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Primary health care: transforming vision into action

OPERATIONAL FRAMEWORK

Draft for consultation

TECHNICAL SERIES ON PRIMARY HEALTH CARE

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Preface

This document is the result of collaborative work led by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). The work was in response to a letter from the Minister of Health of Kazakhstan, Dr Yelzhan Birtanov, to the Director-General of WHO, Dr Tedros Ghebreyesus, and the Director of the WHO Regional Office for Europe, Dr Zsuzsanna Jakab, proposing to capitalize on the 40th anniversary of the landmark International Conference on Primary Health Care in Alma-Ata, 1978, by updating its Declaration on Primary Health Care.

This document is one of a technical series that supports the Global Conference on Primary Health Care, convened to renew commitment to primary health care in light of universal health coverage and the 2030 Agenda for Sustainable Development. This Operational Framework, the related *Vision for Primary Health Care in the 21st Century*, and the associated technical documents are informed by reviews of the literature, 2018 regional reports on primary health care, country case studies on primary health care, a synthesis of lessons learned over the last 40 years, a number of workshops with key stakeholders that agreed on a global roadmap, input from the International Advisory Group on Primary Health Care, public consultations, expert review, and thematic reports on key issues relevant to primary health care.

This document series builds on WHO's work reports on primary health care over the past 40 years, notably the Global Strategy for Health for All by the Year 2000, Primary Health Care 21: "Everybody's Business", the Commission on Social Determinants of Health, the *World health report 2008*, and the WHO Framework on Integrated People-centred Health Services.

The Operational Framework is presented to the Global Conference on Primary Health Care as a draft for discussion to be refined through the conference proceedings as well as through planned web-based and in-person expert consultations.

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Overall technical coordination was provided by Shannon Barkley (WHO), David Hipgrave (UNICEF), and Pavlos Theodorakis (WHO Regional Office for Europe). The principal writing team consisted of Toby Kasper (independent consultant), Katherine Rouleau (University of Toronto, Canada), Sameen Siddiqi (Aga Khan University, Pakistan), and Jose M. Valderas (University of Exeter, United Kingdom).

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Abbreviations

ADDO	accredited drug dispensing outlet
CRVS	civil registration and vital statistics
CSMBS	Civil Servant Medical Benefit Scheme
DHIS2	District Health Information System 2
DTP	diphtheria–tetanus–pertussis
EBAIS	basic comprehensive health care teams (equipos básicos de atención integral de salud)
ICT	information and communication technology
JLN	Joint Learning Network for Universal Health Coverage
JMP	Joint Monitoring Programme on Water Supply and Sanitation
NASF	family health support nuclei (núcleos ampliado de saúde da família)
OECD	Organisation for Economic Co-operation and Development
P4P	pay for performance
PHC	primary health care
PMAQ	National Programme for Improving Primary Care Access and Quality (Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica)
SDG	Sustainable Development Goal
SUS	Unified Health System (Sistema Único de Saúde)
UCS	Universal Coverage Scheme
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Technical series on primary health care

Declaration of Astana

A Vision for primary health care in the 21st century

Making the case for PHC

- The economic case
- Health outcomes case
- Responsiveness case

Operational Framework

From vision to action

- Health in All Policies / Multisectoral Action
- Empowering individuals, families & communities
- PHC Health workforce
- Strategic purchasing
- The private sector
- Quality in PHC
- Digital technologies
- Integrating health services
- Integrating public health & primary care
- The role of hospitals in PHC
- Antimicrobial resistance
- PHC and health emergencies
- Rural primary care

Meeting health needs through PHC

- Sexual, reproductive, maternal, newborn, child & adolescent Health
- Older people
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- Samoa
- Sri Lanka
- Sudan*
- Suriname*
- Thailand
- Turkey
- Viet Nam

* = Health in all policies cases



1. Introduction

The Declaration of Astana on Primary Health Care and the accompanying *Vision for Primary Health Care in the 21st Century* reinforce the commitment of countries and international partners to make concerted efforts to orient health systems towards primary health care (PHC) for accelerated progress on universal health coverage and the health-related Sustainable Development Goals (SDGs). *A Vision for Primary Health Care in the 21st Century* emphasizes a comprehensive PHC approach by proposing three components of PHC:

- meeting people's health needs through comprehensive promotive, protective, preventive, curative, rehabilitative and palliative care throughout the life course, strategically prioritizing key health care services aimed at individuals and families through primary care and the population, with essential public health functions as the central elements of integrated health services;
- systematically addressing the broader determinants of health (including social, economic and environmental factors, as well as individual characteristics and behaviour) through evidence-informed policies and actions across all sectors;
- empowering individuals, families and communities to optimize their health, as advocates of policies that promote and protect health and well-being, as co-developers of health and social services, and as self-carers and caregivers.

These components and their rationale are further elaborated in the associated Vision for Primary Health Care in the 21st Century.



1.1 Primary health care levers and the Operational Framework

The global commitment to PHC in the Astana Declaration needs to be transformed into visible actions to bring about demonstrable change. For this to happen the accompanying document – *A Vision for Primary Health Care in the 21st Century* – has proposed a set of levers that would help countries make progress across the three components of PHC. These levers address key elements of the health system that can be used to accelerate progress on PHC. The levers are separated into ones that primarily function at the policy level and ones that primarily function at the operational level, although the two levels are interdependent and most levers have elements that are policy and elements that are operational. Table 1 summarizes the levers and relates them to the components of PHC over which each lever has the most influence.

Table 1: Overview of primary health care levers and their relationship to the components of primary health care

Short title	Long title	Component of Primary Health Care		
		Primary care and essential public health functions as core of integrated health services	Multisectoral policy and action	Empowered people and communities
Governance, policy and finance levers				
Political commitment and leadership	Political commitment and leadership that place PHC at the heart of efforts to attain universal health coverage and that recognize the broad contribution of PHC to the SDGs	•	•	
Governance and policy frameworks	Governance structures and policy frameworks in support of PHC that build partnerships within and across sectors, and promote community leadership and mutual accountability	•	•	•
Adequate funding and equitable allocation of resources	Adequate financing for PHC that is mobilized and allocated in ways that minimize financial hardship and promote equity	•	•	
Operational levers				
Engagement of community and other stakeholders to jointly define problems and solutions and prioritize actions	Use of engagement approaches to define problems and solutions and prioritize actions by involving a wide range of actors, including across sectors	•	•	•
Models of care that prioritize primary care and public health functions	Models of care that promote primary care and essential public health functions as the core of integrated health services	•		•
Ensuring the delivery of high-quality and safe health care services	Systems at the local, subnational and national levels to continuously assess and improve the quality of PHC services	•		•
Engagement with private sector providers	Partnership between public and private sector for provision of PHC services	•	•	
The PHC workforce	Adequate quantity, competency levels, and distribution of a multidisciplinary PHC health workforce that includes facility-, outreach- and community-based health workers	•		•
Physical infrastructure and appropriate medicines, products and technologies	Availability of the physical infrastructure and appropriate medicines, products and technologies that are needed to deliver quality PHC services	•		
Digital technologies	Use of modern health information and communication technology (ICT) in ways that improve effectiveness and efficiency and promote accountability	•	•	•
Purchasing and payment systems	Purchasing and payment systems that promote PHC and integration across the health system and create incentives to improve access, quality, equity and efficiency of care	•		
PHC-oriented research	PHC-oriented research and knowledge management, including dissemination of lessons learned, as well as the use of the knowledge to accelerate scale-up of successful approaches	•	•	•
Monitoring and evaluation	Monitoring and evaluation through well functioning health information systems that generate reliable data and support their use for improved decision-making from local to global level	•	•	•

A Vision for Primary Health Care in the 21st Century contains only brief descriptions of each lever, so this Operational Framework provides more in-depth information on each lever. For each one, a consistent structure is used:

- narrative description
- key resources for countries
- actions that can be taken by four types of actors:
    - stakeholders at the national or policy level
    - stakeholders at the subnational or operational level
    - people and communities
    - global and regional partners
- indicators that can be used to track progress in the area.

Each of these sections draws extensively on the published literature, from existing guidance documents, and, in some areas, from agreements that have already been made between the World Health Organization (WHO) Member States in the context of the World Health Assembly.

1.2 Who should use this document

The document is primarily intended to assist countries in their efforts to improve PHC. That means that governments – both national and, as appropriate, subnational – are a key audience for the document, particularly since many WHO Member States have committed themselves to improving PHC. In addition, many of the actions are relevant for other actors at the country level, such as nongovernmental organizations and communities. Finally, the document also contains actions that international partners can take to support the efforts of countries to improve PHC, which would be complemented by a process currently under way in which international partners are looking afresh at how they can collaborate more effectively in order to improve support for PHC.

1.3 How this document should be used

At this stage, a lengthy set of actions has been included in the document. This should not be interpreted as meaning that each country should undertake every action in every lever. Instead, the lists are intended to provide practical, evidence-based suggestions that countries that are committed to improving PHC can use to accelerate efforts around PHC. Countries will need to prioritize among the levers and among the actions within them, as they cannot all be completed simultaneously. This should typically be done in the context of an inclusive planning process that is built on a robust evidence base.

The levers and their related actions are not intended to provide a one-size-fits-all approach. The levers are of different significance to countries at different levels of social and economic development and different degrees of PHC orientation and health status. The selection and prioritization of specific actions should be informed by evidence, both local (for example, the social, economic, and environmental situation and trends in the country, the disease burden, and the strengths and weaknesses of the health system) and global (for example, what has been shown to work in improving PHC and what does not work), as well as by the values and preferences of a diverse range of stakeholders. In addition, actions should be refined according to progress and as further evidence and experience are generated to advance PHC.

The same principle applies to the lists of indicators included for each lever, which can be used by countries and other stakeholders to track progress. Priority indicators should be selected based on national or subnational needs and context, as well as feasibility of measurement and actionability. The indicators represent a menu of options to track relevant inputs, processes, and outputs, and outcomes for each lever. As PHC is a contributor to achievement of the health-related SDGs, indicators that demonstrate progress on the determinants of health or on impact level, which are derived from the health-related SDGs, are included in Annex 1. Many of the levers and actions are difficult to assess through quantitative means or through routine data collection methods, and will require special studies to better track progress, including qualitative analyses.

1.4 Way forward

The Astana Declaration sets out a bold vision for PHC but it is up to countries themselves – with the support of the international community – to translate these words into meaningful change. Therefore, the extent to which countries embrace the actions set out in the final draft of the declaration will determine whether or not progress is made on improving PHC.

Given that, it is critical that the document contains all of the material that countries need. The current document is a working draft for consultation that will be discussed at the Astana Conference and will be subject to extensive further discussions on both the form and the specific content (feedback can be submitted online using the consultation portal or sent to primaryhealthcare@who.int). Ultimately, a refined version of the document will be published in spring 2019.

2. Governance, policy and finance levers

2.1 Political commitment and leadership

Political commitment and leadership that place PHC at the heart of efforts to attain universal health coverage and that recognize the broad contribution of PHC to the SDGs

The history of global health is in many ways a history of political commitment and leadership: areas that have seen sustained commitment and leadership have witnessed impressive changes, while those that have not often have languished. A comprehensive approach to PHC should be positioned as a foundation of efforts to achieve universal health coverage, but historically this has not always happened, as it is often easier to favour selective approaches that have ready-made constituencies over the broader-based approach of PHC. Therefore, achieving the vision of PHC requires stronger political commitment and leadership than has characterized the 40 years since Alma-Ata. This commitment and leadership is particularly important because of the ambitious vision of PHC, and in particular the complexities associated with the three components of PHC: integrated health services, multisectoral policy and action, and empowered people and communities.

Addressing social, economic, environmental and commercial determinants of health through multisectoral policy and action cannot be done without political commitment and leadership, because of the considerable challenges associated with multisectoral responses. In particular, multisectoral policy and action requires tackling the silo approach that leads to separation of sectors, as well as the different incentive regimes that different sectors may operate under (for example, non-health ministries will have their own priorities that may or may not result in a focus on the areas that are most important for improving health outcomes). In many countries, ministries of health do not have sufficient power and influence to tackle this challenge on their own and so need support from the top levels of government. Additionally, the status quo – including social, economic, environmental and commercial factors that harm health – is often supported by entrenched and powerful interests that are not keen to accommodate change. Overcoming this resistance therefore requires concerted political commitment and leadership. Finally, multisectoral policy and action often requires the development of partnerships that cut across sectors and involve public and private actors, and there is abundant evidence that these require commitment and leadership to thrive.

Similarly, empowering people and communities entails making difficult decisions that require commitment and leadership. Many of the populations that have the worst health statuses face systemic disadvantages, including with regard to race, ethnicity, gender, sexual orientation, religion, educational status and disability. In this context, empowerment requires redistribution of power to fully engage all people and communities, which again cannot be achieved without strong political commitment and leadership. Within these communities – even marginalized ones – there are also opportunities for individuals to demonstrate leadership and support the empowerment of others.

