Federal Democratic Republic of Ethiopia
Ministry of Health

# UNIVERSAL HEALTH COVERAGE MONITORING FRAMEWORK

## INDICATORS AND PROXY INDICATORS

June 2017

# UNIVERSAL HEALTH COVERAGE MONITORING FRAMEWORK:

## INDICATORS AND PROXY INDICATORS

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# ACRONYMS

| | |
|---|---|
| **ART** | Antiretroviral Therapy |
| **CBHI** | Community-based Health Insurance |
| **DTP** | Diphtheria, Tetanus and Pertussis |
| **EHIA** | Ethiopian Health Insurance Agency |
| **EHSP** | Essential Health Services Package |
| **FMOH** | Federal Ministry of Health |
| **HFG** | Health Finance and Governance |
| **HMIS** | Health Management Information System |
| **HSFR** | Health Sector Financing Reform |
| **HSTP** | Health Sector Transformation Plan |
| **M&E** | Monitoring and Evaluation |
| **MOFEC** | Ministry of Finance and Economic Cooperation |
| **SARA** | Service Availability and Readiness Assessment |
| **SDG** | Sustainable Development Goals |
| **SHI** | Social Health Insurance |
| **TB** | Tuberculosis |
| **USAID** | United States Agency for International Development |
| **UHC** | Universal Health Coverage |
| **WHO** | World Health Organization |

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# EXECUTIVE SUMMARY

Universal health coverage (UHC) is one of the targets of Sustainable Development Goal (SDG) 3. It is important to measure and monitor progress toward UHC to take corrective measures and track achievements and status over time. Recognizing the importance of measuring and monitoring progress toward UHC, the Federal Ministry of Health (FMOH) of Ethiopia has given due emphasis to measuring progress in its Health Sector Transformation Plan (HSTP). However, most indicators that measure UHC require household surveys that are time consuming and costly. This necessitates the development of proxy indicators that can be collected annually, cost effectively, and quickly but at the same time be able to measure and monitor progress. These indicators will complement surveys that are usually conducted every three to five years.

The objectives of this framework are to identify proxy indicators, establish the sources, define the roles and responsibilities of the different actors, and recommend a road map for measurement of these proxy indicators.

International literature was reviewed to ensure comparability and Ethiopian domestic literature reviewed to understand the context and align with the existing monitoring and evaluation (M&E) system of the country.

Based on sources such as the country's Essential Health Services Package, the health management information system (HMIS), and international tracer indictors, the framework identified 15 health service coverage and nine financial protection proxy indicators. Most of the indicators of health service coverage and some of the financial protection indicators are identified in the HSTP. Health service coverage indicators include promotion/prevention, treatment and health system capacity, while financial protection proxy indicators are related to fee waivers, exemption policies, and pre-payment schemes. A road map for the implementation of UHC measurement is also outlined. The road map suggests that the FMOH Policy and Planning Directorate M&E case team be made responsible for the monitoring of UHC. The specific activities in the implementation plan that that the team would carry out include:

- Advocate for the inclusion of new UHC indicators in the HMIS;
- Devise mechanism to collect UHC indicators that are not included in the HMIS;
- Provide training on UHC indicators for the M&E personnel at different levels;
- Provide technical support to Regional Health Bureaus with respect to the collection and reporting of UHC indicators;
- Advocate for the integration of UHC indicators in the regular supportive supervision checklists at regional, zonal, and woreda health office levels;
- Produce regularly progress reports on UHC indicators and submit it to the top management at the FMOH for management use; and
- Provide feedback annually to each Regional Health Bureau on UHC progress, indicating the strength and weakness of progress on each indicator.

# 1. INTRODUCTION

Universal health coverage (UHC) is one of the targets of Sustainable Development Goal (SDG) 3. UHC is defined as all people receiving the health services they need, of adequate quality, without being exposed to financial hardship. UHC involves three coverage dimensions: health services, financial protection, and population coverage (WHO and World Bank 2015). It is important to measure and monitor progress toward UHC to take corrective measures and track achievements and status over time. Recognizing the importance of measuring and monitoring progress toward UHC, the Federal Ministry of Health (FMOH) of Ethiopia has addressed the issue in its five-year health sector strategic plan, called the Health Sector Transformation Plan (HSTP) 2015/16-2019/20 (FMOH 2015). However, most indicators that measure UHC require household surveys, which are time consuming and costly and thus are usually conducted only every 3-5 years. Hence, there is a need for proxy indicators that can be collected quarterly or annually in a cost-effective way and in a short period of time, yet still be able to measure and monitor progress. These indicators will complement the more extensive survey indicators.

