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UNIVERSAL HEALTH COVERAGE MEASUREMENT IN A LOW-INCOME CONTEXT: AN ETHIOPIAN CASE STUDY

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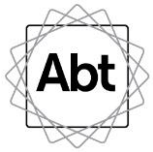

Abt Associates Inc. | 4550 Montgomery Avenue, Suite 800 North | Bethesda, Maryland 20814
T: 301.347.5000 | F: 301.652.3916 | www.abtassociates.com

Broad Branch Associates | Development Alternatives Inc. (DAI) | Futures Institute | Johns Hopkins Bloomberg School of Public Health (JHSPH) | Results for Development Institute (R4D) | RTI International | Training Resources Group, Inc. (TRG)

UNIVERSAL HEALTH COVERAGE MEASUREMENT IN A LOW-INCOME CONTEXT: AN ETHIOPIAN CASE STUDY

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ACRONYMS

CSA	Central Statistics Agency
DHS	Demographic and Health Survey
EDHS	Ethiopia Demographic and Health Survey
EHIA	Ethiopia Health Insurance Agency
EHSP	Essential Health Service Package
FMOH	Federal Ministry of Health
GDP	Gross Domestic Product
GOE	Government of Ethiopia
HEW	Health Extension Worker
HFG	Health Finance and Governance
HIS	Health Information System
HMIS	Health Management Information System
KPI	Key Performance Indicators
MDG	Millennium Development Goals
M&E	Monitoring and Evaluation
MOFED	Ministry of Finance and Economic Development
NCD	Noncommunicable Disease
OOP	Out-of-pocket
UHC	Universal Health Coverage
WHO	World Health Organization
WMS	Welfare Monitoring Survey

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EXECUTIVE SUMMARY

Universal health coverage (UHC) as a goal of health policy has gained wide acceptance at country and global levels since the publication of the World Health Report 2010 and is seen as a critical component of sustainable development. UHC has also been listed as one of the possible goals of the post-2015 development agenda. To achieve these goals, however, policymakers must first be able to define, measure, and monitor UHC.

The objective of this case study was to analyze Ethiopia's approach to monitoring progress towards UHC and consider the implications of Ethiopia's experience with UHC measurement for other low-income countries and the international community. The study achieved this objective by (i) exploring indicators that Ethiopia is already using to measure progress towards UHC; (ii) evaluating Ethiopia's institutional capacity to collect data for and generate a set of proposed UHC indicators; and (iii) providing recommendations based on findings.

The study produced several major findings. First, of the proposed global indicators, nearly all service coverage indicators related to communicable diseases are available in Ethiopia. These indicators include maternity care, child nutrition, child vaccination, treatment of sick children, family planning, malaria, tuberculosis, and HIV/AIDS services. However, indicator estimates based on surveys varied significantly with those based on routine information system data.

Second, this study found that, despite the rising burden of noncommunicable diseases (NCDs), providing care for these conditions receives low priority as does measurement of NCD service coverage.

Third, while policymakers have acknowledged the importance of the quality of care for improving health system performance, very few "process" quality measures exist. Instead, "structural" measures of service quality, such as indicators measuring the condition and sufficiency of infrastructure and workforce, as well as "outcome" measures of service quality, such as morbidity and mortality rates, were more widely available.

Finally, while data for financial protection indicators are being collected in household income, consumption, and expenditure surveys, these data are not analyzed or reported to shed light on the level of financial protection available in the country. As such, they are also not relevant for annual planning and programming. The 2013/14 Annual Plan of the new Ethiopian Health Insurance Agency did, however, introduce new financial protection-related performance indicators that could help guide annual planning and budgeting. They include coverage of risk pooling schemes, percentage of the poor whose premium is paid by the government, and percentage of risk pooling scheme members utilizing services.

This study's primary recommendations are as follows:

- The government of Ethiopia should develop a comprehensive definition and strategy for UHC measurement, incorporating measurement of chronic conditions.
- UHC measurement must satisfy policy and programmatic needs at the country level, reflecting national priorities, and governments may need to prioritize selected indicators that are most locally relevant. If UHC is to become part of a post-2015 agenda and guide policy decisions, it may be more politically feasible to track a smaller number of indicators that focus on a few impact, outcome, and health systems dimensions rather than a list of many disease-specific indicators. Implementing this strategy will increase the likelihood of buy-in from stakeholders.