Finally, effectively delivering integrated health services requires political commitment and leadership, because too often health systems are skewed away from public health and primary care. In particular, tertiary care is often privileged at the expense of primary care, and public health functions frequently suffer from underinvestment. Embracing the vision of PHC means taking difficult decisions to reprioritize resources and reorient systems, which cannot be done without political commitment and leadership.

Political commitment and leadership: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership

• Integrate a comprehensive vision of PHC as a core component of national strategies, including integrated health services, multisectoral policy and action, and empowered people and communities
• Convene and broker health sector decision-making amongst a wide range of stakeholders, including the lay population, for policies and action that can address the social, economic, environmental and commercial determinants of health
• Create an enabling environment for participation by proactively identifying barriers and opportunities for empowering people and communities, by building community capacities for meaningful dialogue, and by providing and regularly evaluating policy dialogue mechanisms
• Assess health services to determine if public health functions and primary care have been appropriately resourced, and reallocate as necessary
	• Collaborate with higher administrative levels to ensure that community needs and views are given appropriate attention in decision-making
	• If appropriate given the level of decentralization, carry out the same efforts at the subnational level as at the national level:
	  ○ bring together stakeholders for multisectoral policy and action
	  ○ include people and communities in decision-making
	  ○ ensure that appropriate levels of resources are dedicated to public health and primary care
		• Participate in efforts to establish inclusive processes
		• Demonstrate leadership as a champion for the comprehensive vision of PHC
			• Support national political commitment and leadership by committing to base financial and technical support on nationally defined priorities rather than donor or partner priorities
			• Support efforts to share lessons learned around political commitment and leadership
			• Support efforts to build the evidence base about how PHC approaches contribute to the SDGs

Political commitment and leadership: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• A comprehensive national health sector policy, strategy or plan with goals and targets that includes all three components of a PHC approach exists and has been updated within the last five years	• The main documents that guide the health sector response should reflect a PHC orientation by including the three components of PHC (integrated health services, multisectoral policy and action, and empowered people and communities)	• Review of relevant strategies or policies

2.2 Governance and policy frameworks

Governance structures and policy frameworks in support of PHC that build partnerships within and across sectors, and promote community leadership and mutual accountability

Governance refers to "ensuring strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to system design and accountability" *(1)*. Historically, the governance of the health sector, including at decentralized levels, in most low- and middle-income countries has predominantly been the remit of governments focused on delivering public sector services. This arrangement is becoming increasingly outmoded to address the emerging components of modern PHC. For example, the private sector, either for profit or not for profit, is in many settings a crucial player in health, and the value of involving actors from other sectors is increasingly recognized.

This broader vision of governance requires that governments oversee and guide the health system as a whole, not just the public system, to protect the public interest *(1,2)*. The transformation from the traditional role of ministries of health as providers of services to stewards for health that engage a full range of actors (including from other sectors) has not been an easy one in many low- and middle-income countries, but this transformative change in the governance of health will be critical for a comprehensive approach to PHC.

This approach should be supported by policy frameworks that reflect the broad definition of PHC. In particular, the concept of PHC as having three interrelated components – integrated health services, multisectoral policy and action, and empowered people and communities – should be embedded in key policy frameworks that govern the health sector. Because PHC is an orientation and not simply a programme, that does not necessarily mean that each country should have a dedicated PHC policy; instead, it is more important that the comprehensive vision of PHC is included in the set of policy frameworks that are most relevant for each country, which could include documents such as a national health policy or strategy, a strategy for universal health coverage, and even programme strategies for areas such as reproductive, maternal, newborn, child, and adolescent health and nutrition or HIV/AIDS.

The process of developing and then implementing these frameworks should also embrace a PHC orientation. This includes using a participatory approach that empowers people and communities to play an active role in shaping the policies that influence their lives. This requires moving beyond solely technocratic processes that rely only on experts in capital cities to using methodologies that engage people and communities where they are and that acknowledge the complexity of the power dynamics that shape the ability of people and communities to participate meaningfully.

Increasing the role of communities can make PHC systems more responsive not only because it allows rapid recognition of local concerns but also because communities can more effectively advocate to have their emerging needs recognized, allowing a prompt response, while distant subnational and national governments may not be able to react with similar agility or flexibility. Leveraging this role needs effective governance structures and processes that allow for better community participation, enhanced legitimacy and improved accountability, resulting in sustainable, equitable and quality health care.

In the absence of formal roles of communities in local health governance, health care providers and managers may remain resistant to community accountability and respond only to internal government or organizational accountability mechanisms. Legitimizing the roles of community networks can ensure that district health systems effectively allow participation, fulfil user needs, and are accountable to the individuals and communities they serve. Such local health governance has to be embedded in supportive national and subnational health systems to ensure transparency and equity so that local power structures and existing inequities are not reflected in decentralized health systems. Such multilevel governance also has the potential to make PHC more resilient, as one level can compensate for governance gaps at another level.

The second process point is that a whole-of-government approach should be embraced, particularly given the need for multisectoral policy and action. An important tool for doing this is the Health in All Policies approach, which was officially defined by the World Health Assembly in 2014 as "an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity" *(3, 4)*. In a Health in All Policies approach, the health sector is seen as the champion for health, keeping health on the agenda but aware of the need for joined-up work that seeks overall societal gains *(5)*.

There is no single model for implementing Health in All Policies, but experience from across the world has led to the identification of a set of characteristics that are key to successful implementation: "good governance; development of strong and sound partnerships based on co-design, co-delivery, and co-benefits; dedicated capacity and resources; and the use of evidence and evaluation" *(6)*. WHO has developed a series of materials that help countries initiate, implement and sustain Health in All Policies, including a training manual and a series of case studies *(7–9)*.



Governance and policy frameworks: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Ensure accountability for PHC in the ministry of health in a manner that works across the traditional departmental boundaries and is linked to the team(s) responsible for universal health coverage and SDGs • Reflect a PHC orientation across all relevant policy and strategy frameworks, in operational planning, and in the budgeting process • Develop leadership and stewardship role, and technical capacities that facilitate multisectoral arrangements with other ministries and institutions, and enable partnership with the private sector • Establish legislative mandate and a clear governance and accountability framework for Health in All Policies seen as a shared responsibility, and dedicate resources to support and sustain multisectoral work • Legitimize the role of communities in local health governance by creation of institutional mechanisms and processes that allow for greater community and civil society involvement • Support the use of audit tools, such as health impact assessments and policy audits, to enable transparency in the examination of health and equity outcomes of policies • Use evidence to document the linkages between health and other government policy priorities (including by using methodologies more commonly used in other sectors, such as economic modelling and qualitative research) • Provide funding and oversight to collaborative community governance of PHC to ensure availability of adequate resources and their equitable use	• Partner with academic institutions to launch a capacity development programme for public, private and community actors to develop competencies for implementing PHC components • Reform and align the integrated PHC-oriented governance mechanism at the subnational level to respond to its three components • Ensure that planning processes at subnational level are guided by national plans and embrace the three components of PHC • Create an organizational culture that supports monitoring and evaluation, through knowledge sharing, open feedback, and demand for data in decision-making • Strengthen PHC management protocols that encourage population registration, provider report cards, patient satisfaction surveys, patient-reported outcomes and balanced scorecard • Create community-based multistakeholder forums for collective accountability and action on health and health-related issues	• Examine how a PHC orientation can be reflected in global policy dialogue and how it can be embedded in policy frameworks for specific programmes • Harmonize global governance mechanisms that put PHC high on the global policy agenda and are essential for attainment of universal health coverage and health-related SDGs • Enhance civil society participation at the global level in PHC initiatives in global health partnerships • Develop normative guidance (strategies, tools, guidelines) in support of Health in All Policies, multisectorality and community engagement for use by countries • Harmonize and align monitoring and evaluation efforts through the Health Data Collaborative for regular reporting on proposed PHC indicators	• Advocate community-steered institutional arrangements to whom government functionaries responsible for PHC are accountable • Participate in efforts to establish inclusive processes (e.g. by engaging in planning forums)

Governance and policy frameworks: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Inclusion of PHC orientation in national health policies, strategies or plans	• Qualitative review of the extent to which key national health policies, strategies or plans reflect a PHC orientation (such as the inclusion of all three components of PHC)	• Review of the most recent national health policy, strategic plan or health strategy document
• Legitimization of the governance role and accountability to communities in national policy dialogue and the resulting policy frameworks	• This encompasses both a process dimension (whether or not communities have a legitimate role in the development of national policies) and a substantive dimension (whether or not the resulting policies clearly legitimize the governance role of communities and the fact that government functionaries should be accountable to them)	• Review of minutes of policy dialogues and of the resulting policy frameworks
• Adoption of a Health in All Policies approach	• This indicator tracks whether a government has formally committed to implementing a Health in All Policies approach, either through a cross-government policy framework or legislative action	• Relevant government documents
• Inclusion of multisectoral actions to address social, economic, environmental and commercial determinants of health in national health strategies or policies	• This indicator assesses the extent to which key national health strategies and policies (as identified nationally) include multisectoral actions	• Review of relevant strategies or policies
• Indicators of progress on relevant social, economic, environmental and commercial determinants of health	• The WHO Global Reference List of 100 Core Health Indicators and the SDG indicators include a number of indicators that can be used to track progress on social, economic, environmental and commercial determinants of health, and the most relevant ones for each context should be identified and measured Examples include: ○ SDG 3.5.2: Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol ○ SDG 3.6.1: Death rate due to road traffic injuries ○ SDG 3.9.1: Mortality rate attributed to household and ambient air pollution ○ SDG 3.9.2: Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	• Varies by indicator

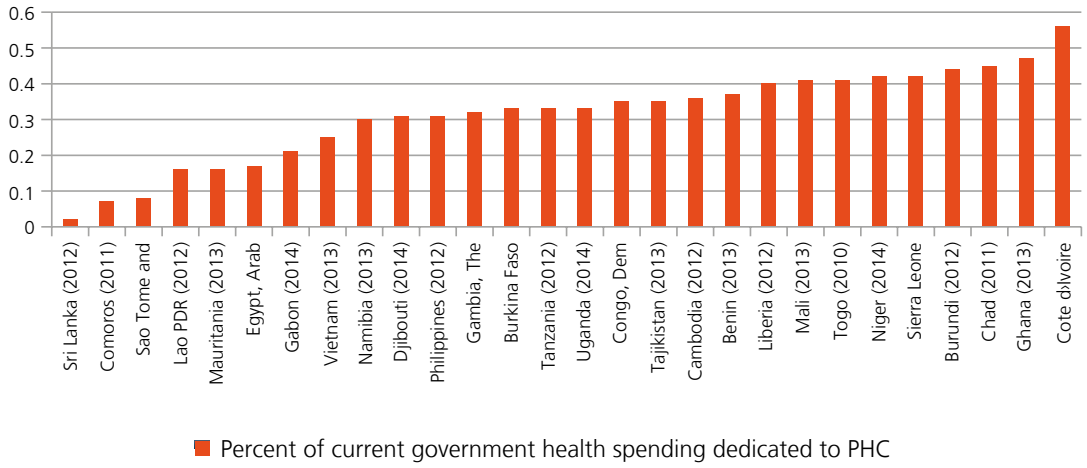
2.3 Adequate funding and equitable allocation of resources

Adequate financing for PHC that is mobilized and allocated in ways that minimize financial hardship and promote equity

From a PHC perspective, there is a need to raise sufficient and sustainable resources; manage them equitably and efficiently by pooling them; and allocate the pooled funds to needed programmes, services and interventions. In many low- and middle-income countries, a major and inequitable source of financing is households spending directly out of pocket for their needed health care.

The matter of how much should be spent on PHC has never been fully resolved since the days of Alma-Ata. While it is possible to estimate how much is being spent on primary care for many countries, estimating expenditure on the public health functions and health determinants component of PHC is not as straightforward, often due to lack of data. One clear pattern that emerges is that PHC programmes are underfunded in most low- and middle-income countries. Of the 28 countries for which data are available on current government health spending on PHC, eight countries spend 25% or less of their government health expenditure, as shown in Figure 1 *(10)*. A key factor is that hospitals consume between 50% and 80% of the public health spending, to the detriment of spending on PHC.

Figure 1. PHC expenditure as a share of public expenditure on health services (%)



While developing or reviewing health financing strategies, countries need to ensure that PHC programmes are appropriately funded, vulnerable population groups are adequately protected, and resources are efficiently used during implementation to reduce the rising inequities in the financing of health care. Further, within the PHC components, the funds should be rationally distributed among primary care and public health programmes, and initiatives that promote community engagement and multisectoral coordination. In order to do so governments, providers and development partners have a range of possible actions.