The objectives of this framework are to:

- Review literature on UHC measurement and identify proxy indicators that complement indicators obtained from household surveys;
- Establish the sources, define the roles and responsibilities of the different actors (Ministry of Health at federal, regional, woreda (district), and health facility levels) to collect, analyze, and present these indicators to management for use, and determine frequency of such measurement; and
- Develop/recommend a 3-5-year road map/implementation plan for measurement of these proxy indicators. Specifically, the road map will include:
  - a process for collecting and analyzing data for proxy UHC indicators
  - roles and responsibilities of key actors
  - frequency of measurement and how measurement data will be used

# 2. METHODOLOGY

An extensive review of literature about measurement of progress toward achieving UHC at the global and national level was conducted. Key global documents reviewed included:

- UHC monitoring framework (WHO and World Bank 2014, World Bank 2016): The documents propose a framework for tracking country and global progress toward UHC, guiding principles, and illustrative indicators.
- UHC global monitoring report (WHO and World Bank 2015). This document is the first of its kind. It presents the global and regional situation in relation to the identified tracer indicators for health service coverage and financial protection.
- Health equity analysis (O'Donnell et al. 2008). This book illustrates a methodology for analyzing health equity using household survey data.

Literature specific to the health sector in Ethiopia (including the country's HSTP, Essential Health Services Package (EHSP) (FMOH 2006), and policies and practices for exempted health services and fee waivers) was reviewed. Annex A describes a summary of literature reviewed. A two-day consultation (February 16–17, 2017) in Bishoftu was conducted with stakeholders from FMOH directorates, the EHIA, USAID, the World Health Organization (WHO), the Health Sector Financing Reform (HSFR) project, and the Clinton Health Access Initiative to refine proxy indicators relevant to the three dimensions of UHC: financial protection, health service coverage, and population coverage.

# 3. PROPOSED PROXY INDICATORS FOR UHC

UHC is an integral part of the HSTP monitoring and evaluation (M&E) framework. The HSTP M&E framework is suitable for measuring progress toward UHC, provided a few indicators are added for missing dimensions.

## 3.1 Health Service Coverage

The following inclusion and exclusion considerations have been taken in identifying the proxy indicators of health service coverage specified in Table 1 in Section 3.3:

- Proposed indicators to include:
  - Global indicators and part of EHSP in Ethiopia: All indicators stated in Table 3 (Annex A) that are comparable with the global tracer indicators, and cover the EHSP indicators, such as antenatal care and skilled birth attendance, that can be collected routinely through HMIS or administrative reports.
  - Indicators beyond EHSP in Ethiopia but part of global tracer indicators and HSTP: Non-communicable diseases (cervical cancer screening) and malaria control (malaria morbidity per 100,000 population at risk).
  - Indicators of health system capacity: Functionality of health facilities (availability of human resource per 1,000 population, availability of water and electricity, availability of essential drugs at primary level, availability of essential equipment, etc.) that enables the delivery of essential health services, and utilization rate of health services (outpatient attendance per capita).
  - Budget share of primary health care services: Indicates the priority given in the provision of essential health services and is also included as an indicator of health service coverage.
- Proposed indicators to exclude:
  - Indicators that aren't currently in the HSTP: Some global indicators, such as TB treatment coverage, prevalence of no-tobacco smoking, percentage of population using improved drinking water sources, hypertension coverage, and diabetes coverage, are not included as there is no indicator in the HSTP or the HMIS that estimates or proxies these indicators.
  - Indicators that require surveys: Surveys are costly and time consuming and do not allow frequent monitoring of progress.

In summary, 15 health service indicators can be used as proxy measures of health service coverage: three maternal health, one child health, one hygiene and environmental health, three communicable disease, one non-communicable disease, and six health system indicators. Grouped differently, the 15 health service coverage indicators consist of five promotion/prevention, four treatment, and six health system indicators.

## 3.2 Financial Protection

Unlike health service coverage indicators, the two global financial protection indicators identified (incidence of catastrophic out-of-pocket payment and impoverishing health expenditure) require household surveys to generate the data on household total expenditure and health expenditure. However, as stated earlier, it is time consuming and prohibitively costly to generate the data to measure and monitor the progress on UHC in a timely way and at least annually. Related indicators identified in HSTP (out-of-pocket payment and proportion of households with catastrophic expenditure) also require household surveys.