- A broader effort should be made to strengthen the capacity of low-income countries to generate the necessary information for monitoring achievement towards UHC. Poor countries just entering an epidemiological transition and beginning to establish risk pooling schemes are particularly in need of capacity investments in their survey and routine information systems so that they can generate the necessary NCD, financial protection, and service quality measures. This likely requires greater collaboration between health ministries and statistical agencies responsible for conducting surveys

1. INTRODUCTION

Universal health coverage (UHC) as a goal of health policy development has gained wide acceptance at country and global levels since the publication of the World Health Report 2010 and is now seen as a critical component of sustainable development (World Health Organization (WHO) 2010; Brearly et al. 2013). UHC has also been listed as one of the possible goals of the post-2015 development agenda (Vega 2013). Discussions on the suitability of UHC as a goal are often reduced to two questions: how should UHC be defined and how can it be measured and monitored? The WHO has defined UHC as a situation where all people who need health services receive them, without incurring financial hardship (WHO 2010). This definition entails two interrelated components: coverage with needed quality health services and access to financial risk protection, for everyone. The level and distribution of effective coverage of interventions and financial risk protection have been proposed as the focus of monitoring progress towards UHC (Evans et al. 2012).

Developing simple and sound measures to assess country, regional, and global situations and to monitor progress towards UHC is critical if this objective is to remain high on the global agenda and receive priority attention from country policymakers. While the basic definition of UHC is conceptually straightforward, developing feasible metrics of UHC is less so. Variations in countries' epidemiology, health systems and financing, and levels of socioeconomic development imply different approaches to UHC implementation as well as a potential range of relevant metrics. Many countries working towards UHC already rely on locally specific, routinely collected service statistics to measure health system performance, and standard demographic, health and economic surveys contribute occasional snapshots of trends in health status measures and economic development. At the same time, establishing new global goals, indicators, and targets could have a critical impact on governments' commitment to successful implementation of global declarations, such as the December 2012 United Nations Resolution making UHC a key global health objective.

While discussions on UHC measurement approaches have been occurring at the global level for a few years, less attention has been paid to country perspectives on this topic until recently. To advance discussion on the availability, feasibility, and relevance of various globally-proposed candidate indicators for UHC measurement – especially in resource-poor contexts – the Health Finance and Governance Project (HFG), funded by the United States Agency for International Development, conducted a case study in Ethiopia, a low-income country engaged in UHC efforts. The objectives of this study were to document the availability of proposed globally-proposed UHC indicators; seek feedback from key informants on these indicators' relevance and feasibility; review the country's overall capacity to collect and use UHC indicators; and compile existing estimates for proposed UHC indicators. The study also aimed to inform the Ethiopian government as it develops its own UHC strategy and eventually implements such policies.

This article summarizes the results of the case study. After a presentation of the case study methodology, we explore the indicators Ethiopia is already using to measure progress towards UHC. The subsequent sections evaluate Ethiopia's capacity to collect data for and generate a set of proposed UHC indicators. We also issue recommendations for the government of Ethiopia and the international community based on the findings.

2. METHODOLOGY

The HFG project team compiled a list of indicators that are under consideration for global UHC monitoring from two primary sources: a WHO working paper by Evans et al. (2012) and an unpublished workshop report prepared as an output of a WHO- and Rockefeller Foundation-sponsored meeting in Bellagio in September 2012 (Evans, 2012; WHO, 2012). The list of 61 proposed indicators includes 52 tracer indicators of population service coverage and nine indicators of financial protection coverage. An additional set of 28 proxy health systems indicators was also reviewed.

The case study employed two methods: key informant interviews and secondary data analysis. Ten key informants representing major stakeholders in Ethiopia's UHC efforts were interviewed, including government, development partners, and implementing partners (Annex A). Key research questions are presented in Annex B. The study team also obtained and analyzed secondary data to assess availability of UHC indicators and to document trends over time (such as health information system (HIS) annual reports, health care utilization survey reports, Demographic and Health Survey (DHS) reports, Household Income, Consumption and Expenditure Survey reports, Welfare Monitoring Survey (WMS) reports, and other Federal Ministry of Health (FMOH) reports). A comprehensive list of indicators, data collection methods and frequency, data quality and availability are presented in Annex C.