Adequate funding and equitable allocation of resources: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Develop health financing strategies that explicitly mention allocations for and spending on PHC • Estimate level of spending on PHC through public expenditure reviews and national health accounts analysis • Increase allocation to PHC programmes and initiatives in national health plans and medium-term expenditure frameworks • Enhance allocations and reimbursement for primary care interventions in countries with social insurance programmes • Strengthen public financial management systems to monitor spending on PHC and minimize wastage and abuse	• Minimize disparities in allocations and spending between primary and tertiary care, and inequalities in PHC allocations to districts • Develop capacity at subnational level to monitor costs and improve utilization of PHC services for greater efficiency	• Advocate increased transparency with regard to PHC expenditure, improved efficiency in spending existing allocations, and increased allocations	• Use partner funds as a lever for more efficient spending on PHC from domestic resources • Take action to progressively shift from disease-specific programmes to broader PHC and universal health coverage initiatives • Develop standards and methods for measuring what should be counted towards PHC spending through public expenditure reviews and national health accounts analysis • Provide technical assistance to support efforts to track PHC expenditures • Convene a process to set a global benchmark on the appropriate share of general government health expenditure that is dedicated to PHC

Adequate funding and equitable allocation of resources: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Per capita current PHC expenditure (US dollars)	• This indicator is measured in US dollars and contributes to the understanding of the priority and importance a country and population places on PHC	• National health accounts analysis • Public health sector expenditure review • Health expenditure and utilization survey
• Percentage of current government health spending dedicated to PHC	• This indicator measures the percentage of government health spending that is specifically dedicated to PHC. This core health financing indicator reflects government investment in and commitment to PHC and enables increased accountability of governments with regard to their PHC investments	

3. Operational levers

3.1 Engagement of community and other stakeholders to jointly define problems and solutions and prioritize actions

Use of engagement approaches to define problems and solutions and prioritize actions by involving a wide range of actors, including across sectors

The engagement of people, as individuals and communities, and of stakeholders from across sectors to work together in defining health needs, identifying solutions and prioritizing action, is central to the concept of PHC. Anchoring the pursuit of health in engaged communities actualizes a commitment to refocus modern PHC on people rather than diseases and to inform PHC through meaningful evidence and multisectoral efforts rather than narrow programmes or ideology.

Community engagement is increasingly understood as an enabling and necessary process rather than as single, discreet interventions. The many definitions of the concept of engagement share the notion of a spectrum of progressively deeper involvement (and presumed impact) that ranges from outreach and information sharing to consultation, to collaboration and ultimately to shared leadership *(11)*.

In a PHC orientation, community engagement extends beyond simple consultation. It enables shared leadership in a spirit of reciprocity and mutual respect among partners and stakeholders *(12)*. It positions people as having a central role in defining their health needs and prioritizing solutions, using processes appropriate for each level of planning, implementation and evaluation at the subnational, national, regional and global levels.

Ensuring that people experience health-promoting environments and access quality services requires systemwide changes at the local, regional and national levels, connected to global processes and mechanisms that clearly articulate how needs and solutions are determined and prioritized, by whom and according to what criteria. Decisions should be informed by situational analysis that combines evidence and epidemiology as well as the representative voice of the citizens. Interpersonal trust, communication and collaboration are essential to effective community engagement *(13)*.

The specific actors and community representatives participating in the prioritization of health needs will vary according to the setting. Participatory approaches can engage the broad community or selected representatives (including those most vulnerable), groups of patients, health professionals from the public and private sectors, academia and nongovernmental organizations, other groups from civil society and, at the global level, development partners *(13)*.

Moving from a process driven primarily by planners and institutions to a participatory process that originates in the community, and engages and empowers people to define their priorities and their solutions, requires intent, inclusion and adaptability by policy-makers and administrators *(14)*. The voice, preferences, needs and expectations of the community can be solicited and incorporated through a range of strategies and structures at all levels. As well as priming and building the capacities of health services providers to engage, this includes mobilization of traditional community engagement strategies and processes such as health committees, community advisory panels, patient advocacy groups, participatory research programmes, community health workers, and many others. Relationship building is the basic foundation of meaningful engagement, effective representation and inclusivity beyond tokenism. The inclusion of those most vulnerable requires flexibility and adaptable processes as well as safe and trusting environments, developed progressively through deliberate and sustained efforts. Translation of a growing body of research is required to determine how to achieve optimal, meaningful and effective engagement and inclusion across diverse context and settings.

Engagement of community and other stakeholders to jointly define problems and solutions and prioritize actions: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Engage people, families and communities in policy formulation and make decisions in resource allocation processes • Develop mechanism for participation of communities in health planning and implementation • Enable political participation of communities for developing public health laws of social relevance • Develop training programmes for community engagement and integrate into the national curricula on medical education • Develop mechanisms for redressing violations of people's right to Health in All Policies	• Develop health committees at district, town and village levels; ensure participation of all social groups in health committees (class, gender, ethnicity, religion, etc.) • Enable communities to engage with civil society, nongovernmental and community-based organizations • Enable community–campus partnerships between people and institutions of public education • Involve communities in developing a shared research agenda for public health • Develop community monitoring mechanisms for monitoring outbreaks, epidemics, and diseases of high priority	• Advocate community engagement in policy formulation, planning, and decision-making around resource allocation • Participate in mechanisms established to facilitate community engagement • Consider forming associations or networks to enable more representative engagement in policy dialogue, planning, and budgeting processes	• Encourage communities to become part of health movements, alliances, knowledge networks, and health-related organizations • Develop a centre for community engagement at WHO • Involve communities in prioritization of health-related resources (by global funding agencies) • Empower communities to participate in shaping global health agendas (e.g. at World Health Assemblies, conferences, meetings), including by providing financing to enable representatives to attend these settings • Empower communities to monitor global progress on primary health care and propose recommendations
Community engagement at all levels			
• Engage communities actively throughout all levels of planning and priority setting • Organize meaningful community dialogues to discuss advantages and disadvantages and weigh up options • Build capacities and capabilities of communities to engage with service providers and planners			

Engagement of community and other stakeholders to jointly define problems and solutions and prioritize actions: monitoring and metrics

Indicator[s]	Description	Source[s] of information
Pull from indicator on page 23 Community boards are established which provide input to policy makers and ensure a Health in All Policies approach is adhered to.	Board members are representatives of school boards, faith-based organizations, law enforcement, environmental & sanitation departments, traffic planners, commercial economy (restaurants, grocery stores, etc.), as well as local health facilities and clinician organizations.	

It is important for metrics to include information from routine feedback mechanisms. Such information should include quantitative and qualitative data that demonstrate that the outputs of engagement at different levels, and with stakeholders and sectors, are being used to guide policy development and implementation, as well as health service design, delivery and implementation. There are three interrelated domains of engagement:

- capturing quantitative and qualitative data through community engagement in public health functions, for example by involving health cadres, community health workers, and health promoters;
- capturing quantitative and qualitative data through engagement at the health facility or health post level;
- capturing quantitative and qualitative data through engagement with social accountability and rights mechanisms.





3.2 Models of care that prioritize primary care and public health functions

Models of care that promote primary care and essential public health functions as the core of integrated health services

A model of care is a particular arrangement of structural elements (financing, workforce, physical environment, information systems and other technologies) and processes of care, ideally supported by explicit identification of roles and allocation of responsibility and tasks along pathways of care. Different models of care can be used for delivering the required functions in a health system and operationalizing the desired health system orientation at the level of care delivery. Variation and innovation based around such models of care delivery, particularly as facilitated by technological solutions using eHealth, and subsequent dissemination and scaling up of successful experiences, can facilitate continuous improvement in the responsiveness and efficiency of the system, further encouraging a culture that is more receptive of change in health care. The relevant stakeholders that need to be engaged include individuals, families and communities, managers, front-line health care providers, ministries of health and social care, health technology assessment agencies, and professional and scientific organizations.

Central to efforts to strengthen PHC is the development of models of care that promote a comprehensive vision of PHC. Since structural arrangements and processes vary across models, the focus needs to be placed on the system functions and core outcomes that are consistent with the PHC orientation in a particular setting. This includes ensuring that population-based services are adequately prioritized and that there is good coordination between public health and primary care. At the level of individual health care services, health systems need to be reoriented to ensure that primary care is both the first and regular point of contact and the core of the health system, linked to all other levels of care and services. The delivery of PHC that is continuous, comprehensive, coordinated and people centred will be facilitated by entrusting the health of defined geographical communities to specific teams through the process of empanelment (assigning individual patients to individual primary care providers).

Strategies should be developed that fully recognize the crucial role of PHC in addressing both existing and new health problems. Such strategies should ensure that the progression of patients along health care pathways is supported and facilitated by multidisciplinary teams, shared electronic medical records and emerging technologies.To ensure comprehensiveness, where feasible responsibility for the first level of care needs to include mental health and chronic and noncommunicable diseases and associated factors, as well as the extension of primary care through programmes that support home health care and self-care. Examples of models of care that address some of these core functions include general practice, the patient-centred medical home, and the chronic care model. Governance, accountability and financing for results across the care pathway in models of care involving multiple providers are critical enablers *(15–22)*.

Models of care that prioritize primary care and public health functions: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Develop a prototype of PHC that is most suited to the situation of the country and allows for adaptation to address local needs • Support the development of targeted training programmes for emerging health care roles • Develop and strengthen information systems for monitoring and facilitating evaluation of models of care and benchmarking • Develop and promote the adoption of evidence-based pathways of care • Adopt legislation that mandates the involvement of recipients of care in the design of care, and supports development of methods and strategies for ensuring effective engagement	• Support development of local leadership and empowerment, within models of care suited to local needs	• Participate in mechanisms to review performance of new models and refine them	• Create instruments for sharing information about effectiveness of successful models of care and supporting their implementation

Models of care that prioritize primary care and public health functions: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Explicit adoption of a set of process and outcome indicators for monitoring PHC-oriented performance		• Ministry of health
• Percentage of admissions for ambulatory care sensitive conditions	• Numerator: hospital admissions for ambulatory care sensitive conditions Denominator: all hospital admissions	• Hospital information systems
• Percentage of visits to primary care	• Numerator: number of primary care visits Denominator: number of all ambulatory visits to accident and emergency departments, hospitals, primary care and other settings	• Population-based health surveys • Routine facility information systems • Ministry of health
• Percentage of visits managed in primary care without referral to higher level of care	• Numerator: all primary care visits – number of visits resulting in a referral Denominator: all primary care visits	• Population-based health surveys • Primary care health records • Ministry of health
• Proportion of the population registered (empanelled) with a primary care provider	• Numerator: number of people registered (empanelled) with a primary care provider Denominator: total population	• Administrative systems
• Existence of functional referral and counter referral system between primary and referral levels of care	• Numerator: number of adults aged 18 or older with systolic blood pressure < 140 mmHg and diastolic blood pressure < 90 mmHg (regardless of treatment status) Denominator: number of adults aged 18 years or older	• Ministry of health

Case studies: Ireland and Paraguay

1. Shifting acute care services from hospital to the community in Ireland

In 2010, in response to the overburdened acute care services in Carlow-Kilkenny Acute Hospitals in Ireland, Caredoc – a non-profit organization commissioned to provide out-of-hours medical care by the Irish Health Service Executive – devised a new model of care aiming to improve health outcomes by providing support to hospitals through the early discharge of acute yet low-risk patients to community-based care. To put this model into practice, community intervention teams were established. The teams are composed of specialized nurses who work with hospital staff, general practitioners and patients to provide acute care services within home care settings, following early discharge. A clinical algorithm for e-referral to the community intervention team was established, as well as a personalized health plan. In a period of one year, the new care model averted 2300 hospital bed-days and 215 ambulance trips. Patient satisfaction surveys show respondents are pleased with the service.

2. Telemedicine for improved access to diagnostic services for remote populations in Paraguay

In Paraguay, a model of care based on telemedicine for improved access to diagnostic services for remote populations with epilepsy, cardiovascular diseases or cancer and women with maternal health problems has been developed and successfully implemented. Populations living in rural and remote areas did not have access to specialist care and quality diagnostic services. In order to improve access a telemedicine system was introduced including three different diagnostic services: tomography, electrocardiography and ultrasound. The initiative was the result of an international collaboration between the Ministry of Health and Social Welfare of Paraguay and its Department of Telemedicine, the University of Asunción, the University of the Basque Country, the Italian Hospital of Buenos Aires and the WHO/Pan American Health Organization country office in Paraguay. Through the implementation of a software system, health professionals in remote areas in first- and second-level health centres can now capture images with their medical devices and transmit those images to specialists in tertiary hospitals. The specialist reviews the images, writes up the diagnosis in a medical report, and sends it back to the first- or second-level health centre that contacted them. Specialists who participate in the project receive incentives for each diagnostic report sent back to the health service delivery network, allowing the PHC teams to provide continuity of care to their patients. The response capacity of the local integrated health service delivery networks has been improved by providing access to tertiary-level diagnostic services by specialists. Patient satisfaction studies have shown a high level of satisfaction and a tendency of improved uptake of these services.



3.3 Ensuring the delivery of high-quality and safe health care services

Systems at the local, subnational and national levels to continuously assess and improve the quality of PHC services

Quality care is safe, effective and people centred. Such care needs to be timely, efficient, equitable and integrated. Quality care is essential for improving performance, maintaining trust and ensuring sustainability of the health system, and guaranteeing that all efforts and resources invested in facilitating access to and delivering care are translated into improving people's health. Systems at the local, subnational and national levels should be equipped to continuously assess, assure, evaluate and improve the quality of PHC, tailoring interventions selected from a wide range of evidence-based quality improvement interventions to best suit their needs.