In order to identify proxy indicators that do not require surveys, it is necessary to examine the country's policies that provide financial protection directly or indirectly. Accordingly, the exemption and fee waiver policies and their implementation to identify proxy indicators that can be collected from routine administrative reports and the HMIS were examined. Other indicators related to government expenditure on health, which indirectly show financial protection, may also be included. Generally, it is expected that as government expenditure on health increases, the extent of financial protection improves, since costs at government facilities would be highly subsidized through government budget.[1] Such government subsidy enables access to health services and protects the population although coverage through pre-payment schemes is not yet widespread. Accordingly the following proxy indicators are proposed:

- Per capita budget for exempted services: The magnitude of budget allocated for exempted services over time, measured on a per capita basis. This indicator indicates the extent of financial protection provided for the population, as exempted services constitute part of the EHSPs provided at government facilities. This can be achieved by measuring the amount of money allocated by government and development partners for each of the exempted services per annum and per region over time, divided by the population.
- Fee waiver: The fee waiver system exempts poor households from paying fees. The indicator could be calculated as percentage of poor people covered by fee waivers, disaggregated by gender and region.
- Pre-payment schemes:
  - Trends in government subsidy for CBHI premiums: includes the number and percentage of population receiving subsidies;
  - Magnitude of subsidy (share of subsidy as a percentage of total premium) for informal sector households enrolled in CBHI;
  - Percentage of population covered by pre-payment schemes (CBHI and SHI);
- Per capita government expenditure on health;
- Government resources dedicated to health: Government expenditure on health as a percentage of total government expenditure-Abuja Declaration.

[1] A study on the assessment of user fee revision in public health facilities in Ethiopia revealed that government on average subsidized 61% of the unit cost of health services in health centers and hospitals. In other words, the user fees cover only 39% of unit cost of health services (HSFR 2011).

In summary, nine proxy indicators are identified for financial protection, one of which is from the list of three UHC indicators in the HSTP. The remaining two financial indicators in HSTP (proportion of households with catastrophic out-of-pocket expenditure and out-of-pocket expenditure as proportion of total health expenditure) are not included because they require household surveys. All of the identified indicators will be collected from administrative reports prepared by different levels of the FMOH as well as the Ministry of Finance and Economic Cooperation (MOFEC).

## 3.3 Summary of Suggested Indicators

As stated above, 15 health service coverage indicators were identified taking into consideration the list of global health service tracer indicators, the EHSP, health system capacity indicators in the HSTP, and the budget allocated to primary health care. Indicators that need survey data or do not exist in the country's HSTP were excluded, because it would be very difficult to introduce and collect them. Regarding the availability of the 15 identified indicators, 11 of them are readily available from the HMIS, and the remaining four indicators (proportion of facilities equipped with medical equipment as per the essential medical equipment list, health workers per 1,000 population, proportion of health facilities with functional electricity, water and sanitation facilities, and proportion of government budget allocated to primary health care) are not readily available. It is expected that these would be generated from administrative reports that are produced by the FMOH at different levels on an annual basis. The list of the 15 health service coverage indicators with definition (numerator and denominator stated), data sources, and frequency of measurement are presented in Table 1.

**Table 1: Health Service Coverage Proxy Indicators**

| No. | Indicator | Numerator | Denominator | Equity Measurement | Data Source | Frequency of Measure-ment |
|---|---|---|---|---|---|---|
| I | **Promotion/ Prevention** | | | | | |
| 1. | Contraceptive acceptance rate | Number of new and repeat acceptors | Total number of women of reproductive age (15-49) who are not pregnant | Residence (pastoralist and non-pastoralist; rural and urban), age | HMIS | Monthly |
| 2. | Proportion of women having at least 4 antenatal care visits | The number of pregnant women that received at least 4 antenatal care visits | Total number of expected pregnancies | Residence (pastoralist and non-pastoralist; rural and urban) | HMIS | Monthly |
| 3. | Proportion of deliveries attended by skilled health personnel | Deliveries attended by skilled health personnel | Total number of expected deliveries | Residence (pastoralist and non-pastoralist; rural and urban) | HMIS | Monthly |
| 4. | Pentavalent 3 immunization coverage | Number of children under one year of age who have received third dose of pentavalent vaccine | Estimated number of surviving infants | Residence (pastoralist and non-pastoralist; rural and urban) | HMIS | Monthly |

| No. | Indicator | Numerator | Denominator | Equity Measurement | Data Source | Frequency of Measure-ment |
|---|---|---|---|---|---|---|
| 5. | Proportion of households' access to improved latrine facilities | Number of households with improved latrine | Total number of households | Residence (pastoralist and non-pastoralist, rural vs urban) | HMIS | Quarterly |
| **II** | **Treatment** | | | | | |
| 6. | ART coverage (adult and children) | Number of adults and children with HIV infection who are receiving ART | - | Residence (pastoralist and non-pastoralist; rural and urban), sex, age | HMIS | Monthly |
| 7. | TB detection rate | Number of all forms of TB (new and relapsed cases detected during reporting period) | Estimated number of all forms of TB cases in the population during the same period | Age (pediatrics and adults) | HMIS | Quarterly |
| 8. | Number of morbidity attributed to malaria per 100,000 population at risk | Total number of malarial morbidity | Total population of the area | Residence (rural and urban), region | HMIS | Monthly |
| 9. | Proportion of women age 30-49 years screened for cervical cancer | Number of women aged 30-49 screened for cervical cancer | Total number of women aged 30-49 within the catchment area | Residence (rural and urban) | HMIS | Monthly |
| **III** | **Health System** | | | | | |
| 10. | Availability of essential drugs at primary health care level | Tracer drugs multiplied by number of months available of the tracer drugs | Tracer drugs multiplied by total number of months in the time period | Residence (rural and urban), region | HMIS | Monthly |
| 11. | Proportion of facilities equipped with medical equipment as per the essential medical equipment list | Total number of facilities equipped with medical equipment as per the essential medical equipment list | Total number of facilities | Residence (rural and urban), region | Admin report/SARA | Annual |
| 12. | Health workers per 1,000 population | Total number of health workers at the end of the year | Total population of the catchment area | Residence, profession | Admin report | Annual |
| 13. | Proportion of health facilities with functional | Total number of health facilities with electricity, water, | Total number of health facilities | Residence (rural and urban; pastoralist and non-pastoralist), | Admin report /SARA | Annual |