The scope of these data collection efforts was limited due to the constrained time period in which this research was undertaken (August–September 2013); we were unable to interview some key stakeholders, such as private sector associations and other donor agencies. While the results presented here can inform the discussion on measuring progress towards UHC in low-income contexts, additional information on health information system capacity and stakeholder preferences is still needed.

3. BACKGROUND: UHC INITIATIVES IN ETHIOPIA

3.1 Overview of the Service Delivery System

Ethiopia is a low-income country with a per capita gross domestic product (GDP) of US$513 in 2011/12 (Ministry of Finance and Economic Development (MOFED) 2013). While the proportion of people living below the local poverty line has declined by roughly a third over the past decade, the fraction remains high at 28 percent (Central Statistics Agency (CSA) 2012). Private final consumption on health is estimated at 3 percent of the GDP (MOFED 2013). The country is federally structured and three tiers of government (federal, regional, and woreda (district)) allocate resources to the health sector.

Primary care is delivered at three types of facility – health posts, health centers, and primary hospitals. Each primary health care unit comprises five health posts, one health center, and a primary hospital. Each health post is staffed with two health extension workers (HEWs) and is responsible for a population of 3,000 to 5,000 people. A health center has an average of 20 staff and provides both preventive and curative services. It also serves as a referral center for patients coming from health posts and a practical training institution for HEWs. Health centers have an inpatient capacity of 11 beds. Rural health centers serve populations up to 25,000 persons, while urban health centers serve up to 40,000 persons.

A primary hospital provides inpatient and ambulatory services to an average population of 100,000. In addition to what a health center can provide, a primary hospital provides emergency surgical services, including Caesarean sections and blood transfusions. It also serves as a referral center for patients from health centers in the hospital's catchment area, and is a practical training center for nurses and other paramedical health professionals. A primary hospital has an average inpatient capacity of 35 beds and a staff of 53 persons.

The secondary care level is made up of general hospitals. A general hospital provides inpatient and ambulatory services to an average of 1 million people. It is staffed with roughly 230 professionals and serves as a referral center for primary hospitals. General hospitals have an inpatient capacity of 50 beds and act as training centers for health officers, nurses, emergency surgeons and other health professionals.

The tertiary care level comprises specialized hospitals. A specialized hospital serves an average of 5 million people. It is staffed with roughly 440 professionals, serves as a referral center for general hospitals, and has an inpatient capacity of 110 beds.

3.2 Ethiopia's Policies for Achieving UHC

Ethiopia has not yet promulgated an official definition of UHC. Nonetheless, the government of Ethiopia (GOE) is working on a vision for 2035, and, according to those interviewed for this study, the major policy imperative is expected to be UHC. UHC-designated reforms may be initiated in 2014 as part of the development of the Fifth Health Sector Development Program. As shown in Tables 1 and 2, the country has various policies, and strategies aimed at improving access to a basic package of essential primary health care services and protecting users from catastrophic spending; many of the policies and strategies could fall under a "UHC" heading.

Table 1: Policies that Aim to Define and Achieve UHC

Laws, Policies, and Strategies	Objectives or Provisions
Ethiopian Constitution 1991	Indicates that, to the extent the country's resources permit, policies shall aim to provide all Ethiopians with access to public health and education, clean water, housing, food, and social security.
Health policy 1993	States that Ethiopia shall invest in the development of an equitable and acceptable standard of health service system that will reach all segments of the population within the limits of recourse.
Health finance strategy 1998	Notes that a shift is required in how health resources are targeted, from curative and urban-based expenditures to high-risk and focus population groups as well as the poor. Indicates that user fees need to be revised according to the ability of the people to pay for the services they receive, and adjusted by increases in the cost of living. Although there is always a cost for health services, out-of-pocket (OOP) payments at the time of service delivery may not be required. Some disease categories, population groups, and program entities should get the privilege of exemption. Decrees that appropriate measures will be taken to ensure that the poorest people benefit from primary health care through fee exemptions, subsidies, and/or the implementation of community-based risk sharing schemes/insurance
Health sector development plans	Since HSDP III, five-year plans indicate that the GOE's priority for investment has been geared towards strengthening the primary health care system, especially the health extension program (health posts with two HEWs) and massive health center expansion (facilities, health officers, and nurses).
Ethiopian essential health package	Ethiopia's essential health service package (EHSP) (FMOH 2005) aims to provide a minimum standard of care that fosters an integrated service delivery approach essential for advancing the health of the population. EHSP services are to be offered at district hospitals, health centers, and health posts. The package covers family health, communicable diseases, hygiene and environmental sanitation, essential curative care and chronic diseases, and health education and communication. Within the EHSP, exempted services are free for everyone and include care for tuberculosis (sputum diagnosis, drugs, and follow-up); maternal care (prenatal, delivery, postnatal); family planning services; immunization services; HIV/AIDS (voluntary care and treatment and prevention of mother-to-child transmission); leprosy; fistula; and epidemics. The government subsidizes the remaining essential health services, allowing health centers and hospitals to charge a minimal user fee. However, the government fully subsidizes these services for the poorest households eligible for the fee waiver program. High-cost inpatient services are not included in the EHSP and hospitals need to mobilize their own resources for these services.
Regional health laws, regulations, and guidelines	The regional governments set the user fees to be charged at the facility level, and the targeting and reimbursement of fee-waiver beneficiaries; they determine how to improve quality of care through retained fees.
Draft health insurance strategy	The draft health insurance strategy (FMOH 2010a) defines how formal and informal sector employees will be covered by prepayment and risk sharing schemes. The draft strategy has the goal of achieving UHC with dual objectives: (i) reduce the burden of OOP spending by households and (ii) increase access to quality health services.