A range of approaches can be used for this, but the emphasis should be on developing a multimodal suite of interventions tailored to the local context, while simultaneously working to improve the broader health systems environment and culture that supports delivery of quality care. This is therefore not a prescriptive framework but rather a guide that has been developed to provide orientation, and that can be adapted to help countries improve the overall quality of PHC. The WHO, Organisation for Economic Co-operation and Development (OECD) and World Bank joint publication on delivering quality health services, released in 2018 *(23)*, outlines a number of illustrative interventions as a starting point for such efforts, covering activities to address the system environment; reduce harm; improve clinical care; and promote patient, family and community engagement and empowerment. The pivotal role of setting national directions on quality is further expanded upon in the WHO *Handbook for national quality policy and strategy*, also released in 2018 *(24)*. Other key resources include the WHO Technical Series on Safer Primary Care *(25)*.

In any approach, the value of patient and community engagement for quality and safety is emphasized, aiding both alignment with the wider scope of PHC, and effectiveness, accountability, ownership and sustainability of the quality improvement efforts. Relevant stakeholders include patient and civil society organizations, PHC service providers (public and private), professional bodies, universities and health professional training institutions, external evaluation or licensing agencies, health technology assessment agencies, ministries of health, and subnational, facility, and community quality teams. Faith-based organizations also play a key role in PHC delivery in many countries *(16,23–26)*.

Ensuring the delivery of high-quality and safe health care services: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Routinely measure and publicly report on the quality of PHC providers using internationally comparable measurements where feasible, and including patient assessments • Develop a national quality policy and framework with stated national quality priorities and a set of defined indicators for monitoring quality, involving primary care stakeholders in its development and implementation • Support the development and implementation of quality indicators for the effective engagement of patients and the public in planning, delivery and evaluation of PHC services • Ensure quality improvement initiatives in primary care are adequately financed • Support development of, dissemination of and adherence to locally relevant primary care-specific clinical practice guidelines • Include quality improvement and patient safety in curricula for training of PHC professionals; for in-service training, offer continuous professional development pathways for health professionals	• Develop and sustain governance and leadership for quality and safety at the local level, for example district and primary care quality teams and focal points • Support functioning of systems to support improving quality of care • Develop systems to monitor adherence to standards of care • Put in place an infrastructure for generating and sharing learning on quality within PHC	• Contribute to efforts to develop national quality policies and frameworks • Use reporting mechanisms (or, if necessary, lobby government to develop these) to identify health personnel offering care that does not meet quality standards	• Develop and promote minimum common sets of indicators of structure, process and outcome for quality PHC services • Focus on quality as a central component of health systems reform for universal health coverage

Ensuring the delivery of high-quality and safe health care services: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Percentage of ambulatory care sensitive admissions	• Numerator: ambulatory care sensitive admissions Denominator: all admissions	• Routine administrative hospital data
• Presence of quality improvement and assurance processes in the national health plan		• Ministry of health
• Percentage of health service users who rate their primary care practice as safe	• Numerator: number of patients who rate their primary care practice as safe Denominator: number of patients who rate their primary care practice	• Survey of PHC service users
• Presence and use of unique patient identification number		• Ministry of health • Facility surveys
• Individual patient records		• Ministry of health
• Percentage of facilities that regularly assess the patient experiences or satisfaction	• Numerator: number of facilities that assess patient experiences or satisfaction Denominator: all PHC facilities	• Facility surveys
• Percentage of facilities that undertake routine service improvement activities	• Numerator: number of facilities that undertake routine service improvement activities Denominator: all PHC facilities	• Facility surveys
• Patients reporting having been involved in decisions about care or treatment by their regular (or any) provider	• Numerator: number of patients reporting having been involved Denominator: all respondents	• Population-based health surveys

Case studies: Costa Rica and Brazil

1. Contribution of health care teams to data gathering in Costa Rica

In Costa Rica, basic comprehensive health care teams (equipos básicos de atención integral de salud, EBAIS) are key instruments in the Costa Rican approach to PHC. They collect a rich array of socioeconomic, demographic, and epidemiological data on risk factors critical for the implementation of high-quality PHC, thus contributing to the Household and Family Medical Record (Ficha Médica Familiar). This is a virtual census conducted annually by gathering data through detailed interviews of each household in the country. Since they are familiar to the population, EBAIS have the trust of individuals, who are thus willing to share key information. EBAIS use these surveys for planning, implementing and evaluating the results of public health interventions in their geographical catchment areas. Although the data collection tool that was introduced in the early 1970s has evolved in comprehensiveness and sophistication, it has not yet been fully digitalized or linked to other sources of data. The survey has more than 260 indicators collected annually, constituting a virtual census that can be exploited for different social and policy purposes beyond the health sector.

2. Financial incentives for evaluation of primary care teams under Brazil PMAQ

The Brazil National Programme for Improving Primary Care Access and Quality (Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica, PMAQ) provides financial incentives against structure, process and outcome indicators. It involves several rounds of voluntary self-assessment and external assessment of primary care teams. The assessment covers nearly 39 000 teams and more than 100 million users. Assessments are carried out for each team and involve facility assessments, examination of health indicators, and interviews with health care professionals, municipal managers, and service users. Teams are awarded an overall score as a weighted average mainly derived from the results obtained using a set of indicators in the external evaluation, but also from their participation in the self-assessment activities, performance on selected agreed-upon health indicators, and use of electronic health records. Financial incentives are then allocated based on their performance. PMAQ may well be the largest pay-for-performance system in the world, and has contributed to a near doubling of federal investment in primary care.



3.4 Engagement with private sector providers

Partnership between public and private sector for provision of PHC services

The term "private sector" covers a wide array of actors and services, and hence plays multiple roles with regard to PHC, including as a source of financing, a developer of new technologies and products, a manager of supply chains, an advocate, and a service provider *(27)*. That means that engagement with the private sector is included in many of the levers; this lever does not attempt to aggregate all of these but rather focuses specifically on one of the most important dimensions, the role of private sector providers – including both private for-profit and private not-for-profit providers – in service delivery.

This is a critical area because virtually every country has a mixed health system that includes both public and private provision of care. In many countries, a significant share of primary care services is delivered by the private sector: the share varies by the particular service in question but frequently exceeds 50% in many low- and middle-income countries *(27-31)*. In the context of primary care, this typically influences provision by a range of actors, including individual doctors, practitioners of traditional medicine, pharmacists or others running informal drug shops, and non-profit providers (such as faith-based or nongovernmental organizations). It is important to highlight that in most countries the public and private sectors are not hermetically sealed off from each other: individual health professionals may practise in both, and a significant share of patients seek services from both. Moreover, actions that are aimed at one sector (for example, improving the quality of care in public facilities) often end up influencing the other sector (for example, by shifting demand from lower-quality private providers to the public sector) *(27, 32)*.

A number of approaches and tools can be employed to ensure successful collaboration, which can be grouped into two main categories:

- **Regulation.** This involves prohibition or constraint of the private sector through statutory controls, approaches such as accreditation, and self-regulation by professional organizations.
- **Private sector engagement.** A range of possible forms of partnership are possible, including training and quality improvement, social marketing, social franchising, and purchasing (for example, through vouchers or contracting). In addition, a range of different types of legal arrangements can be used, including public ownership with private management; joint ventures with shared ownership; transferring ownership over time (for example, build-operate-transfer models); using public financing to support private activities (for example, guarantees or grants); using private financing to support public activities (for example, impact bonds); or full-scale privatization of public services.



The use of these approaches with regard to PHC should be based on two key foundations: a participatory approach that involves the private sector, and adequate information about the scope and nature of private provision. The diversity and size of the private sector often poses a challenge for the first of these, as does the differing payment and incentive structures between public and private sectors (for instance, it may be difficult for a private provider to participate regularly in lengthy meetings during normal consultation hours, since that requires forgoing the income associated with seeing patients during that time). To address these challenges, the Joint Learning Network for Universal Health Coverage (JLN) has identified five key steps to building partnerships with the private sector, including finding common ground ("win-wins") and establishing a regular consultative process *(33)*. To improve the private sector's ability to engage in policy dialogue with the government, the private sector has created stakeholder alliances, networks, forums, or federations in a number of countries.

The JLN has also produced a step-by-step guide to mapping private sector providers, which is critical to ensuring an adequate information base for decision-making *(33)*. A somewhat broader approach to conducting private sector assessments has been developed by the United States Government-supported SHOPS and SHOPS Plus projects, which have conducted assessments in more than two dozen countries and prepared a guide to carrying out assessments based on this experience *(34)*.

In any given country, it is typically the case that multiple approaches will be employed at the same time to address different aspects of engagement with the private sector. Optimizing the mix of approaches requires both clear objectives for the collaboration and a strong process to ensure rigorous decision-making with regard to which approaches to employ to achieve these objectives. To assist with this, WHO has developed a decision-making model and a set of tools designed to provide the information needed to support evidence-based decision-making, including:

- understanding a country's health markets, types of private actors and the nature and scale of private activity;
- identifying potential areas of risk and opportunity posed by the private sector to a country's health goals;
- assessing governance and regulatory capacity, matching this capacity to its envisioned role for the private sector, and helping with the design of reforms to address capacity gaps;
- identifying different modes of control or engagement of the private sector.

The framework and model aim to help countries formulate policy on the private sector and choose and deploy legal and financial policy tools to implement it.

Finally, it is also important to ensure the participation of private providers in national monitoring and evaluation efforts, ideally including through health management information systems, such as the District Health Information System 2 (DHIS2). This has proven challenging in a number of countries *(35)* but new technologies are creating opportunities for stronger collaboration around monitoring systems.

Engagement with private sector providers: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Conduct a stakeholder analysis to lay the groundwork for public–private dialogue • Clarify the rationale for engagement between the public and private sectors • Listen to the private sector to understand barriers and constraints to collaboration • Identify areas of common ground between the public and private sectors ("win-wins") • Establish a regular consultative engagement process or platform • Ensure engagement of private sector actors in existing policy-making bodies • Conduct provider mapping or a private sector assessment • Jointly agree on priorities for public–private engagement • Identify approaches best suited to priorities, such as constraining or regulating the private sector, encouraging or subsidizing it, or purchasing services from it • Proactively reach out to private providers to ensure inclusion in national monitoring and evaluation systems	• Ensure engagement of private sector actors in existing policy-making bodies • If appropriate given extent of decentralization, establish a regular consultative engagement process or platform	• Organize alliances or networks that can improve the representation of the private sector in policy dialogue with the government • Engage actively in existing policy-making bodies • Support efforts to establish consultative processes or platforms and use them to agree on priorities for public–private collaboration	• Provide support for global public goods, such as sharing of lessons learned on the private sector between countries, development of tools for public–private engagement, and generation of evidence about what works • Provide support for national public goods, such as development of capacity to manage public–private collaboration, carrying out private sector assessments or mapping, establishment and functioning of private sector networks or alliances, piloting new approaches to engaging with the private sector, and inclusion of private providers in monitoring and evaluation systems

Engagement with private sector providers: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Participation of the private sector in key national policy-making bodies	• This indicator measures whether or not key national policy-making bodies (these will differ according to national context but could include the committee or entity responsible for preparing the national health strategy, health sector coordination committees, or other relevant bodies)	• Records of meetings of key national policy-making bodies
• Percentage of key health services delivered in the public and private sectors	• This indicator provides trend data about whether the population is accessing services from the public or private sectors (or both) for a range of key conditions (these should be defined nationally but could include antenatal coverage, delivery, children with diarrhoea, children with a fever or cough, and modern contraceptive methods)	• Demographic and health surveys and multi-indicator cluster surveys
• Percentage of private providers included in routine health information systems	• This indicator tracks the extent to which private providers are included in national health management information systems by comparing the number of providers regularly reporting in a national health management information system (e.g. DHIS2) with the number of private providers identified through a mapping exercise or a private sector assessment	• Routine data from the national health management information system compared with data from a provider mapping or private sector assessment
• Additional consideration should be given to using qualitative techniques to assess changes in public–private collaboration over time	• In addition to quantitative metrics such as those listed above, qualitative research is useful for understanding perceptions about public–private collaborations and how they evolve over time	

3.5 PHC workforce

Adequate quantity, competency levels, and distribution of a multidisciplinary PHC health workforce that includes facility-, outreach- and community-based health workers

The PHC workforce includes all occupations engaged in the continuum of promotion, prevention, treatment, rehabilitation and palliative care, including the public health workforce, and those engaged in addressing the social determinants of health. It also includes caregivers and volunteers, the majority of whom are women, complementing the actions of salaried workers *(36)*. Health workers are the critical pathway to attaining the health targets in SDG 3. An adequate, well distributed, motivated and supported health workforce is required for strengthening PHC and progressing towards universal health coverage *(37)*. The SDG index threshold of 4.45 nurses and midwives per 1000 population is considered the minimum threshold of those health workers required to achieve and sustain universal health coverage. This threshold should not be used as a benchmark for planning at national levels. Globally, the needs-based shortage of health care workers in 2013 was estimated to be about 17.4 million, of which almost 2.6 million were doctors, 9 million were nurses and midwives, and 5.8 million represented other health worker cadres *(38)*.