| No. | Indicator | Numerator | Denominator | Equity Measurement | Data Source | Frequency of Measure-ment |
|---|---|---|---|---|---|---|
| | electricity, water, and sanitation facilities | and sanitation facilities | | type of facility | | |
| 14. | Outpatient attendance per capita | Total outpatient visits of the catchment area at health facilities | Total catchment population of the area | Residence (rural and urban; pastoralist and non-pastoralist), age, sex | HMIS | Quarterly |
| 15. | Proportion of government budget allocated to primary health care (including woreda health offices) | Budget allocated to primary health facilities | Total government budget allocated to health sector | Region and woreda | Admin report | Annual |

Note: The indicators in this table are only those that can be generated from HMIS or routine administrative reports. SARA=Service Availability and Readiness Assessment.

Nine financial protection proxy indicators were identified based on the country's policies of fee waiver, exemption, pre-payment schemes, and government expenditure on health. None of the nine indicators are part of the HMIS and hence are not readily available. These proxy indicators would be collected from administrative reports that are prepared from different agencies of the FMOH and MOFEC. However, it will not be an easy task to collect this information from administrative reports. Effort should be made to include these indicators in the HMIS and make them readily available for policy use. Table 2 lists the nine proxy indicators with definitions, data source, and frequency of measurement.

**Table 2: Financial Protection Proxy Indicators**

| No. | Proxy Indicator | Numerator | Denominator | Equity Measurement | Data Source | Frequency of Measure-ment | Remark |
|---|---|---|---|---|---|---|---|
| 1. | Proportion of HHs enrolled in CBHI | Number of HHs enrolled in CBHI | Total number of HHs (Eligible HH for CBHI*) in the country | Residence (pastoralist and non-pastoralist; rural and urban), sex of HH head | Admin report /CBHI scheme report | Semi-annually | |
| 2. | Proportion of woredas with established CBHI scheme** | Number of woredas with established CBHI scheme | Total number of woredas in the country | Residence (pastoralist and non-pastoralist) | Admin report /CBHI scheme report | Semi-annually | |
| 3. | Proportion of population enrolled in SHI | Total population enrolled in SHI | Total population (formal sector) of the country | Sex | Admin report /EHIA | Annual | |

| No. | Proxy Indicator | Numerator | Denominator | Equity Measurement | Data Source | Frequency of Measure-ment | Remark |
|---|---|---|---|---|---|---|---|
| 4. | Per capita government expenditure on health | Total government expenditure on health | Total population of the country | Country level | Admin report /MOFEC | Annual | Need to be analyzed in real terms |
| 5. | Government expenditure on health as % of total government expenditure | Total government expenditure on health | Total government expenditure | Country level | Admin report /MOFEC | Annual | |
| 6. | Proportion of poor/Indigent HHs with health service coverage | Total number of indigent HHs covered via CBHI and fee waiver | Total number of indigent HHs in the country | Sex | Admin report /CBHI scheme report | Annual | |
| 7. | Share of budget allocated to exempted health service commodities (drugs and supplies) as proportion of total government budget on health | Total budget for exempted services | Total government budget on health | Country level /regional level | Admin report /MOFEC | Annual | |
| 8. | Government subsidy as % of total premium in CBHI schemes | Total government subsidy for CBHI (general and targeted subsidy) | Total revenue collected by CBHI schemes | Country level /regional level | Admin report | Annual | |
| 9. | Share of revenue collected from CBHI schemes as proportion of total health facility revenue | Total revenue collected from CBHI schemes | Total revenue of health facilities (from user fee and CBHI schemes) | Country level /regional level | Admin report (health facilities) | Semi-annually | |

Note: These proxy indicators do not include incidence of catastrophic health expenditure and incidence of impoverishing health expenditure because those indicators need household surveys to generate the required data and are beyond the scope of this study. HH=household.

* Eligible Households for CBHI are those households that are not enrolled in the SHI scheme.

