Introduction to the PHC measurement framework and indicators to monitor health systems through a PHC lens
Operational framework for primary health care

• In response to World Health Assembly Resolution 72.2, when Member States requested an operational framework to support countries to implement the PHC vision

• Guides national and sub-national policy and planning processes towards strengthening PHC for progress towards UHC and the health-related SDGs

• Includes 14 strategic and operational levers around which countries can take actions and make investments to strengthen health systems and integrated health services

• Supported by companion document on PHC measurement and indicators

<table>
<thead>
<tr>
<th>Old paradigm</th>
<th>Vs</th>
<th>New paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease-based</td>
<td></td>
<td>Needs-based</td>
</tr>
<tr>
<td>Individuals</td>
<td></td>
<td>Population health</td>
</tr>
<tr>
<td>Acute care</td>
<td></td>
<td>Continuum of care</td>
</tr>
<tr>
<td>Fragmentation</td>
<td></td>
<td>Networks of integrated delivery services</td>
</tr>
<tr>
<td>Volume of services</td>
<td></td>
<td>Appropriate care at an appropriate level</td>
</tr>
<tr>
<td>Reactive to shocks</td>
<td></td>
<td>Proactive Preparedness</td>
</tr>
</tbody>
</table>

Source: World Health Organization, Regional Office for the Eastern Mediterranean (WHO EMRO)
"Monitoring, evaluation and review of health progress and performance are essential to ensure that priority actions and decisions are implemented as planned against agreed objectives and targets."

PHC measurement framework and indicators
Monitoring health systems through a PHC lens - for achievement of UHC and the SDGs

Objectives

1. support Member States to track, monitor and improve PHC performance within the context of national and subnational planning and review processes; and

2. report regularly on progress made globally in strengthening PHC as part of progress towards achieving UHC and the SDGs

Monitoring progress across the three PHC components

- **Integrated health services** (primary care & public health functions)
  - Includes novel measures to assess & monitor how countries are defining their integrated service packages, how those services are designed, organised and managed across different service delivery platforms and multidisciplinary teams to promote equitable and integrated person-centred care.

- **Empowered people and communities**
  - Integrates indicators to assess and monitor the extent of engagement with communities in defining problems and solutions at policy level, engaging in service planning and organization at service level and to assess how services are responding to community and individual needs.

- **Multisectoral policy and action**
  - Includes measures that assess the extent to which health in all policies with multisectoral coordination has been adopted to address the broader determinants of health.

---


See Annex 1. Menu of indicators for country selection for PHC monitoring, by PHC component.
Monitoring equity, quality and resilience

**Equity**
Indicators focus attention on inequalities and populations experiencing vulnerability, and are disaggregated using the main inequality dimensions
- socioeconomic status, wealth, urban and rural residence, age, education level, sex and gender, ethnicity, displacement, disability, and stigma

**Quality**
Dimensions of quality are embedded across measurement domains for use at different levels
- governance and policy frameworks
- health systems determinants (health workforce, physical infrastructure, medicines and other health products, health information systems)
- systems for quality & quality care (e.g. 1st contact, continuity, comprehensiveness, coordination, people centred + effectiveness, safety & timeliness)

**Resilience**
Integrates indicators to monitor policies and actions for building resilience of health systems and communities (aligned with emergency preparedness and response frameworks)
- Indicator examples: Existence of health emergency and disaster risk management strategies, institutional capacities to meet essential public health functions, contingency funds available for emergencies, effective surveillance systems, resilience of health facilities and services

See Tables 3.1, 3.2 and 3.3 for further information on indicators and considerations for monitoring equity, quality and resilience.
WHO PHC measurement: Conceptual framework

Health systems determinants

**Structures**
- Governance
  - Political commitment and leadership*
  - Governance and policy frameworks*
  - Engagement with communities & other multisectoral stakeholders*
  - Engagement with private sector providers*
- Physical infrastructure*
- Health workforce*
- Medicines and other health products*
- Health information
  - Information systems
  - Surveillance
- Digital technologies for health*

**Inputs**
- Physical infrastructure*
- Health workforce*
- Medicines and other health products*
- Health information
- Digital technologies for health*

**Processes**
- Models of care*
  - Selection and planning of services
  - Service design
  - Organization and facility management
  - Community linkages and engagement
- Systems for improving quality of care*

**Outputs**
- Access and availability
  - Accessibility, affordability, acceptability
  - Service availability and readiness
  - Utilization of services
- Quality care
  - Core primary care functions
    - First-contact accessibility
    - Continuity
    - Comprehensiveness
    - Coordination
    - People-centredness
  - Effectiveness
  - Safety
  - Efficiency
  - Timely access