The four objectives of the Global Strategy on Human Resources for Health: Workforce 2030 have direct bearing on the PHC workforce as well. These are as follows:

- optimize performance, quality and impact of the health workforce through evidence-informed policies on human resources for health;
- align investment in human resources for health with the current and future needs of the population and health systems, taking account of labour market dynamics and education policies;
- build the capacity of institutions at subnational, national, regional and global levels for effective public policy stewardship, leadership and governance of actions on human resources for health;
- strengthen data on human resources for health for monitoring and accountability of national and regional strategies, and the Global Strategy.

While improving the availability and distribution of PHC workers where there are shortages is absolutely essential, it is also important to improve the productivity and performance of the existing workforce. Performance barriers of PHC workers – such as unclear roles and expectations, unclear guidelines, poor processes of work, inappropriate skills mix within the work setting, competency gaps, lack of feedback, difficult work environments and unsuitable incentives – mean that even where there are no critical workforce shortages, PHC workers may still fail to provide quality care *(39)*.

Investing in a workforce with the appropriate skills mix works well for both better health and economic growth. Equally, the employment of health workers promotes economic growth, for which different pathways that have direct and indirect benefits have been identified *(40)*.

Developing a fit-for-purpose PHC workforce, especially in countries that are facing critical shortages, requires a medium-term to long-term strategic response, although some short-term interventions can also help to achieve quick wins. A concerted response at the national, subnational and community levels with the support of global and regional development partners can help accelerate progress towards an adequate, competent, well distributed and multidisciplinary PHC health workforce.

PHC workforce: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Health workforce density and distribution	• Number of health workers per 10 000 population disaggregated by occupation, gender, age, facility type, and subnational administrative area	• National health workforce information system • National health workforce accounts
• Existence of national or subnational standards for interprofessional education in accreditation mechanisms		
• Existence of national systems for continuing professional development		

Case study: Brazil

Needs and dynamics of the primary health care workforce in Brazil

Primary care and the health care workforce can be considered the greatest challenges of the Brazilian Unified Health System (Sistema Único de Saúde, SUS), principally in recent decades. A study was undertaken to describe the growth and regional distribution of the professions requiring higher education registered in the primary health care units, using a quantitative approach. The study concerns 14 accredited professions in the five major regions of Brazil from 2008 to 2013. The data were collected from the national database of the Ministry of Health.

Among the professional categories with the greatest rates of national growth were physical education teachers, nutritionists, occupational therapists, physiotherapists and pharmacists. In the North Region of Brazil, physiotherapy, social work and speech therapy stood out as having the highest growth rates; in the Northeast Region, the main categories were physical education, physiotherapy and occupational therapy; in the Central-West Region, nutrition and physiotherapy; in the Southeast Region, nutrition and pharmacology; and in the South Region, physical education. The major losses occurred in the professions of biologist and veterinary doctor in all regions. In general, the professional categories that comprise the family health support nuclei (núcleos ampliado de saúde da família, NASF), demonstrated greater growth rates than nurses and doctors *(41)*.

PHC workforce: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Develop or update health workforce strategies that prioritize investments in the PHC workforce to address community and population needs • Establish appropriate forums that engage health, education, labour, finance and planning ministries to ensure the alignment of different constituencies and stakeholders in developing health workforce strategies and plans • Mobilize adequate funding from local sources to sustain recruitment and retention of PHC workforce and minimize premature exit • Introduce appropriate strategies, through regulations and incentives, to deploy PHC workers in underserved areas • Strengthen education and training institutions to scale up and sustain the production of PHC workers in appropriate quantity, quality and relevance to respond to local health needs • Strengthen capacity of regulatory and accreditation authorities through certification, recertification and registration of primary care health workers	• Develop and implement competency-based post descriptions for all PHC workforce cadres that enhance merit-based recruitment, deployment, performance appraisal, and career development • Institutionalize and offer interprofessional continuing educational programmes for PHC teams that are equipped with broad-based skills, avoiding overreliance on subspecialist and tertiary care • Optimize motivation, satisfaction, retention and performance by promoting decent working conditions that ensure gender-sensitive employment free of violence, discrimination and harassment; manageable workload; adequate remuneration and non-financial incentives; hardship, housing and educational grants; and occupational health and safety • Provide career development opportunities through job security, supportive supervision, and career development pathways • Strengthen health workforce information systems and database for monitoring performance and informed decisions to improve workforce performance through implementation of national health workforce accounts	• Monitor PHC staff at community, outreach and facility levels and provide feedback for performance improvement • Engage in selection and deployment of staff at community, outreach and facility levels • Participate in consultations and care plan development • Participate in patient experience and satisfaction surveys	• Ensure that all global, multilateral and bilateral health sector grants and loans include a component of PHC workforce that contributes to capacity-building efforts beyond disease-specific in-service training and incentives • Support strengthening of data and evidence through implementation of national health workforce accounts • Establish mechanisms to determine proportion of development assistance for health allocated to human resources for health, especially PHC • Provide normative guidance, especially by WHO, to assist Member States in workforce planning and projections, education policies, health labour market analysis, costing of workforce strategies, and tracking of national and international financing for workforce

3.6 Physical infrastructure and appropriate medicines, products and technologies

Availability of the physical infrastructure and appropriate medicines, products and technologies that are needed to deliver quality PHC services

In addition to appropriately skilled and supervised personnel, all levels of health services are increasingly dependent on the reliable availability of infrastructure (including energy, water, medical gases and services), ICT (including reliable telephony, access to the Internet and computerized data management), and health technologies (including medicines, vaccines, medical devices, in vitro diagnostics and protective equipment, assistive devices, vector control materials and related consumables).

Indeed, many clients will seek out health care according to the health technology on offer. An explosion in the production and availability of health technologies, albeit of varying quality, has fostered competition in the provider marketplace, patients seeking access to health technologies at secondary or tertiary facilities, and rising out-of-pocket expenditure on health technologies, such as caesarean section delivery, that are often both unnecessary and potentially dangerous.

On the one hand, patients have a right to access health care at facilities that are clean and characterized by the qualities above. Such facilities should be able to order, appropriately store, and safely and effectively administer and utilize affordable and appropriate health technologies.

On the other, it is both inefficient and potentially dangerous to make all health technologies available to all providers, whether locally or through referral. This has resulted in problems such as gender imbalance due to selective abortion of female embryos identified on ultrasound; antimicrobial resistance due to first-line use of second- or third-line antibiotics without appropriate medical microbiology; immunization or treatment failure due to vaccine freezing or warming or use of substandard drugs; procuring expensive technologies that cannot be used safely due to lack of training; or treatment or diagnosis being postponed due to lack of consumables or maintenance. Substandard drugs are estimated to be responsible for hundreds of thousands of deaths each year *(42)*.

It is therefore incumbent on health administrators to ensure that health technologies are not only available to health facilities but also transported, stored and used appropriately, according to the level of care needed, the capacity of the personnel on site, local regulations on their use, and the population covered. This is not only critical to ensuring public confidence in and the quality and efficiency of health services, but is also part of restoring the appropriate balance of health services, with the majority delivered at the front line.

Health technologies should also be approved for market authorization by the national regulatory authorities in each country in which they are introduced. This should involve nations undertaking health technology assessment, or a similar process of evidence-based decision-making. Health technology assessment is defined as the systematic evaluation of the properties, effects, or impacts of health technology. It is a multidisciplinary process that evaluates the social, economic, organizational and ethical issues related to health technology, informing decisions on when, where and how it can be used. Global guidelines such as lists of essential medicines, vaccines, medical devices and associated procedures are useful in determining which health technology is appropriate for local assessment to support services in primary care *(43)*.

After assessment, health technology must be appropriately managed. This includes the specifications for procurement or donation, supply chain standards and decommissioning. This process is again complex and depends on the technology type, maintenance and calibration requirements, inventories and funds for continuous operation.

Considerable effort has gone into the development of lists of commodities and services for primary care and referral level by ministries of health, planning officers and United Nations organizations. These are available through various sources *(44,45)*. Countries newly or reestablishing primary care have an opportunity to plan the use of health technologies according to the availability of a good supply source and appropriate transport, storage and operation conditions, with reagents or associated materials as needed, all with reliable supervision and regulation. This may require new resources from a sustained source, or formal collaborations with networks of private providers of primary care or suppliers of commodities. Some countries are now decentralizing medical stores, contracting out medicines procurement and distribution services, restricting the lists of medicines and vaccines that are included in national health insurance schemes, and participating in quality assurance and equipment maintenance programmes.

Countries should also maintain access to health technologies during outbreaks or emergencies. This may require prepositioning or using established capacity for rapid manufacturing or distribution of central stores of goods. Rapid deployment of surveillance and communications equipment may be required for information collection and dissemination and health promotion in such contexts.

Other technologies may derive from non-health sectors but have great impact on health outcomes, for example drones for delivery of drugs and vaccines to remote providers, solar power for refrigeration, water purification technologies, and fund transfer systems that enable safe and instant payment for services, including through government-contracted suppliers and private providers *(46)*.

A high proportion of health expenditure goes on payment for health technology. Prior to recent health reforms, 40% of China's total health expenditure was on medicines, mostly out of pocket *(47)*. Diagnostic tests (such as scans or blood tests) are equally overused. This calls for efficient regulation of health technology usage, funding and payment.



Physical infrastructure and appropriate medicines, products and technologies: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Prioritize construction of appropriate health facilities with functioning utilities and communication to ensure capacity for referral • Establish appropriate national regulatory bodies to ensure independent and credible guidance and restrictions on use of health technology • Fund quality assurance of health technology using lot quality assurance or other sampling approaches • Use health technology assessment to assess the introduction of new technology or to establish regulatory guidance on existing products • Use health technology or supply chain management to ensure safe availability of approved products at the point of use • Ensure adequate domestic resources, or establish public–private partnerships to assure access to health technology appropriate to primary care • Establish national capacity to mobilize health technology during health emergencies, including diagnostics, personal protective equipment and medicines	• Prioritize access to appropriate health facilities and infrastructure (through rehabilitation or building of facilities), whether public or non-State, equipped and reliably stocked with appropriate and affordable medicines, vaccines, and other health products and techologies • Ensure proper management and maintenance of health facilities, prioritizing reliable power, sanitation and clean water, and health technology storage and supply • Implement national standards on health technology usage and scheduled inspection and supervision by qualified authorities • Undertake periodic random surveys of storage, availability and quality • Ensure adequate local resources or establish public–private partnerships to assure access to health technology at primary care level • Establish local capacity to mobilize health technology during health emergencies, including needed personal protective equipment • Disseminate guidance on health technology and on national standards to community leaders	• Use mechanisms established to facilitate reporting on health facility standards and functions (e.g. citizens' scorecards) • Participate in decisions on and oversight of health technology	• Establish national regulatory body to participate in standards on the quality and safety of health technology • Lobby national authorities in manufacturing countries to regulate quality standards of locally produced MVDD • Establish regular reporting of identified fake or substandard commodities to appropriate global authorities

Physical infrastructure and appropriate medicines, products and technologies: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Primary care infrastructure of adequate quality	• Proportion of registered health facilities with an improved source of clean water	• WHO/UNICEF Joint Monitoring Programme on Water Supply and Sanitation (JMP) • WHO/UNICEF Joint Reporting Form on vaccines and immunization
• Reliable access to essential drugs and vaccines	• Stock-outs of vaccines	
• Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis		• SDG indicator 3.B.3 on availability of essential medicines
• Health facility density		

Case study: United Republic of Tanzania

Improving accessing to quality medicines at community level in United Republic of Tanzania

As in many low-income countries, communities in rural areas of the United Republic of Tanzania lack access to reliable medicines, dispensed by providers trained in their use. Many depend on local vendors without formal training, dispensing drugs they have bought from suppliers who themselves have often purchased them through unregulated channels. WHO recently reported that over 10% of drugs dispensed globally are substandard, and thus ineffective or even dangerous. This figure is much higher in low- and middle-income countries.

Rather than ban these vendors and leave communities with no local access to drugs during illness, Tanzanian health authorities undertook a long process of converting the local vendors into accredited drug dispensing outlets (ADDOs). The process was comprehensive and designed for sustainability. It involved changing the behaviour and expectations of individuals and groups that use, own, regulate or work in retail drug outlets. The ADDOs were provided with financial incentives and tailor-made training programmes to address their different capacity needs. All ADDOs are required by law to adhere to standards related to product and service quality in order to maintain government accreditation, as well as meeting client demands and expectations for quality products and services.

By June 2014, the programme had trained over 19 000 providers in almost 6100 shops, with a further 3100 in training. Moreover, it had trained 3262 drug shop inspectors (unpublished data). The providers are linked to local primary care facilities and the programme has been overseen by a range of regulatory authorities, wholesalers, political and local leaders, and consumer groups.