Source: Authors' compilation of various strategies and reports.

The strategies above and others indicate that financial protection is of particular concern to the GOE.[1] Estimates of the financial burden of OOP spending for households range from 1.07 to 4 percent of household income (CSA 2011; FMOH 2013a). To reduce the financial burden of user fees and premiums, the GOE has established various financial protection mechanisms. Table 2 presents each of these mechanisms and their associated challenges.

Table 2: Strategies to Enhance Access and Financial Protection in Health

	Strategy	Definition	Main Challenges in Implementation
1	Exempted services	These services are free for all regardless of income.	Sustainability of financing for health commodities will become a challenge if and when donor resources reduced or withdrawn.*
2	Essential services	The government subsidizes as much as 70% percent of non-medicine costs.** Medicines are sold with a 25% mark-up.	Quality of services remains an issue.
3	Targeted fee waiver schemes for indigents	Local governments reimburse health providers for lost user fees when treating indigent patients.	Undercoverage of the very poor and wide regional variation in implementation.***
4	Pilot community-based health insurance schemes	Government subsidizes 25% of the premiums of all members and the full premiums of the poor; district-level scheme managers are paid through government allocation.	Undercoverage of the poor; scalability of the schemes due to huge fiscal implications; and inadequate readiness of facilities to provide quality service.***
5	Health insurance for the formal sector	The legal framework is in place, the Health Insurance Agency has been established, and some systems have been designed, but the agency has not yet started operations.	There is limited management capacity of the agency; limited readiness of facilities to provide quality care.

Sources: *Harvard School of Public Health (2013); ** FMOH (2010b); ***Purvis et al. (2011)

As these tables show, numerous separate strategies, policies, and guidelines are shaping Ethiopia's efforts to provide universal primary health care in Ethiopia, addressing the UHC components of access, quality, and financial protection. However, they have yet to be consolidated into one coherent policy document with clearly articulated sources of financing. Moreover, although some isolated efforts have been initiated, there has been limited focus on noncommunicable diseases (NCDs).

1 Ethiopia's social health insurance strategy touches on UHC by defining the objective of a future social health insurance scheme as "…provide quality and sustainable universal health care coverage to the beneficiary through pooling of risks and reducing financial barriers at the point of service delivery" (FMOH 2010a).

4. FINDINGS: MEASURING AND MONITORING PROGRESS TOWARDS UHC IN ETHIOPIA

4.1 Ethiopia's Current and Proposed Systems for Measuring Progress towards UHC

Ethiopia has an established monitoring and evaluation (M&E) system for its health sector, with an annual planning process that establishes targets and annual review meetings that assess performance (Altman et al. 2012). There are 155 indicators in the current five-year Health Sector Development Program (FMOH 2010c); as indicated in Table 3, annual plans and performance reports capture 42 of these indicators on a yearly basis. No direct financial protection indicators are planned for or monitored on annual basis. Thirty-six additional "key performance indicators" (KPIs) are used to monitor health service quality via a separate, parallel mechanism, as shown in Table 4.