** CBHI scheme are said to be established in a given woreda when the general assembly meets and approves the establishment of the scheme, registers members, and begins providing health service to the members.

# 4. IMPLEMENTATION PLAN FOR MEASUREMENT OF UHC

The FMOH Policy and Planning Directorate is responsible for collecting health and health-related information, analyzing the data, and producing a report for management use. The directorate operates at different levels (federal, regional, zonal, and woreda). Its M&E case team is responsible for monitoring progress toward HSTP targets and preparing progress reports for management use.

Because monitoring progress toward achieving UHC is part of the HSTP monitoring, it does not need a separate, parallel system of monitoring or a separate team to do the monitoring; rather, the Policy and Planning Directorate M&E case team should be the entity responsible for collecting, analyzing, and reporting on UHC progress.

The M&E case team, under directorate guidance, will carry out the following UHC monitoring activities:

- In collaboration with the Health Economics and Financing case team of the FMOH Resource Mobilization Directorate, present progress reports to the FMOH Management Committee for approval;
- Advocate for the inclusion of the identified new UHC indicators in the HMIS during the revision of HMIS indicators;
- Devise a mechanism to collect data on UHC indicators that are not included in the HMIS;
- Because strengthening health workforce capacity and motivation is one focus area and intervention of the Information Revolution Roadmap (FMOH 2016), this study recommends making training on UHC indicators and tools, such as the register format on UHC for M&E personnel at different FMOH levels, an integral part of the upcoming training on the revised HMIS indicators:
    - At national level hold training of trainers (1st level TOT)/sensitization for Policy and Planning Directorate personnel from each Regional Health Bureau on the concept of UHC and agreed-upon UHC indicators;
    - Each Regional Health Bureau will cascade the training (2nd level TOT) to zonal health offices and woreda health offices;
    - Zonal and woreda health offices will cascade the training to health facilities in their respective areas.
- Provide Regional Health Bureaus with technical support for the collection and reporting of UHC indicators;
- Advocate for the integration of UHC indicators in the regular supportive supervision checklist at regional, zonal, and woreda health offices;
- Produce progress reports (after getting consent from the respective program area to ensure quality of data) on UHC indicators regularly as soon as the current revision of HMIS indicators is finalized and the trainings listed above are completed; submit the reports to top FMOH management for use in management[2];

[2] UHC progress reports also should be prepared at the regional level and feedback on progress provided to their woredas

- Provide feedback regularly to each Regional Health Bureau on UHC progress, indicating the strength and weakness of progress on each indicator;
- Initiate and coordinate revision of UHC health service coverage indicators when the EHSP is revised.

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# ANNEX A: UHC MEASUREMENT LITERATURE REVIEW

Monitoring progress toward UHC focuses on assessment of equitable coverage of essential health services as well as financial protection (WHO/World Bank, 2014). Equity is particularly important when considering the population coverage dimension of UHC. This review focuses on essential health service coverage and financial protection taking into consideration equity (stratified by sex, residence, and income dimensions) at global and country levels to identify relevant proxy indicators for Ethiopia. These indicators can complement indicators derived from data from household surveys such as the Demographic and Health Survey and the Welfare Monitoring Survey.

## 1. Global (WHO/World Bank) UHC Indicators

### 1.1 Health Service Coverage

**Indicators:** The WHO/World Bank (2015) first global monitoring report on UHC has identified core tracer indicators of health service coverage that will serve at global and country levels. These indicators cover:

- Reproductive and newborn health (family planning, antenatal care, skilled birth attendance),
- Child immunization (three doses of diphtheria, tetanus and pertussis (DTP)-containing vaccine);
- Infectious diseases (antiretroviral therapy (ART), tuberculosis(TB) treatment); and
- Non-health determinants of health (improved water sources, improved sanitary facilities).

In addition to the above indicators, potential tracer indicators for non-communicable diseases have been identified and include:

- Hypertension treatment coverage,
- Type 2 diabetes treatment coverage, and
- Prevalence of no-tobacco smoking in the past 30 days among adults age 15 years and above.

**Data sources:** Some of these indicators, such as percentage of population using improved drinking water sources and sanitation facilities, require household surveys. Others, such as antenatal care coverage among pregnant women, skilled birth attendance of the total deliveries, DPT3 immunization coverage among 1-year-olds, ART coverage among people living with HIV, and TB treatment coverage among new cases of TB in a given year, can be estimated from administrative records.

This study focuses on indicators that do not require surveys and that reflect Ethiopia's priority for the health service coverage dimension of UHC based on its unique epidemiological, health system, and economic context.