3.7 Digital technologies

Use of modern health information and communication technology (ICT) in ways that improve effectiveness and efficiency and promote accountability

Information and communication technology (ICT) has changed dramatically in recent decades, with technologies such as the Internet and mobile telephony spreading far more rapidly than earlier technologies. Although access is not yet universal, more than 8 in 10 people in developing countries own a mobile phone and nearly half of the population globally uses the Internet. These technologies are more equitably distributed across the planet than income is, such that even the region with the lowest mobile penetration – sub-Saharan Africa – has 78 mobile cell subscriptions per 100 people.

The ICT revolution has brought about important shifts in how individuals and communities manage their own health and access information about health conditions, treatment options, and the availability (and sometimes quality) of service providers. This can put new power in the hands of people and shift the nature of the relationship between medical provider and patient by reducing the asymmetry of information. However, too much of the information currently available is only in English or other languages that are typically not the first language of people in low- and middle-income countries, which is limiting the impact of the ICT revolution in these settings. The spread of social media helps address this, as it facilitates peer–peer sharing of medical information, although the information is mostly unvetted for accuracy. Additionally, new technologies are creating new ways that people can hold service providers to account, as well as enabling more effective and larger-scale advocacy efforts.



New technologies are also having profound effects on the provision of health services, particularly through an explosion of medical digital technologies, "mHealth" (mobile health), and "eHealth" (electronic health) initiatives. Governments have rapidly responded to this changing landscape by developing national strategies or plans for them, the number of which has increased from under 20 a decade ago to nearly 60 as of 2016 *(48)*.

There are four main targets for mHealth and eHealth initiatives: individuals, health providers, health information systems, and medical devices.

The widespread availability of mobile phones makes it far easier to reach individuals with directed messaging aimed at changing behaviours (for example, to promote adherence to medication or to encourage return visits to a health facility) as well as simply providing information. Many of the initiatives attempting to do this are still small scale, but an ecosystem is growing that helps catalogue efforts and share information about what works and what does not.[1] This should facilitate scale-up.

An increasing number of countries are attempting to address human resources constraints – particularly in relation to primary care – through e-learning or telemedicine. The former aims to build capacity among health professionals through electronic courses or other forms of preservice and in-service training. These can reduce the cost of training, improve access to expertise, and enable access to training in settings that have limited educational facilities. Telemedicine can provide access to specialist expertise by transmitting medical images and clinical data or descriptions to off-site facilities that support diagnosis and can propose treatment options. Areas of focus thus far include radiology, dermatology, pathology and psychiatry, but improvements in mobile phone technology are expanding the range of services that can be offered, including in new areas such as cardiology and ophthalmology. The impact of these is particularly important in primary care, given the ways in which they can dramatically increase the capacity of health personnel who have limited medical education (for example, community health workers). However, it is also important to note that telemedicine requires medical technologies at both ends and involves specific concerns on data management and legal responsibilities between the practitioner on site and the specialist off site. Other technologies are further from widespread use in low- and middle-income countries but are likely to have a major impact in the coming years. For example, artificial intelligence is already starting to be used to improve diagnosis, while personalized genomics has the potential to enable tailored treatment approaches.

Advances in ICT have already shaken up health information systems, with the traditional paper-based systems having been partially or fully replaced by electronic systems for collecting, coding and aggregating data in many countries, resulting in significant improvements in the timeliness and accuracy of information systems, particularly through the DHIS2 platform.[2] Electronic health records are less widespread but WHO reports a nearly 50% increase in the use of these systems in the past five years *(48)*. Ensuring legislation to protect confidentiality is an important component of electronic health records, but has lagged in a number of countries.

Two emerging applications of ICT that are particularly relevant to PHC are the ability to use "big data" approaches to analyse patterns and trends, and efforts use data to improve the targeting of public health efforts (sometimes called "precision public health"). New technologies have already made an impact in supply chain management (for example, through electronic logistics management information systems), and there are efforts under way to use cutting-edge approaches such as blockchain technology to improve the reliability of supply chains.

Finally, ICT is increasingly embedded in new medical devices, enabling them to be more precise, record clinical data, facilitate diagnosis, and enable decision support systems. Medical devices can also interact among themselves and provide electronic data to health records, if interoperability is addressed *(49–53)*.

[1] See for example mHealthKnowledge: https://mhealthknowledge.org/.
[2] https://www.dhis2.org/.

Digital technologies: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Develop, as appropriate, national eHealth strategies and plans, and legislation and data protection policies around issues such as data access, sharing, consent, security, privacy, interoperability and inclusivity, consistent with international human rights obligations • Move mHealth and eHealth initiatives from pilots to scale, including by integrating digital technologies into existing health systems infrastructures and regulation • Establish standards, accreditation procedures, and evaluation activities to certify and ensure the quality of training delivered through approaches that include elearning • Establish mechanisms to learn about new developments around ICT globally and identify gaps in existing efforts that could be addressed through new technologies • As appropriate, conduct health technology assessments	• Accelerate efforts to implement electronic health information systems, including electronic health records • Facilitate continuing professional development through elearning • Explore the possibilities of improving the quality of care through telemedicine and clinical decision-making support tools	• Utilize ICT to become informed consumers of health information • Use new avenues enabled by technology to provide feedback on health services	• Support efforts to build platforms that make health information available in local languages • Develop a repository on regulations and evidence related to effectiveness, unintended effects, quality and cost-effectiveness of digital health technologies • Support efforts by countries to share and disseminate good practices and successful examples of digital health architecture, programmes and services • Support the development of standards for interoperability • Monitor developments and trends of digital technologies in health systems, public health and data science, and analyse their implications for the achievement of the health-related SDGs

Digital technologies: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Availability of a national eHealth strategy	• This indicator tracks whether or not a country has developed a national strategy on eHealth	• Publication records
• Percentage of health facilities using electronic health records	• This indicator tracks the progress of implementing electronic health records (total number of facilities that are fully using electronic health records) / (total number of health facilities)	• Facility records, national health management information system
• Telehealth programmes operating nationally	• This indicator tracks the extent of scale-up of telehealth programmes	• Global Observatory for eHealth

3.8 Purchasing and payment systems

Purchasing and payment systems that promote PHC and integration across the health system and create incentives to improve access, quality, equity and efficiency of care

The way in which providers are paid is known to have a profound impact on the volume and quality of health services delivered. Financing and provider payment methods for PHC can serve as important tools for addressing issues of access, quality and equity in health care. Well thought-out purchasing and payment models allow adequate resources to flow to the PHC level and increase the accessibility of priority interventions to the entire population. These models can also create incentives across the health system to manage population health, use resources efficiently, and avoid unnecessary services and expenditures at the secondary and tertiary levels *(54)*.

Many low- and middle-income countries find it challenging to improve PHC due to underprovision of high-priority services, overreliance on hospitals to deliver PHC services, poorly functioning referral systems, difficulty in managing costs, inefficient allocation of limited resources, obstacles to effectively engaging private sector providers, and lack of monitoring and performance measurement. Designing and implementing appropriate provider payment methods can provide the right incentives to help strengthen PHC and advance other health system objectives.

Introducing innovative provider payment methods is assuming greater importance as PHC systems are increasingly being led by family physicians in low- and middle-income countries. This transition has taken place in industrialized countries where the remuneration model emphasizes per patient or per capita payments as being the best way for the health system to pay front-line health workers. The most commonly used provider payment methods include line item budget (staff salary being the line item), global budget, fee for service, capitation (per capita payment), per diem, and case-based payment (for example, diagnosis-related groups). The first four are more relevant to paying primary care providers and are explained in Table 2.





Table 2. Assessment of provider payment methods

Payment method	Definition	Incentives for providers	When the method may be useful
Line item budget	• Providers receive a fixed amount for a specified period to cover input expenses (e.g. personnel, medicines, utilities)	• Underprovide services, increase referrals, increase inputs, spend all remaining funds by the end of the budget year • No incentive or mechanism to improve efficiency	• Management capacity of the purchaser and providers is low; cost control is a top priority
Global budget	• Providers receive a fixed amount for a specified period to cover aggregate expenditures to provide an agreed-upon set of services • Budget is flexible and not tied to line items	• Global budgets formed based on inputs: underprovide services, increase referrals, increase inputs • Global budgets formed based on volume: increase the number of services, increase referrals, decrease inputs (possible efficiency)	• Management capacity of the purchaser and providers is at least moderate; competition among providers is not possible or not an objective; cost control is a top priority
Fee for service	• Providers are paid for each individual service provided • Fees are fixed in advance for each service or group of services	• Increase the number of services, including above the necessary level; reduce inputs per service, which may improve the efficiency of the input mix	• Increased productivity, service supply and access are top priorities; there is a need to retain or attract more providers; cost control is a low priority
Capitation (per capita)	• Providers are paid a fixed amount in advance to provide a defined set of services for each enrolled individual for a fixed period of time	• Improve efficiency of the input mix, attract enrollees, decrease inputs, underprovide services, increase referrals, improve output mix (focus on less expensive health promotion and prevention), attempt to select healthier (less costly) enrollees	• Management capacity of the purchaser is moderate to advanced; strengthening primary care and equity are objectives; cost control is a priority; choice and competition are possible

Source: Adapted from Langenbrunner, Cashin and O'Dougherty *(55)*.

While there is no ideal payment method and each model has its strengths and weaknesses, many countries are moving towards some variation of capitation payment for PHC. Capitation[3] is structured around paying for a defined set of services for a defined catchment area population (or for the people affiliated to that facility) and period of time, rather than tying payment to specific diagnostic and curative services when those services are delivered. While capitation has its own limitations, among all of the payment methods it is the most consistent with the philosophy of PHC. In general, countries are moving towards (total or partial) capitation because the alternatives – fee for service and line item budgets – have demonstrated shortcomings in supporting a PHC-centred health system.

A growing number of new provider payment models, which often combine different payment methods, are emerging that explicitly seek to align payment incentives with health system objectives related to quality, care coordination, health improvement, and efficiency by rewarding achievement of targeted performance measures. These have become collectively known as "pay for performance" (P4P). The most important contributions of P4P mechanisms may be their reinforcing effects on broader performance improvement initiatives, and their spillover effects, or other health system strengthening that occurs as a by-product of the incentive programmes *(56)*.

[3] Capitation offers a fixed payment to a provider to care for a specified population over a specified period, in effect offering a block contract.

Purchasing and payment systems: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Develop a strategic approach to provider payment in primary care as part of the wider health financing and strategic purchasing strategy • Define the PHC service package before selecting payment methods • Choose purchasing and payment models that move from fee for services towards capitation-led models to better meet PHC service delivery objectives • Use a combination of costing and other information to match resources to the PHC package • Introduce P4P by piloting combination of payment methods in addition to capitation	• Adapt the PHC service based on national package before selecting payment methods • Support continuous improvement of PHC payment systems through regular monitoring of the incentives and possibly adjustment in payment method	• Monitor facility or provider performance to ensure desired quality of care that minimizes underprovision or overprovision • To the extent possible, avoid making under-the-table payments or unnecessarily high level of copayments for primary care services	• Provide appropriate tools and guidelines for developing benefit package and its costing • Develop capacity-building programmes for nationals to better understand advantages and disadvantages of provider payment methods

Purchasing and payment systems: monitoring and metrics

Indicator(s)	Source(s) of information
• The average amount of resources (allocation, payment or claims) paid per person per month, quarter or year for the PHC package	• Ministry of health, district health office or facility records • National health management information system
• Proportion of health workforce paid through strategic purchasing (blended payment systems)	• Ministry of health, district health office or facility records • National health management information system

Case study: Thailand

Strategic purchasing and health system efficiency: comparison of two financing schemes in Thailand

Strategic purchasing is an essential health financing function, and one of its key elements is provider payment. A recent study compared the strategic purchasing practices of Thailand's two tax-financed health insurance schemes, the Universal Coverage Scheme (UCS) and the Civil Servant Medical Benefit Scheme (CSMBS), and identified factors contributing to successful universal health coverage outcomes by analysing the relationships between the purchaser and government, providers and members *(57)*. The study used a cross-sectional mixed methods design, including document review and interviews with 56 key informants. The Comptroller General's Department of the Ministry of Finance manages CSMBS as one among several civil servant welfare programmes, while the National Health Security Office manages purchasing for UCS. Fee-for-service payment for outpatient care has resulted in rapid cost escalation and overspending of their annual budget. In contrast, the National Health Security Office engages in strategic purchasing of health services, undertaking a range of strategic purchasing actions, including applying closed-end provider payment, promoting the gatekeeping functions of PHC, exercising collective purchasing power, and engaging the views of members in the decision-making process. The difference in purchasing arrangements between the two schemes has resulted in expenditure per CSMBS member being four times higher than UCS in 2014. The table below highlights the differences in purchasing.