**Health system objectives**

**Outcomes**
- Universal health coverage
- SDG 3
- Health-related SDGs

**Impact**
- Improved health status
- Health security
- Equity

**Determinants of health and risk factors**

Focus of PHC measurement conceptual framework
* PHC strategic and operational levers
Focus of the PHC measurement framework

Health systems determinants

**Structures**
- Governance
  - Political commitment & leadership*
  - Governance & policy frameworks*
  - Engagement with communities & other multisectoral stakeholders*
  - Engagement with private sector providers*
- Adjustment to population health needs
  - Monitoring & evaluation*
  - PHC-oriented research*
- Financing
  - Funding & allocation of financial resources*
  - Purchasing & payment systems*

**Inputs**
- Physical infrastructure*
- Health workforce*
- Medicines and other health products*
- Health information
  - Information systems
  - Surveillance
- Digital technologies for health*

**Processes**
- Models of care*
  - Selection & planning of services
  - Service design
  - Organization & facility management
  - Community linkages & engagement

**Outputs**
- Access and availability
  - Accessibility, affordability, acceptability
  - Service availability & readiness
  - Utilization of services
- Quality care
  - Core primary care functions
    - First-contact accessibility
    - Continuity
    - Comprehensiveness
    - Coordination
    - People-centredness
  - Effectiveness
  - Safety
  - Efficiency
  - Timely access
- Systems for improving quality of care*
- Resilient health facilities and services

**Service delivery**
(promotion, prevention, treatment, rehabilitation, palliation)

**Monitoring capacity of PHC**
*PHC strategic and operational levers

Is there political commitment to PHC to address the broader determinants of health?

Are policies and strategies in place that are oriented to PHC as the main vehicle for achieving UHC and SDGs?

Do mechanisms exist to promote multisectoral & community engagement?

Is the private sector engaged to align w/ health system goals?

- Health in all policies with multisectoral coordination
- Existence of right to health legislation
- Existence of national health policy oriented to PHC & UHC
- Existence of policy, strategy or plan for improvement of quality & safety
- Existence of health emergency & disaster risk management strategies
- Institutional capacity to meet essential public health functions & operations
- Professionalization of management
- Existence of coordination mechanisms w/ multistakeholder & community engagement
- Existence of national, sub-national & local strategies for community participation
- Evidence of effective stewardship of mixed (public/private) health systems
Extract of Indicators for monitoring adjustment to population health needs

**Structure domains**
- Adjustment to population needs
  - Monitoring and evaluation*
  - PHC-oriented research

**Key questions**

Do data and evidence inform the identification of health priorities?

Is research adequately funded to support the identification of health priorities and documentation of successful strategies in strengthening PHC?

**Menu of indicators for country selection**
- Priority setting is informed by data and evidence
- Existence of a M&E framework for national health plan meeting criteria
- Total net ODA to medical research and basic health sector
- Percentage of public research funding for primary care research

Extract of Indicators for monitoring financing

Structure domains

- Funding and allocation of resources*
- Purchasing and payment systems*

Financing

Key questions

How are public funds distributed across service delivery platforms?

Has government spending on PHC increased?

Are provider payment systems that promote PHC-oriented models of care in place?

Menu of indicators for country selection

- Current expenditure on health (total and PHC specific) as a percentage of GDP
- Per capita expenditure on health (and PHC specific)
- Government PHC spending
- Sources of expenditure on health (and PHC specific)
- Contingency funds available for emergencies

- Services included in health benefits package (including primary care services)
- Purchasing and provider payment methods are in place (including for primary care services)
- Health financing follows established guidelines

Extract of Indicators for monitoring PHC-oriented health information & digital technologies

Inputs domains

Health information: Information systems

Health information: surveillance

Digital technologies for health

Inputs

Key questions

Are existing data sources fit-for-purpose to provide needed information for monitoring and management of PHC?

Is an effective surveillance system in place to alert emerging threats?

Has use of digital technologies to support service delivery increased?