## 1.2 Financial Protection

**Indicators:** Financial protection measures the extent to which households are protected against catastrophic and impoverishing medical expenditures. The two commonly used indicators to track the level of financial protection in health are *incidence of "catastrophic" health expenditures and incidence of impoverishment due to out-of-pocket health payments* (WHO and World Bank 2014).[3] Both of these indicators of financial protection are affected by the relative lack of pre-payment mechanisms, such as tax-funded services and health insurance, and over-reliance on out-of-pocket payments at the time of service. When out-of-pocket expenditures are large relative to the resources available to the household, i.e. over a certain threshold, these expenditures are considered catastrophic. When health expenses push the household below the poverty line, they are considered as impoverishing health expenditures.

**Definition:** The WHO and World Bank (2015) have defined catastrophic health expenditure to be out-of-pocket spending on health that exceeds 25 percent of the total household expenditure. The idea, known as a budget share approach, is that spending a large proportion of the total household budget on health care comes at the expense of other goods and services. A second approach to measure catastrophic health expenditure is health spending relative to "capacity to pay," which measures household spending net of a minimum level of subsistence spending. The threshold for catastrophic health expenditure based on the capacity-to-pay approach is 40 percent. The budget share approach requires less data than the capacity-to-pay approach, under which there is a need to define subsistence expenditure. However, a capacity-to-pay approach might overestimate the resources available to finance health expenditure. It is generally accepted to consider both approaches (Rockefeller Center 2015).

Household medical expenditures are said to be impoverishing when they cause households to slip below or further below the poverty line. The international standard poverty line is US$1.25 per day per capita (at purchasing power parity). In addition to the international poverty line, the national poverty line could also be used to estimate the impoverishing effect of out-of-pocket health expenditure. Catastrophic health expenditure might not lead to impoverishment depending on the household's economic status. Rich households or households with access to credit may not be required to forgo consumption (WHO and World Bank 2015).

Both approaches have a substantial limitation: they identify only households that incur health expenditures and ignore those that forgo treatment because they cannot meet these expenses. Notwithstanding this limitation, health expenditure in excess of a substantial proportion of the household budget informs part of the catastrophic economic consequences of illness (O'Donnell et al. 2008).

**Data Sources:** The source of data for incidence both of catastrophic and of impoverishing health expenditure measurement is a household survey that collects data on household health expenditure and total expenditure. However, as stated above, household surveys are costly and are not conducted annually, which limits monitoring of progress on financial protection.

Based on the indicators for health service coverage and financial protection identified above and the Ethiopian context, the section below identifies indicators and proxy indicators that can be routinely collected to enable progress on monitoring UHC.

[3] Currently, there are some efforts to adopt an index-based approach to measure UHC, particularly to combine the financial protection indicators.

# 2. Ethiopia's UHC Indicators

## 2.1 Health Service Coverage

Based on the country's health priorities, Ethiopia's FMOH developed an EHSP that sets out essential health services to be delivered at different levels of the health systems: health post, health center, and hospital. These services include family health services, communicable disease control, and curative care and treatment (see Annex B for the list of essential health services). Specific indicators and targets for the provision of these essential and other services are reflected in the country's HSTP. Accordingly, the proxy indicators for health service coverage identified in this report consider the essential health services identified.

**Indicators:** The HSTP identifies 10 UHC tracer health service coverage indicators that align with global level health service tracer indicators, and set targets for them for the period 2015/16–2019/20. These indicators and targets are:

- Contraceptive prevalence rate (target: increase from 42% to 55%)
- Proportion of pregnant women having at least four antenatal care visits (target: increase from 68% to 95%)
- Deliveries attended by skilled health personnel (target: increase from 60% to 90%)
- Proportion of children age 12–23 months with pentavalent 3 immunization coverage (target: increase from 94% to 98%)
- ART coverage of all people diagnosed with HIV infection (target: achieve 90%)
- TB detection rate (target: increase from 61% to 87%) and TB cure rate (increase from 78% to 90%)
- Malaria deaths per 100,000 population at risk (target: decrease from 4 to 0.6)
- Access to improved latrines (increase from 28% to 82%), and open-defection-free kebeles (increase from 18% to 82%)
- Outpatient attendance per capita (target: increase from .48 to 2)
- % of women age 30–49 years screened for cervical cancer (target: increase from .60% to 20%)

The HSTP has four additional UHC priority indicators to assess progress in the area of health system capacity. These are:

- Availability of essential drugs at primary, secondary, and tertiary health care levels
- Health facilities with functional utilities (electricity, water, sanitation facilities, and Information Communication Technology networking equipment)
- Health workers per 1,000 population
- Proportion of health facilities that meet the data verification factor within 10 percent of the range for skilled birth attendance

**Data sources:** Most of the health service coverage indicators such as contraceptive acceptance rate, antenatal care, skilled birth attendance, pentavalent 3 immunizations, ART coverage, and TB treatment success rate can be collected from the Health Management Information System (HMIS) (FMOH 2014) without the need to conduct surveys such as the Demographic and Health Survey. In addition, these indicators are comparable with the global health service tracer indicators. This facilitates the monitoring of health service coverage annually.