	CSMBS	UCS
Purchaser organization	Comptroller General's Department of Ministry of Finance	National Health Security Office
What services are purchased?	Similar to UCS, but use of non-essential medicines is permitted	Comprehensive services, including medicines with reference to National List of Essential Medicines for UCS beneficiaries and health promotion and disease prevention for all Thais (not only UCS members)
Who uses the services?	5 million members (8% of population) who are civil servants, government pensioners and their families	48 million (75% of population), not members of CSMBS and social health insurance; mostly rural in the informal economic sector, 50% belonging to poorest and poor wealth quintiles
Who provides the services?	No PHC gatekeeping, direct access to public hospitals and specialists; access to private hospitals is only for life-threatening accident and emergencies	A contracting public primary care provider network, notably a district health system, consisting of health centres and a district hospital. The network serves a gatekeeping function. UCS members need to register with the district health system; do not have free access to providers outside their network unless referred
How providers are paid	Originally, fee for service was used for all services. CSMBS reformed to disbursement from Comptroller General's Department directly to providers for outpatient services in 2003 and diagnostic related group for inpatient services in 2007	Mixed provider payment applied, with age-adjusted capitation paid to district health system, based on the number of registered members in the catchment population, including referral costs. Hospitals are paid by diagnostic related group with national global budget. Other high-cost interventions such as dialysis are paid on a fee schedule; health promotion and prevention for all Thais is paid on a capitation basis with some combination of fee schedules

The governance of the purchaser organization, the design of the purchasing arrangements including incentives and use of information, and the institutional capacities to implement purchasing functions are essential for effective strategic purchasing, which can improve health system efficiency as a whole.

3.9 PHC-oriented research

PHC-oriented research and knowledge management, including dissemination of lessons learned, as well as the use of the knowledge to accelerate scale-up of successful approaches

Systems, policies, strategies and operational plans should be informed by the best available evidence of what works and how, and implementation and health systems research is key to providing this. This includes research on interventions that support all components of the PHC orientation, strategies to best engage people in their own care and in service design, self-management of common health problems, the substitution of professionals, and the transfer of care responsibilities along integrated care pathways. It is not enough simply to conduct this research; ensuring that it informs policy and decision-making is key, and a number of efforts have been developed to support countries in doing this. Additionally, the acquisition of information and the development of knowledge will benefit from new options enabled by modern ICT, such as wikis and co-learning models that operate virtually.

In addition to pressing clinical research issues (perhaps best exemplified by the need to identify best approaches for adequately responding to the challenges posed by multimorbidity and inappropriate polypharmacy, both in terms of their management and prevention), PHC research is facing a number of challenges, including:

- devising strategies for addressing population needs and policy priorities and for adopting efficient approaches to priority setting (including through co-production of research);
- the need to develop capacity in broad areas of the world where care delivery is still perceived as the sole objective;
- consolidating multidisciplinary research in terms of both methodologies and research questions;
- advancing the science on complex PHC policy and systems interventions, including the identification of PHC experiences and outcome measures;
- developing and supporting models of knowledge transfer to bridge the knowledge gap and promote knowledge uptake in implementation and PHC systems research;
- developing narratives of impact of research that demonstrate the huge potential benefits of investing in research that has the potential to impact broad segments of the population;
- reinvigorating a focus on equity, which can also effectively address the urban–rural divide.

Relevant stakeholders that need to be involved include research funders (public and charities), universities and research centres, health technology assessment institutions, scientific societies, ministries of science and research and other decision-makers, patients and the public, and health care professionals *(58–61)*.

PHC-oriented research: actions and interventions

Policy level	Operational and implementation level	People and communities	Global or regional partnership
• Earmark research funding in budgets for PHC programmes and policies • Increase targeted funding of research for PHC research capacity infrastructure (such as national PHC research institutes or schools)and dedicated financing, including for complex PHC systems research through standard and specific calls for proposals • Adopt efficient models of knowledge transfer, potentially as part of the specific remit of PHC research institutes • Develop narratives of impact of PHC research • Adopt multisectoral approaches to research to understand PHC as an entry point into intersectoral collaboration • Apply an equity lens to PHC policy research and evaluation • Develop and implement approaches to co-production of PHC research • Develop and implement a framework to promote public and patient involvement in research questions, study design and conduct, and dissemination • Establish public and patient involvement as a requisite for access to publicly funded projects • Advance the practice of community-based participatory action research • Adopt priority-setting approaches to stimulate the relevance and reduce wastage of PHC research	• Support the development of primary care research networks • Support implementation research to inform scale-up of effective interventions and models	• Advocate public and patient involvement in research questions, study design and conduct, and dissemination • Participate when public and patient involvement is introduced (e.g. through community advisory boards)	• Promote cross-national and regional networks of PHC research centres • Support public and patient involvement as a prerequisite for funding

PHC-oriented research: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Percentage of public research funding devoted to PHC research	• Numerator: public funding devoted to PHC Denominator: all public funding for health research	• Ministry of science, ministry of finance
• Percentage of publicly funded research projects with patient and public involvement	• Numerator: public funding devoted to PHC Denominator: all public funding for health research	• Ministry of science, ministry of finance
• Percentage of research outputs on PHC-relevant topics	• Numerator: PHC research-relevant outputs Denominator: all health research outputs	• Bibliographic databases

Case study: United Kingdom

INVOLVE: supporting health research in the United Kingdom

INVOLVE was established in 1996 as part of the National Institute for Health Research, the major public research funder in the United Kingdom, to support active public involvement in research conducted in the National Health Service, public health and social care. It is one of the few government-funded programmes of its kind in the world. As a national advisory group, its role is to bring together expertise, insight and experience in the field of public involvement in research, with the aim of advancing it as an essential part of the process by which research is identified, prioritized, designed, conducted and disseminated. Successful applications for National Institute for Health Research funding have to demonstrate public involvement, which is specifically assessed by reviewers against explicit criteria.



3.10 Monitoring and evaluation

Monitoring and evaluation through well-functioning health information systems that generate reliable data and support their use for improved decision-making from local to global level

It is impossible to deliver PHC effectively and efficiently without accurate, up-to-date data about the health status of individuals and the population and the current state of the health system. An increasing number of countries have recognized this and committed to focusing on strengthening health information systems: the number of countries reporting having a dedicated national health information policy or strategy increased from under 20 in 2006 to more than 80 in 2015, and this tally does not count those that have embedded their health information systems strategies within a broader national health strategy or an eHealth strategy *(48)*.

The first step in strengthening health information systems is being clear on what data are needed, which is typically captured in results frameworks of documents such as national health strategies or PHC strategies. Considerable progress has been made in reaching agreement on standard definitions of indicators that can be used to track progress on many aspects of PHC, as reflected in documents such as the 2018 Global Reference List of 100 Core Health Indicators (plus health-related SDGs). The Primary Health Care Performance Initiative has also identified a set of indicators specifically focused on PHC. Some gaps still remain, particularly in areas beyond primary care: there is less consensus on indicators for the "empowered people and communities" and "multisectoral policy and action" components of PHC, although the integrated nature of the SDGs has prompted some more attention to these areas in settings such as the Health Data Collaborative.

The most common challenges relate not to the selection of indicators but rather to the systems that produce the data for these indicators. Data can come from a range of sources, particularly:

- routine facility reporting systems (sometimes known as health management information systems);
- health system resources, such as health facility assessments, health financing data, health workforce data, and logistics management information systems;
- population-level sources, particularly regular population-based surveys of population health and health risks, civil registration and vital statistics (CRVS) systems, and censuses;
- surveillance data that detect public health threats;
- evaluations of programme performance.

Routine facility reporting systems are the cornerstone of PHC monitoring, as they provide real-time information about programme performance, which is essential for improving service delivery. The past decade has seen major investments in improving health management information systems, particularly through the expansion of real-time reporting systems (for example, the roll-out of DHIS2, a free, web-based, open-source software that has been deployed at national scale in more than 50 countries worldwide) and in using electronic medical records systems.

A variety of approaches are used to gather data about health systems resources. Health facility assessments, such as the Service Availability and Readiness Assessment, the Service Delivery Indicators project, and Service Provision Assessment surveys, can capture information that is not routinely reported, such as availability of essential equipment, medicines, supplies and human resources; functionality of equipment; staff capacity; compliance with clinical guidelines; quality of care; and client experience. National health accounts provide essential financial information to inform policy choices, budgetary planning and resource allocation, and to monitor accountability, and should be complemented by household expenditure surveys and reviews of national budgets. Many countries lack reliable data on their health workforce, so a system of national health workforce accounts can progressively improve workforce data through use of a set of core indicators and standardization of the health workforce information system. Logistics management information systems are critical for tracking the availability of medical products throughout the supply chain.

The process for producing periodic household surveys (such as demographic and health surveys or multi-indicator cluster surveys) has been refined based on a number of years of experience and so is something that runs smoothly in most countries. These surveys are critical for generating nationally representative figures about the health status of the population and coverage of key interventions, but because of the time and expense of carrying them out they can typically only be done every four or five years. Less progress has been seen on CRVS systems, although recently the Global Financing Facility has stepped up investments in these.

Surveillance systems draw from both routine facility systems and event-based channels that tap a wider range of sources, including community-based sources. Primary care facilities and their community linkages are critical parts of detection and early warning. Rapidly advancing technologies provide new opportunities for involving the public to improve monitoring and alert capacities.

While the first three sources of data listed above provide descriptive statistics on the current state of affairs and trends over time, evaluation is the best way to determine whether or not a particular programme or intervention is causing the intended outcomes. It is good practice that evaluation is designed and built into a programme at the outset, based on a clear hypothesis and theory of change, rather than something that is tacked on at the end of the programme. Building evaluation approaches from the beginning enables the evaluation findings to contribute to course corrections during implementation rather than simply passing judgement at the end, and a wide array of different evaluation methodologies have been developed to enable this.

Across all of these, the spread of innovations in ICT is opening up new possibilities, with mobile phones and tablets in particular facilitating the rapid collection and sharing of data, while blockchain technology is being actively explored in the context of supply chain management. These can also help address one of the persistent challenges in many countries: the extent to which all providers – including those in the private sector and in more remote areas – are covered by the systems. Another key challenge with routine systems is data quality. A number of tools have been developed in recent years to assist with reviewing and improving quality (for instance by WHO and MEASURE Evaluation), many of which build on advances in ICT.

Having reliable sources of data is necessary for improving programme performance but it is not sufficient: the data must be put to use for identifying bottlenecks and making course corrections. Many countries hold annual reviews of progress, occasionally in the form of a widely consultative national health assembly *(62)*. Midterm reviews of national strategies are another important moment to synthesize and analyse data and reflect on what the evidence is showing. Such reviews should be informed by a comprehensive analytical report that provides an in-depth analysis and synthesis of all relevant data. An analytical report contains key indicators, targets and benchmarks, equity analyses, and performance and efficiency analyses. The report should also include qualitative assessment of contextual changes. At health facility and subnational levels, scorecards or dashboards including a limited set of key indicators with targets and "traffic lights" have significant potential for improving data quality control and regular reviews of primary care performance. A number of resources (such as MEASURE Evaluation and WHO's curriculum on routine health information systems) and tools (such as UNICEF's EQUIST) have been developed to support countries in building capacity in collecting and using data.

The above focuses on data within the health sector, but since multisectoral policy and action is a crucial component of PHC, as part of reviews of performance data should be drawn in from other sectors, such as water and sanitation, education, environment and agriculture. The specifics of this will vary by country depending on the most relevant social, economic, environmental and commercial determinants of health, but this will typically require building collaboration with relevant non-health ministries.

Last but not least, although monitoring and evaluation are often thought of as the domain of health systems and specifically ministries of health, people and communities can play important roles in generating information about their own health and about their experiences interacting with health systems. In richer countries, innovations in ICT have enabled people to track their own health status and its key determinants (such as exercise levels) much more accurately than in previous generations, and these are starting to spread globally, with new applications continually expanding how mobile phones and other technologies can be used to track different elements of a person's health. Mobile technology has also opened up new ways for people to report on the quality of the health care that they receive and on related matters such as governance issues. For example, UNICEF's U-Report system has facilitated millions of young people in more than 40 countries directly weighing in on the matters that are most important to them, including on their experiences with health systems *(63–72)*.