Menu of indicators for country selection

- Completeness of reporting by facilities
- Percentage of facilities using comprehensive patient records
- Regular systems of facility and patient surveys
- Functional national human resources information system and national health workforce accounts
- Completeness of birth registration
- Completeness of death registration
- Regular system of population-based health surveys

- Existence of effective surveillance system

- Existence of national e-health strategy
- Telemedicine access
- Percentage of facilities using electronic health records

Indicators for monitoring PHC-oriented models of care

**Process domains**

- Selection & planning of services
- Service design
- Organization & facility management
- Community linkages & engagement

**Models of care**

- Service package meeting criteria
- Roles & functions of service delivery platforms/settings defined
- Existence of an empanelment system
- System to promote first contact accessibility
- Protocols for patient referral, counter-referral & emergency transfer
- Existence of care pathways for tracer conditions
- Management capability & leadership
- Multidisciplinary team-based service delivery
- Existence of supportive supervision system
- Facility budgets & expenditures meeting criteria
- Collaboration between facility- & community-based service providers
- Community engagement in service planning & org.
- Proactive population outreach

**Key questions**

- Are service packages defined?
- Are services designed and delivered in an integrated way?
- Do facilities have adequate management and leadership capacities?
- Are community linkages in place to support service responsiveness?

**Menu of indicators for country selection**

- Service package meeting criteria
- Roles & functions of service delivery platforms/settings defined
- Existence of an empanelment system
- System to promote first contact accessibility
- Protocols for patient referral, counter-referral & emergency transfer
- Existence of care pathways for tracer conditions
- Management capability & leadership
- Multidisciplinary team-based service delivery
- Existence of supportive supervision system
- Facility budgets & expenditures meeting criteria
- Collaboration between facility- & community-based service providers
- Community engagement in service planning & org.
- Proactive population outreach

Indicators for monitoring **systems for improving quality of care**

- **Quality:**
  - Systems for improving quality of care
  - **Key questions:**
    - Do facilities have quality improvement processes in place?

- **Menu of indicators for country selection**
  - Percentage of facilities with systems to support quality improvement, including following criteria:
    - Existence of focal person for quality improvement and patient safety
    - Dedicated resources for action on quality and safety
    - Regular application quality improvement methods
    - Processes for clinical audits and mortality reviews
    - Availability of clinical guidelines, protocols, checklists
    - Systems for adverse event reporting, including medication harm
    - Existence of an up-to-date risk management protocol
    - System or mechanism to measure patient experience/patient voices

Indicators for monitoring resilience of health facilities and services

Process domains

Resilient health facilities and services

Key questions

Do facilities meet key resilience criteria to deliver services before, during and after public health emergencies?

Menu of indicators for country selection

- Percentage of facilities meeting criteria for resilient health facilities and services:
  - Defined health facility emergency management plan
  - Designated team or focal persons for emergency management and service continuity
  - Identified priority primary care services to be maintained during emergencies
  - Up-to-date protocols for case management for priority health emergencies and disasters
  - Staff trained on emergency and disaster risk management & service continuity
  - Recent (once in past five years) assessment of risks and structural, non-structural, functionality and preparedness of facilities
  - Simulation exercises to routinely test the functionality of health facility structures, mechanisms and functions
  - Post-emergency reviews conducted to evaluate performance and use lessons to recover and strengthen capacities for future risks.

**Indicators for monitoring access and availability**

**Key questions**

- Has service access improved?
- Has equity in access improved?
- Are comprehensive services available at point of care?
- Do services meet minimum standards?
- What is the utilization of services across service delivery platforms?

**Menu of indicators for country selection**

- Geographical access to services
- Perceived barriers to access (geographical, financial, sociocultural)
- Access to emergency surgery
- Existence of a system of post-crash care

- Percentage of facilities offering services according to national defined service package
- Provider availability (absence rate)
- Percentage of facilities meeting minimum standards to deliver tracer services
- Percentage of facilities compliant with infection prevention and control (IPC) measures

- Outpatient visits
- Emergency unit visits
- Hospital discharges**
- Leading diagnoses (primary care/outpatient visits, inpatient diagnoses at discharge**)

---

Indicators for monitoring quality of care

Key questions

Are primary care services the first point of contact?

Do patients have a regular health provider?

Are visits managed effectively at the primary care level?

Are services responsive to patient and community needs?

Menu of indicators for country selection

- Patient-reported experiences
- People’s perception of health system and services

Indicators for monitoring quality of care (cont.)

**Quality care**

**Effectiveness**

- Is provision of care adherent to clinical standards

---

**Safety**

- Has patient safety improved?

---

**Efficiency**

- Efficiency
  - What is the volume of visits at hospitals?

---

**Timely access**

- Are services delivered in a timely manner?