## 2.2 Financial Protection

Monitoring progress toward UHC needs to include assessment of the financial protection granted to the population when accessing essential health services.

**Indicators:** The HSTP has identified three financial protection indicators: proportion of households enrolled in community-based health insurance (CBHI), proportion of households with catastrophic out-of-pocket expenditure exceeding 40 percent of nonfood expenditure, and out-of-pocket expenditure as a share of total health expenditure. Government expenditure on health as a share of total government expenditure is included in the HSTP as an indicator to show government commitment to the sector. This indicator is in line with the Abuja Declaration, which requires African governments to spend at least 15 percent of their budget on the heath sector.

**Data Sources:** Indicators such as out-of-pocket expenditure as a share of total health expenditure and catastrophic expenditure require household surveys or conducting National Health Accounts based on surveys. Other indicators such as proportion of population enrolled in a CBHI scheme and the Social Health Insurance (SHI) scheme, and government expenditure on health as a share of total government expenditure can be collected from administrative reports prepared at various levels of the FMOH (federal, region, woreda, and health facility).

# 3. Comparison of Global and Ethiopia's UHC Indicators

The following table shows the indicators of health service coverage and financial protection that are identified and used at global and at country level.

**Table 3: Comparison of UHC Indicators**

| Global Indicators | Ethiopia's Indicators (HSTP) | Remarks |
|---|---|---|
| Health Service Coverage | | |
| • Reproductive and newborn health (family planning, antenatal care, skilled birth attendance)<br>• Child immunization (three doses of diphtheria, tetanus and pertussis (DTP)-containing vaccine)<br>• Infectious disease (ART, TB treatment)<br>• Non-health determinants of health (improved water sources and improved sanitary facilities)<br>• Potential tracer indicators for non-communicable disease | • Contraceptive acceptance rate<br>• Antenatal care visits<br>• Deliveries attended by skilled health personnel<br>• Pentavalent 3 immunization coverage<br>• ART coverage of all people diagnosed with HIV infection<br>• TB detection rate<br>• Malaria control coverage<br>• Access to improved latrines and hand washing facilities<br>• Health system indicators such as availability of drugs at facility level | The indicators are similar and most can be collected from administrative data. In addition, Ethiopia's UHC indicators include country-specific priority areas such as malaria control and access to latrines and hand washing facilities. |

| Global Indicators | Ethiopia's Indicators (HSTP) | Remarks |
|---|---|---|
| Financial Protection | | |
| • Incidence of catastrophic out-of-pocket payment<br>• Incidence of impoverishing health expenditure | • Catastrophic out-of-pocket payment<br>• Out-of-pocket payment as % share of total health expenditure<br>• Government health expenditure as % share of total government expenditure<br>• Proportion of population covered in CBHI | Ethiopia's list of UHC indicators does not cover the impoverishment effect of out-of-pocket health expenditure. With respect to catastrophic expenditure, it has considered an additional variable (such as proportion of population covered in CBHI) that can be collected from routine administrative data sources. |

Source: Author compilation

Ethiopia's health service coverage indicators have also taken into account equity among different population groups (i.e., disaggregated by residence, sex, and income levels). For example, the HSTP tries to disaggregate skilled birth attendance between pastoralist and non-pastoralist woredas, between rural and urban woredas, and between lowest and highest income quintiles, as well as pentavalent 3 coverage between bottom and top wealth quintiles. Indicators can be disaggregated by residence, sex, and income levels in both the health service coverage and financial protection dimensions of UHC.

# ANNEX B: LIST OF ESSENTIAL HEALTH SERVICES PACKAGE IN ETHIOPIA

## EHSP at CHP Level

| A. Family Health Services | B. Communicable Disease Control Services | C. Basic Curative Care and Rx of Major Condition |
|---|---|---|
| 1. ANC<br>2. Treatment of anemia, malaria and hookworm in pregnancy<br>3. Normal delivery<br>4. PNC<br>5. Condom<br>6. OCP<br>7. Injectable contraceptives<br>8. Vaccination | 1. ITN distribution<br>2. Malaria case management (both adult and children)<br>3. TB and leprosy continuation Rx | 1. Diarrhea<br>2. Bacterial conjunctivitis<br>3. Intestinal parasite<br>4. Splinting & anti pain for simple trauma |