Monitoring and evaluation: actions and interventions

Policy level	Operational or implementation level	People and communities	Global or regional partnership
• Ensure the availability of an updated national health information strategy • Agree on key, nationally appropriate indicators to track progress on PHC • Strengthen systems to collect data, including through routine systems, household surveys, facility surveys and evaluations • Employ ICT to extend reach of health management information systems, including to the private sector and remote areas • Conduct regular multistakeholder reviews of data	• Strengthen systems to collect and use data, particularly those collected through routine systems • Supervise the system of data collection, using for example a system of random assessments or lot quality assurance approaches • Build capacity to process and use data at the subnational level for local decision-making • Use information from routine systems as a starting point for improving supportive supervision of front-line workers	• Use new ICT to improve personal tracking of health • Engage in efforts to improve the quality of health services by using reporting mechanisms to identify good or bad practices	• Continue to support capacity-building • Continue to improve harmonization among key international actors, to avoid fragmentation in monitoring and evaluation requests and systems (in particular through the Health Data Collaborative) • Develop guidance on indicators for "empowered people and communities" and "multisectoral policy and action"

Monitoring and evaluation: monitoring and metrics

Indicator(s)	Description	Source(s) of information
• Completeness of reporting by facilities	• Numerator: number of reports received Denominator: total number of expected reports • This is a WHO Core 100 indicator	• Routine health information system
• Proportion of children aged under 5 years whose births have been registered with a civil authority, by age	• Numerator: number of children aged under 5 years whose births are reported as being registered with the relevant national civil authorities Denominator: total number of children aged under 5 years • This is an SDG and a WHO Core 100 indicator	• National population-based survey (or CRVS system if coverage is national and is considered reliable)
• Percentage of deaths that are registered (with age and sex)	• Numerator: number of deaths registered Denominator: Total number of deaths • This is an SDG and a WHO Core 100 indicator	• CRVS system (or national population-based survey)
• Frequency of national multistakeholder reviews of performance	• This indicator tracks the extent to which a country is holding regular reviews of the data generated and using them to adjust programme performance; these should include stakeholders from a range of backgrounds	• Meeting records
• High-quality analytical report on progress and performance produced annually	• The analytical report is predominantly based on analysis and synthesis of levels and trends for key health indicators of the country and aims to inform multistakeholder reviews of progress against plans; the review report should focus on the health sector strategic plan or similar cross-cutting health strategy and go beyond single programme reviews	

Glossary

Access (to health services). The ability, or perceived ability, to reach health services or health facilities in terms of location, timeliness, and ease of approach.

Accountability. The obligation to report, or give account of, one's actions, for example to a governing authority through scrutiny, contract, management and regulation, or to an electorate.

Ambulatory care sensitive conditions. Chronic conditions for which it is possible to prevent acute exacerbations and reduce the need for hospital admission through active primary care, for example asthma, diabetes and hypertension.

Amenable morbidity. The incidence of illness considered avoidable by health care interventions.

Amenable mortality. Deaths considered avoidable by health care interventions.

Care coordination. A proactive approach that brings care professionals and providers together around the needs of service users to ensure that people receive integrated and person-focused care across various settings.

Case management. A targeted, community-based and proactive approach to care that involves case-finding, assessment, care planning and care coordination to integrate services around the needs of people with a high level of risk requiring complex care (often from multiple providers or locations), people who are vulnerable, or people who have complex social and health needs. The case manager coordinates patient care throughout the entire continuum of care.

Change management. An approach to transitioning individuals, teams, organizations and systems to a desired future state.

Coherence (of a national health policy, strategy or plan). (a) The extent to which proposed strategies are aligned with the priorities identified in the situation analysis; (b) the extent to which programme plans are aligned with the national health strategy and plan; (c) the extent to which the different programmatic strategies in the national health policy, strategy or plan are coherent with each other; or (d) the extent to which the budget, monitoring and evaluation framework and action plan introduce the proposed strategies.

Collaborative care. Care that brings together professionals or organizations to work in partnership with people to achieve a common purpose.

Community. A unit of population, defined by a shared characteristic (geography, interest, belief, social characteristic), that is the locus of basic political and social responsibility and in which everyday social interactions involving all or most of the spectrum of life activities of the people within it takes place.

Community health worker. Person who provides health and medical care to members of their local community, often in partnership with health professionals; alternatively known as village health worker, community health aide or promoter, health educator, lay health adviser, expert patient, community volunteer or some other term.

Comprehensiveness of care. The extent to which the spectrum of care and range of available resources responds to the full range of health needs of a given community. Comprehensive care encompasses health promotion and prevention interventions as well as diagnosis and treatment or referral and palliation. It includes chronic or long-term home care, and, in some models, social services.

Continuity of care. The degree to which a series of discrete health care events is experienced by people as coherent and interconnected over time, and consistent with their health needs and preferences.

Co-production of health care. Health services that are delivered in an equal and reciprocal relationship between professionals, people using care services, their families and the communities to which they belong. Co-production implies a long-term relationship between people, providers and health systems whereby information, decision-making and service delivery become shared.

Chronic care. Medical care that addresses the needs of people with long-term health conditions.

Disease management. A system of coordinated, proactive health care interventions of proven benefit and communications to populations and individuals with established health conditions, including methods to improve people's self-care efforts.

Effectiveness. The extent to which a specific intervention, procedure, regimen or service does what it is intended to do for a specified population when deployed in everyday circumstances.

eHealth. Information and communication technologies that support the remote management of people and communities with a range of health care needs through supporting self-care and enabling electronic communications among health workers and between health workers and patients.

Empowerment. The process of supporting people and communities to take control of their own health needs resulting, for example, in the uptake of healthier behaviours or an increase in the ability to self-manage illnesses.

Engagement. The process of involving people and communities in the design, planning and delivery of health services, thereby enabling them to make choices about care and treatment options or to participate in strategic decision-making on how health resources should be spent.

Equity in health. The absence of systematic or potentially remediable differences in health status, access to health care and health-enhancing environments, and treatment in one or more aspects of health across populations or population groups defined socially, economically, demographically or geographically within and across countries.

Essential public health functions. The spectrum of competencies and actions that are required to reach the central objective of public health – improving the health of populations. This document is focused on the core or vertical functions: protection, promotion, prevention, surveillance and response, and emergency preparedness.

First level of care. The entry point into the health care system, at the interface between services and community; where the first level of care satisfies a number of quality criteria it is called primary care. See: primary care.

Fragmentation (of health services). (a) Coexistence of units, facilities or programmes that are not integrated into the health network; (b) services that do not cover the entire range of promotion, prevention, diagnosis, treatment, rehabilitation and palliative care services; (c) services in different platforms of care that are not coordinated among themselves; or (d) services that do not continue over time.

Goal-oriented care. Care that is planned and delivered based on goals and targets as explicitly elicited from each individual for the achievement of the highest possible level of health, as defined by that individual.

Health. State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.

Holistic care. Care that considers the whole person, including psychological, social and environmental factors, rather than just the symptoms of disease or ill-health.

Horizontal integration. Coordination of the functions, activities or operating units that are at the same stage of the service production process; examples of this type of integration are consolidations, mergers and shared services within a single level of care.

Indicator. Explicitly defined and measurable metric that helps in the assessment of the structure, process or outcomes of an action or a set of actions.

Integrated health services. The management and delivery of health services such that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services, through the different functions, activities and sites of care within the health system.

Integrated health services delivery network. A network of organizations that provides, or makes arrangements to provide, equitable, comprehensive and integrated health services to a defined population and is willing to be held accountable for its clinical and economic outcomes and for the health status of the population that it serves.

Life course approach. An approach suggesting that the health outcomes of individuals and the community depend on the interaction of multiple protective and risk factors throughout people's lives. This approach provides a more comprehensive vision of health and its determinants, which calls for the development of health services more centred on the needs of its users in each stage of their lives.

Mental health. A state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.

Multisectoral action on health. Policy design, policy implementation, and other actions by health and other sectors (for example, social protection, housing, education, agriculture, finance and industry), carried out collaboratively or alone, that address social, economic and environmental determinants of health and associated commercial factors, or that improve health and well-being.

Mutual (shared) accountability. The process by which two (or multiple) partners agree to be held responsible for the commitments that they have made to each other.

People-centred care. An approach to care that consciously adopts the perspectives of individuals, carers, families and communities as participants in, and beneficiaries of, trusted health systems that respond to their needs and preferences in humane and holistic ways. People-centred care also requires that people have the education and support they need to make decisions and participate in their own care.

Personal health services. Health services targeted at the individual, including health promotion, timely disease prevention, diagnosis and treatment, rehabilitation, palliative care, acute care and long-term care services.

Population health. An approach to health care that seeks to improve the health outcomes of a group of individuals, including the distribution of such outcomes within the group.

Primary care. A key process in the health system that supports first-contact, accessible, continued, comprehensive and coordinated patient-focused care.

Primary health care. A whole-of-society approach to health that aims to maximize the level and distribution of health and well-being through three components: (a) primary care and essential public health functions as the core of integrated health services; (b) multisectoral policy and action; and (c) empowered people and communities.

Primary health care-oriented health system. Health system organized and operated so as to make the right to the highest attainable level of health the main goal, while maximizing equity and solidarity. A primary health care-oriented health system is composed of a core set of structural and functional elements that support achieving universal coverage and access to services that are acceptable to the population and that are equity enhancing.

Quality care. Care that is safe, effective, people centred, timely, efficient, equitable and integrated.

Regulation. The imposition of constraints upon the behaviour of an individual or an organization to force a change from preferred or spontaneous behaviour.

Resilience. The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Self-care. Individuals, families and communities are supported and empowered to appropriately manage their health and well-being when not in direct contact with health services.

Stakeholder. An individual, group or organization that has an interest in one or multiple aspects of the health system.

Stewardship. A responsibility for the effective planning and management of health resources to safeguard equity, population health and well-being.

Universal health coverage. Ensuring that all people have access to needed promotive, preventive, curative, rehabilitative, and palliative health services, of sufficient quality to be effective, while also ensuring that the use of these services does not expose any users to financial hardship.

Vertical integration. The coordination of the functions, activities or operational units that are in different phases of the service production process. This type of integration includes the links between platforms of health service delivery, for example between primary and referral care, hospitals and medical groups, or outpatient surgery centres and home-based care agencies.

Vertical programmes. Health programmes focused on people and populations with specific (single) health conditions.

Well-being. A multidimensional construct aiming at capturing a positive life experience, frequently equated to quality of life and life satisfaction. Measures of well-being typically focus on patient-reported outcomes covering a wide range of domains, such as happiness, positive emotion, engagement, meaning, purpose, vitality and calmness.

Note: Definitions in this glossary are adapted from the following sources:

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Annex 1. Indicators for the health-related Sustainable Development Goals

SDG indicator	Indicator name
3.1.1	Maternal mortality ratio
3.1.2	Proportion of births attended by skilled health personnel
3.2.1	Under-five mortality rate
3.2.2	Neonatal mortality rate
3.3.1	Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations
3.3.2	Tuberculosis incidence per 1,000 population
3.3.3	Malaria incidence per 1,000 population
3.3.4	Hepatitis B incidence per 100,000 population
3.3.5	Number of people requiring interventions against neglected tropical diseases
3.4.1	Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease
3.4.2	Suicide mortality rate
3.5.1	Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders
3.5.2	Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol
3.6.1	Death rate due to road traffic injuries
3.7.1	Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods
3.7.2	Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group
3.8.1	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, noncommunicable diseases and service capacity and access, among the general and the most disadvantaged population)
3.8.2	Proportion of population with large household expenditures on health as a share of total household expenditure or income
3.9.1	Mortality rate attributed to household and ambient air pollution

SDG indicator	Indicator name
3.9.2	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)
3.9.3	Mortality rate attributed to unintentional poisoning
3.A.1	Age-standardized prevalence of current tobacco use among persons aged 15 years and older
3.B.1	Proportion of the population with access to affordable medicines and vaccines on a sustainable basis
3.B.2	Total net official development assistance to medical research and basic health sectors
3.C.1	Health worker density and distribution
3.D.1	International Health Regulations (IHR) capacity and health emergency preparedness
1.1.1	Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)
1.3.1	Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable
1.4.1	Proportion of population living in households with access to basic services
2.2.1	Prevalence of stunting (height for age < –2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age
2.2.2	Prevalence of malnutrition (weight for height > +2 or < –2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)
4.1.1	Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex
4.3.1	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex
4.6.1	Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex
5.3.1	Proportion of women aged 20–24 years who were married or in a union before age 15 and before age 18
5.6.1	Proportion of women aged 15–49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care
5.6.2	Number of countries with laws and regulations that guarantee women aged 15–49 years access to sexual and reproductive health care, information and education

SDG indicator	Indicator name
5.B.1	Proportion of individuals who own a mobile telephone, by sex
6.1.1	Proportion of population using safely managed drinking water services
6.2.1	Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water
7.1.2	Proportion of population with primary reliance on clean fuels and technology
8.1.1	Annual growth rate of real GDP per capita
9.1.1	Proportion of the rural population who live within 2 km of an all-season road
9.C.1	Proportion of population covered by a mobile network, by technology
10.2.1	Proportion of people living below 50 per cent of median income, by age, sex and persons with disabilities
11.1.1	Proportion of urban population living in slums, informal settlements or inadequate housing
11.6.1	Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities
11.6.2	Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)
11.7.1	Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities
13.1.1, 1.5.1	Number of deaths, missing persons and persons affected by disaster per 100,000 people
13.1.2, 1.5.3	Number of countries with national and local disaster risk reduction strategies
16.1.1	Number of victims of intentional homicide per 100,000 population, by sex and age
16.1.2	Conflict-related deaths per 100,000 population, by sex, age and cause
16.1.3	Proportion of population subjected to physical, psychological or sexual violence in the previous 12 months
16.2.3	Proportion of young women and men aged 18–29 years who experienced sexual violence by age 18
16.7.1	Proportions of positions (by sex, age, persons with disabilities and population groups) in public institutions (national and local legislatures, public service, and judiciary) compared to national distributions
16.7.2	Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group

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