---

**Menu of indicators for country selection**

- Diagnostic accuracy (provider knowledge)
- Adherence to clinical standards for tracer conditions
- 30-day hospital case fatality rate (for acute myocardial infarction or stroke)**
- Avoidable complications (lower limb amputation in diabetes)
- Hospital readmission rate for tracer conditions**
- Admissions for ambulatory care sensitive conditions

---

- Prescribing practices for antibiotics
- Proportion of people 65 years and over prescribed antipsychotics

---

- Provider caseload
- Bed occupancy**

---

- Cancer stage at diagnosis (by cancer)
- Waiting time to elective surgery**

---

*hospital-oriented indicators considered important for broader PHC-oriented health system monitoring*

### Implementing PHC monitoring at country level

<table>
<thead>
<tr>
<th>Align PHC monitoring within national plans</th>
<th>Tailor and prioritise indicators</th>
<th>Set baselines and targets</th>
<th>Identify and fill major data gaps</th>
<th>Strengthen analysis and use of data</th>
<th>Conduct regular policy dialogues &amp; reviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporate PHC monitoring within national processes for health sector plans, monitoring and review</td>
<td>Align and incorporate novel indicators, based on national health context and priority needs and suited to the maturity of the health system</td>
<td>Consider conducting a rapid situation analysis using qualitative and quantitative data sources</td>
<td>Build on and strengthen data monitoring systems while investing in innovative methods and tools for new indicators</td>
<td>Invest in country capacities in data quality, analysis and dissemination of data via scorecards and dashboards for decision-makers</td>
<td>Informed by evidenced-based reports on progress towards PHC and UHC, and as the basis for guiding actions, interventions and investments</td>
</tr>
</tbody>
</table>

### Source
Develop/revise health sector strategy (informed by situation analysis, priority setting, consultations)

++ integration of PHC priorities, domains, targets to progress towards health sector goals and objectives

Develop M&E framework & strategy

++ inclusion of novel PHC-oriented indicators (as relevant to country context) to contribute to broader health sector progress

Conduct progress & performance reviews + policy dialogues to inform health sector planning

PHC planning embedded within health sector operational plans:

- Y1 Annual review
- Y2 Annual review
- Y3 Mid-term review
- Y4 Annual review
- Y5 End-term review

Review of PHC progress as part of broader health sector reviews and policy dialogues

Qualitative + quantitative data analysis, synthesis and use (including multisectoral and PHC-oriented data)

- Qualitative MoH key informant assessments
- Facility data (RHIS, surveys)
- Individual surveys (providers, patient, HH)
- CRVS
- Surveillance systems
- Admin. data (HR, Fin, meds)
- Research
- Context, politics, etc.

++ new rapid tools to fill PHC-oriented data gaps (e.g. models of care, resilience, quality, people’s perceptions/demands)

Step-wise approach to monitor PHC performance within health sector monitoring

Have PHC policies & investments resulted in more equitable access to quality care & improved outcomes?

Health systems determinants

Structures

Governance
- Are policies oriented to PHC?
- Are there mechanisms for multisectoral engagement?

Adjustment to population health needs
- Are resources allocated to reach vulnerable?
- Are communities engaged?

Financing
- Has spending on PHC oriented systems increased?

Inputs

Physical infrastructure
- Are facilities accessible & meeting WASH standards?

Health workforce
- Is there adequate trained workforce?

Medicines & other health products
- Are meds, diagnostics & supplies available?

Health information
- Are facility registers and reporting complete?

Digital technologies
- Has use of digital technologies increased?

Service delivery

Processes

Models of care
- Are service packages defined?
- Are services designed in an integrated way?
- Are there community linkages?

Systems for improving quality
- Do facilities have QI processes in place?

Outputs

Access and availability
- Has access to services improved?
- Are comprehensive services available at point of care?
- Do they meet minimum standards?

Quality care
- Are services responsive to patient needs?
- Is care adherent to standards?
- Has patient safety improved?

Resilient health facilities & services
- Do facilities meet resilience criteria?

Health system objectives

Outcomes

UHC
- Has service coverage improved?
- Are people protected from financial risk?

Health status
- Have health outcomes improved?
- Are populations protected from health emergencies?

Equity
- Have health inequities reduced?

Responsiveness
- Are health systems responsive and resilient?

Has PHC capacities improved?

Has PHC performance improved?

Has health & well-being improved?

Example: monitoring **NCD services** within PHC monitoring

**Health systems determinants**

**Governance**
- NCD policy, strategy or plan as part of NHPSP
- Multisectoral action integrates NCDs & risk factors
- Are policies in place to address NCDs & risk factors?
- Are there mechanisms for community & multisectoral engagement?

**Medicines & other health products**
- % facilities with essential NCD medicines & supplies
- Has availability of medicines, diagnostics & supplies for NCDs improved?

**Health information**
- NCD surveillance for monitoring global NCD targets
- Are there targets for NCD performance and information system components in place to collect relevant data?