Table 3: Types and Numbers of Health Sector Indicators Monitored in Ethiopia

Types of Indicators by Strategic Objectives	In HSDP IV (Five-year Plan)	Annual Plan	Comments
Access	104	34	Of the 104, 18 are impact indicators collected every five years only.*
Community ownership	3	1	
Resource mobilization	8	-	
Quality of health services	9	1	36 additional KPI monitor the quality of hospital services.
Emergency preparedness and response	1	1	
Pharmaceutical services	7	1	
Regulatory system	5	1	
Planning and M&E	7	1	
Infrastructure	8	1	
Human capital and leadership	3	1	
Total	155	42	Of the 155, information on 44 are derived from surveys.

Sources: FMOH (2010c); FMOH (2013)

Table 4: Key Performance Indicators (KPI) on Quality of Care

No.	Indicator
KPI 1	% of Ethiopian Hospital Reform Implementation Guidelines' Operational Standards for hospital reform met
KPI 2	Outpatient attendances
KPI 3	% of all outpatient attendances that are seen at the private wing service
KPI 4	Outpatient waiting time to treatment
KPI 5	% of outpatients not seen on same day
KPI 6	Emergency Room attendances
KPI 7	% of patients triaged within 5 minutes of arrival at Emergency Room
KPI 8	% of emergency room attendances with length of stay >24 hours
KPI 9	Emergency room mortality rate
KPI 10	Inpatient admissions
KPI 11	% of inpatients that are admitted to private wing services
KPI 12	Inpatient mortality rate
KPI 13	Delay for elective surgical admission
KPI 14	Bed occupancy rate
KPI 15	Average length of stay
KPI 16	Pressure sore incidence rate
KPI 17	Surgical site infection rate
KPI 18	% of completeness of inpatient medical records
KPI 19	Deliveries (live and stillbirths) attended
KPI 20	Proportion of births by surgical, instrumental, or assisted vaginal delivery
KPI 21	Institutional maternal mortality ratio
KPI 22	Institutional neonatal death rate within 24 hours of birth
KPI 23	Number of referrals made
KPI 24	Rate of referrals
KPI 25	Emergency referrals as a proportion of all referrals
KPI 26	Average stock-out duration of hospital-specific tracer drugs
KPI 27	Patient day equivalents per doctor
KPI 28	Patient day equivalents per nurse/midwife
KPI 29	Number of major surgeries per surgeon
KPI 30	% of all surgeries conducted in the private wing
KPI 31	Attrition rate – physicians
KPI 32	Staff satisfaction
KPI 33	Cost per patient day equivalent

No.	Indicator
KPI 34	Raised revenue as a proportion of total operating revenue
KPI 35	Revenue utilization
KPI 36	Patient satisfaction

4.2 Comparison of Ethiopia's UHC Measurement Approach with WHO-Proposed Indicators

Ethiopia has three sources of health monitoring data relevant for UHC measurement: the Health Management Information System (HMIS), administrative reports, and surveys. Of the 61 WHO-proposed indicators that were explored in this study to measure UHC, our review indicated that 28 are collected in Ethiopia through surveys and 14 are recorded and reported through HMIS or other administrative sources. Twenty-seven indicators (44%) are not collected nor reported in any of the sources. Table 5 shows availability of indicators, grouped by the major UHC elements of measurement. The full list of WHO proposed indicators can be found in the Evans et al. (2012) and Bellagio meeting report (Annex C).

Table 5: Availability of Proposed UHC Indicators in Ethiopia's Information System

Elements of UHC Measurement	# of Explored Indicators	Sources of Available Indicators		# of Unavailable Indicators
		Survey	Routine	
Service coverage indicators	52	27	12	21
Financial protection indicators	9	1	2	6

4.2.1 Service Coverage Indicators

Of the 52 indicators proposed for measuring service coverage, Ethiopia collects and uses 31 or roughly 60 percent (Table 6). All the proposed tracer indicators of maternity care, child nutrition, child vaccination, treatment of sick children, family planning, malaria, tuberculosis, and HIV/AIDS services are available. However, none of the proposed NCD or injury indicators (for coverage of cancer, cardiovascular disease, diabetes, chronic pain, chronic respiratory conditions, musculoskeletal conditions, mental health, vision, or dental services) are currently being collected. Key informants acknowledged concerns about an epidemiological transition in Ethiopia, including a rising burden of NCDs, but the priority given to these conditions remains marginal. Interviewees noted that there is a plan to undertake a Burden of Disease study in 2014 to estimate NCD prevalence rates and establish a baseline for future interventions.