## EHSP at Health Center Level

| A. Family Health Services | B. Communicable Disease Control Services | C. Essential Curative Care and Treatment of Major Conditions |
|---|---|---|
| 1. ANC<br>2. PMTCT<br>3. Preeclampsia/eclampsia<br>4. Abortion<br>5. PPH<br>6. APH (diagnosis, referral and transport)<br>7. Local infection<br>8. Neonatal sepsis<br>9. CEOC (for health centre Type A)<br>10. Breast abscess<br>11. Puerperal sepsis<br>12. IMCI<br>13. OCP | 1. VCT services<br>2. Syndrome STI treatment<br>3. Opportunistic infection<br>4. TB<br>5. Leprosy<br>6. ART<br>7. Antirabies vaccination | 1. ARI<br>2. I/P<br>3. Anemia<br>4. Measles complication<br>5. Trachoma<br>6. Bacterial conjunctivitis<br>7. Treatment of acute gingival and periodontal infection<br>8. Dental extraction<br>9. Resuscitation, referral and transport of medical and surgical emergency<br>10. Foreign body removal<br>11. Epilepsy<br>12. Uncomplicated diabetes mellitus |

| A. Family Health Services | B. Communicable Disease Control Services | C. Essential Curative Care and Treatment of Major Conditions |
|---|---|---|
| 14. Depo-Provera<br>15. IUCD<br>16. BTL<br>17. Norplant<br>18. Vasectomy<br>19. Condoms<br>20. MVA<br>21. Malnutrition<br>22. Vaccination | | 13. Uncomplicated hypertension<br>14. Uncomplicated asthma<br>15. Splinting & anti pain for simple trauma |

## EHSP at District Hospital Level

| A. Family Health Services | B. Communicable Disease Control Services | C. Essential Curative Care and Treatment of Major Conditions |
|---|---|---|
| 1. ANC<br>2. PMTCT<br>3. SVD(spontaneous vaginal delivery)<br>4. Assisted vaginal delivery<br>5. Destructive delivery<br>6. Removal of retained placenta<br>7. C/S<br>8. Eclampsia<br>9. PPH<br>10. Retained placenta<br>11. PNC<br>12. Post-natal care<br>13. Sepsis<br>14. Abortion complication<br>15. Ophthalmic neonatarum<br>16. Neonatal sepsis<br>17. OCP<br>18. Depo Provera<br>19. IUCD<br>20. BTL<br>21. Norplant<br>22. Vasectomy | 1. Uncomplicated malaria<br>2. Complicated malaria<br>3. Smear negative TB<br>4. Smear positive TB<br>5. Relapse TB<br>6. Treatment failure TB<br>7. Leprosy<br>8. STI<br>9. Rabies | 1. Conjunctivitis<br>2. Trachoma<br>3. Skin infections<br>4. Dental infections<br>5. Dental extraction<br>6. Minor ophthalmic surgery<br>7. Management of fractures<br>8. Surgical management of acute abdomen<br>9. Foreign body removal<br>10. Treatment of asthma<br>11. Treatment of complicated cases of asthma<br>12. All respiratory infection at OPD<br>13. ARI in patient<br>14. DM<br>15. Hypertension<br>16. Complicated hypertension<br>17. ART<br>18. Epilepsy<br>19. Diarrhea<br>20. I/P |

| A. Family Health Services | B. Communicable Disease Control Services | C. Essential Curative Care and Treatment of Major Conditions |
|---|---|---|
| 23. Condoms<br>24. Immunization<br>25. IMCI<br>26. Growth Monitoring<br>27. Common injuries<br>28. Malnutrition | | |

# ANNEX C: KEY STAKEHOLDERS CONSULTED

| Organization | Stakeholder |
|---|---|
| 1. Resource Mobilization Directorate, FMOH | a. Dr. Mizan Kiros, Director of Resource Mobilization Directorate<br>b. Mideksa Adugna, Head, Health Economics and Financing Case Team<br>c. Ermiyas Dessie , Health Care Financing Analyst<br>d. Zenebech Gella, Officer |
| 2. Ethiopian Health Insurance Agency | a. Abduljelil Reshad, Deputy Director General |
| 3. Policy and Planning Directorate, FMOH | a. Noah Elias, Director<br>b. Meseude Mohammed, Assistant Director and M&E Coordinator<br>c. Melaku G/Michael, M&E Expert<br>d. Mengesha Hidego, Officer |
| 4. Clinical Service Directorate | a. Dr. Hassen Mohammed, Officer<br>b. Tiruwork Aklie, Officer |
| 5. Primary Health Care/Health Extension Directorate | a. Temesegen Ayalew, Assistant Director |
| 6. Health Sector Financing Reform Project, Abt Associates Inc. | a. Leulseged Ageze, Chief of Party<br>b. Zelalem Abebe, Deputy Chief of Party and Senior Health Insurance Specialist;<br>c. Marjan Inak, Technical Project Officer |
| 7. USAID | a. Gebeyehu Abelti, SI Advisor |
| 8. WHO | a. Dr. Sofonias Getachew, Health System Advisor |
| 9. Clinton Health Access Initiative (CHAI) | a. Eshetu Bekele, M&E Advisor |
| 10. Workie Mitiku | a. Private consultant |