**Financing**
- Total expenditure on NCDs
- Is NCDs spending appropriate?
- Are resources allocated to priorities & to reach the most vulnerable?

**Service delivery**

<table>
<thead>
<tr>
<th>Processes</th>
<th>Systems for improving quality</th>
<th>Access &amp; availability</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Models of care</td>
<td>• Core NCD services defined</td>
<td>• Existence of evidence-based NCD management guidelines</td>
<td></td>
</tr>
<tr>
<td>• Are NCD services included in the service package?</td>
<td>• Do facilities have necessary guidelines, protocols and standards for NCD treatment?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systems for improving quality</td>
<td>• % of facilities that maintained NCD services during emergency period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Were NCD services maintained during emergency?</td>
<td>• % facilities with NCD service availability</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Resilient health facilities & services**

| % of facilities that maintained NCD services during emergency period |
| % of facilities with NCD service availability |

**Health system objectives**

**UHC**
- Hypertension treatment coverage
- Diabetes treatment coverage
- Cervical cancer screening
- Hepatitis B vaccine coverage
- Human papilloma virus vaccine coverage
- Access to palliative care
- Has NCD service coverage improved?

**Health status**
- Total NCD mortality (per 100,000 pop.)
- Probability of dying between ages 30-70 from any CVD, cancer, diabetes
- Probability of premature death from NCDs [SDG 3.4.1]
- Cancer incidence by type of cancer
- Have NCD health outcomes improved?
- Have health inequities reduced?

**Determinants of health and risk factors**

- Trans fats policy [WHA 66.10]
- Low fruit/vegetable intake
- Alcohol consumption [SDG 3.5.2]
- Tobacco use [SDG 3.a.1]
- Prevalence of diabetes
- Obesity (adults) and overweight (children) [WHA 66.10 & SDG 2.2.2]
- Prevalence of hypertension
- Clean household fuels [SDG 7.1.2]
- Air pollution level in cities [SDG 11.6.2]

- Have determinants and risk factors for NCDs improved?
Monitoring PHC performance: an example of a national performance dashboard for country use

- **A snapshot** of PHC in individual countries – where systems are strong and where there are challenges.
- **Identify priority areas** for improvement and track and trend improvements over time.
- **Supports transparency and accountability** for results.

### Country A Primary Health Care Vital Signs Profile

#### CAPACITY
- Governance
  - Policy and leadership: 85
  - Multi-sectoral approach: 59
  - Adjustment to population health needs: 67

- Financing
  - PHC spending per capita: $78 per capita
  - Percent of overall health spending allocated to PHC: 73
  - Percent of government health spending allocated to PHC: 84
  - Sources of PHC spending: 29% Government, 29% Other

- Inputs
  - Physical infrastructure: 47
  - Medicines & supplies: 58
  - PHC workforce: 34
  - Information & technology: 66

#### PERFORMANCE
- Management of Services & Population Health
  - Population health management: 81
  - Resilient facilities and services: 65
  - Management of services: 72
  - Organization of services: 80

- Access & Availability
  - Access: 83
  - Service availability & readiness: 79

- Quality
  - Primary care functions: 50
    - First contact accessibility
    - Comprehensiveness: 50
    - People-centeredness: 50
    - Coordination: 45
    - Continuity: 55
    - Service quality: 43
      - Efficiency: 61
      - Timeliness: 31
      - Safety: 30
      - Effectiveness: 24

#### IMPACT
- Universal Health Coverage
  - Service coverage: 75
  - Financial protection: 22%
  - Incidence of catastrophic expenditure: 4%

- Responsiveness
  - 64%

- Health Status
  - Premature NCD mortality: 29%
  - Maternal mortality: 617 per 100,000 live births
  - Mortality per 1,000 live births: 33
  - Under-5 mortality: 52
  - Life expectancy in years: 63

- Resilience & Health Security
  - Health security: 57
  - Resilience: 48

- Equity
  - Health worker density, by urban/rural
  - Percent of perceived access barriers due to cost, by wealth quintile
  - Coverage of RMCH services, by mother’s education

#### Country A at-a-glance

- Income status: Lower-middle income
- GDP per capita: $1,443 per person
- Govt. health spending: 1% of GDP
- Population: 56 million
- Living in poverty: 30% under $1.90 a day
- Human capital index: 0.54 out of 1
- Gender inequality index: 0.35 out of 1
- Causes of death: 11% communicable & other conditions, 11% injuries, 7% non-communicable diseases

Source: Primary health care performance initiative. DRAFT Vital Signs Profile 2.0 (currently under revision)
Thank you!