Table 6: Availability of Proposed UHC Service Coverage Indicators

Service Coverage Indicators	# of Explored Indicators	Sources of Available Indicators		# of Unavailable Indicators
		Survey	Routine	
Maternal health	5	3	3	0
Child nutrition	6	6	0	0
Child vaccination	5	5	3	0
Treatment of sick children	3	3	0	0
Family planning	2	2	1	0
Malaria	3	3	1	0
Tuberculosis	2	0	2	0
HIV/AIDS	4	2	2	0
Cancer	5	1	0	4
Cardiovascular diseases	8	0	0	8
Diabetes	1	0	0	1
Chronic pain	1	0	0	1
Musculoskeletal conditions	1	0	0	1
Mental health	1	0	0	1
Vision problems	1	0	0	1
Hearing problems	1	0	0	1
Dental/oral	1	0	0	1
Other NCDs	2	0	0	2
Total	52	27	12	21
				40%

Measurement of the quality of services, an element of "effective" coverage, is primarily limited to the tertiary level, where the 36 KPIs are currently tracked. All hospitals set annual quality targets based on these KPIs and report monthly on achievements. Perceived quality is tracked through quarterly patient satisfaction surveys. The focus of quality measurement to date has been on tracking system-wide progress (overall patient satisfaction, infection, and mortality rates) rather than disease- or service-specific indicators as in the WHO's proposed measurement indicators. The only service-specific quality indicators being collected in Ethiopia are related to maternity and pediatric care. Efforts to assess quality of chronic disease services are just beginning. Given that Ethiopia's vision for UHC is related to ensuring access to primary care, measures of quality outside health facilities (services provided through the health extension program for example) are rarely found.

4.2.2 Financial Protection Indicators

In Ethiopia, three of the WHO's five proposed "indirect"[2] measures of financial protection – measures that usually correlate with but do not directly measure rates of impoverishment from health spending – are collected via routine government administrative reports or surveys (Table 7). None of the four "direct" financial protection indicators (measuring the financial burden of health spending to families) is calculated.[3] National Health Accounts estimations and Household Income, Consumption, and Expenditure surveys are conducted on a regular basis; however, final survey reports show only the overall percentage of total household income spent OOP on health care (about 1 percent in 2011). The reports do not analyze the percentage of households that are impoverished as a result of OOP spending. Thus, while efforts are being made reduce the burden of OOP spending on households, these strategies are not yet reflected in the official indicator list for health sector performance.

Table 7: Availability of Proposed UHC Financial Protection Indicators

Financial Protection Indicators	# of Explored Indicators	Sources of Available Indicators		# of Unavailable Indicators
		Survey	Routine	
Direct	4	0	0	4
Indirect	5	1	2	2
Total	9	1	3	6
				67%

The 2013/14 Annual Plan of the new Ethiopian Health Insurance Agency (EHIA) introduced financial protection-related performance indicators. The proposed indicators include coverage of risk pooling schemes, percentage of the poor whose premium is paid by government, and percentage of risk pooling scheme members utilizing services. While not direct measures of financial protection, these three indicators seem programmatically relevant for measuring annual efforts made to reduce the number of people paying out-of-pocket and to support the very poor. Other EHIA indicators will reflect the quality of services provided to members of the risk pooling schemes and patient satisfaction. The proposed "direct" financial protection indicators listed above were perceived by key informants to be important impact indicators, but less programmatically relevant in the Ethiopian context.

4.2.3 Additional Health System Performance Indicators

Table 8 presents several WHO-recommended additional indicators that could be used as proxies for UHC by measuring health system performance. The detailed definition of these indicators in the Ethiopian context is presented in Annex C of this report. They include measurements of health workforce and infrastructure, service readiness, quality of care, and health outcomes. Roughly 57 percent of these additional proposed indicators are available in Ethiopia, with notable gaps in the availability of service readiness and quality indicators. The Service Provision Assessment survey that will be conducted in EFY 2013/14 is expected to collect some of these indicators.

[2] These indirect measures include OOP payments as a percent of total health spending; government health spending as a percent of GDP; government health spending as a percentage of total government spending; etc.
[3] These direct measures include incidence and depth of catastrophic health spending and medical impoverishment.

Table 8: Availability of Proposed, Additional UHC Indicators

Additional Indicators	# of Explored Indicators	Sources of Available Indicators		# of Unavailable Indicators
		Survey	Routine	
Health financing	1	1	0	0
Health workforce	2	0	2	0
Infrastructure	2	0	2	0
Information	2	0	0	2
Service access and readiness	4	1	1	2
Service quality and safety	4	0	0	4
Risk and behavioral factors	4	1	2	1
Health status	8	5	0	3
Responsiveness	1	1	0	0
Total	28	9	7	12
				43%

4.3 Local Capacity to Collect, Analyze, and Use UHC Indicators

In addition to the question of whether Ethiopia's existing systems include relevant indicators for UHC measurement, strengths and weaknesses in the HIS more broadly will influence Ethiopia's capacity to generate these measures. Our review of secondary data and key informant interviews highlighted concerns about the quality of existing systems. Weaknesses in basic infrastructure (Internet, electricity, and hardware), especially at facility and woreda levels, present challenges for both survey-based and routine data collection. While there is general consensus that surveys such as the DHS are of high quality – both in terms of their validity and reliability – their ability to accurately monitor changes in self-reported health care coverage are limited by low literacy rates, recall bias (especially for long-term recall of detailed information like vaccine doses), and survey fatigue. Survey estimates of income and consumption, including health expenditures, are also subject to well-known limitations (Deaton 1997).

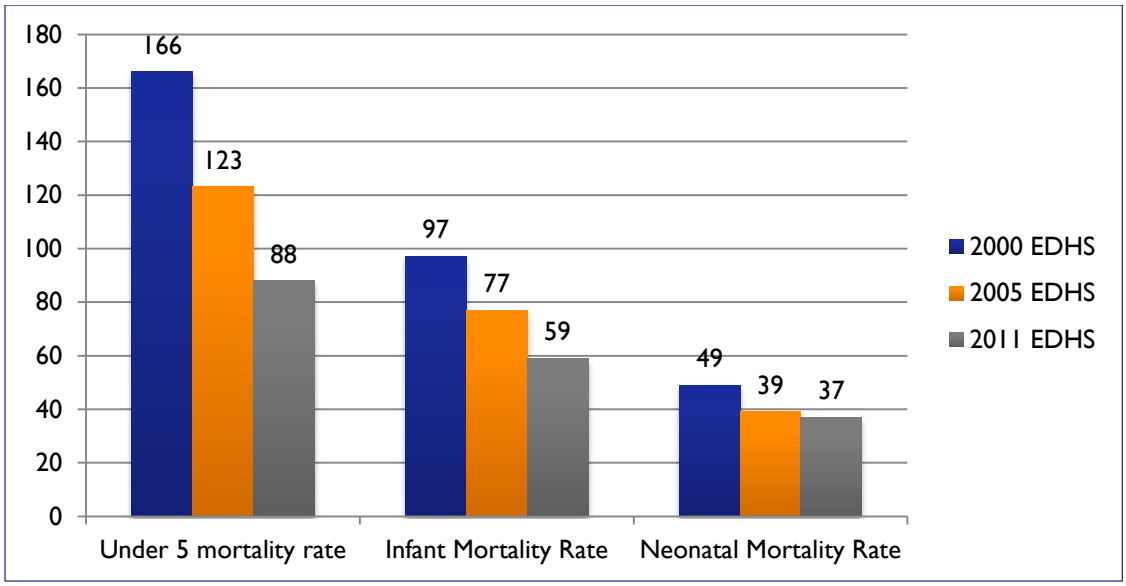
The quality of Ethiopia's routine information system is mixed, as in most low- and middle-income countries, and efforts to strengthen and scale up the electronic HMIS and other vertical information systems are ongoing. A recent annual data quality assessment in Ethiopia noted weaknesses such as under- and over-reporting (and lack of accountability for accurate reporting), challenges with timeliness and quality of data, and inadequate supportive supervision; most M&E staff at health facilities did not have adequate knowledge of reporting procedures or indicator calculation (FMOH 2012). The quality of routine data can only be improved when it is used for planning and monitoring at local levels, yet only a third of facilities compared their plans with performance every quarter. While the GOE has tried to instill a culture of information use through its annual planning process, there is still work to be done.

5. REVIEW OF ETHIOPIA'S PROGRESS TOWARDS UHC

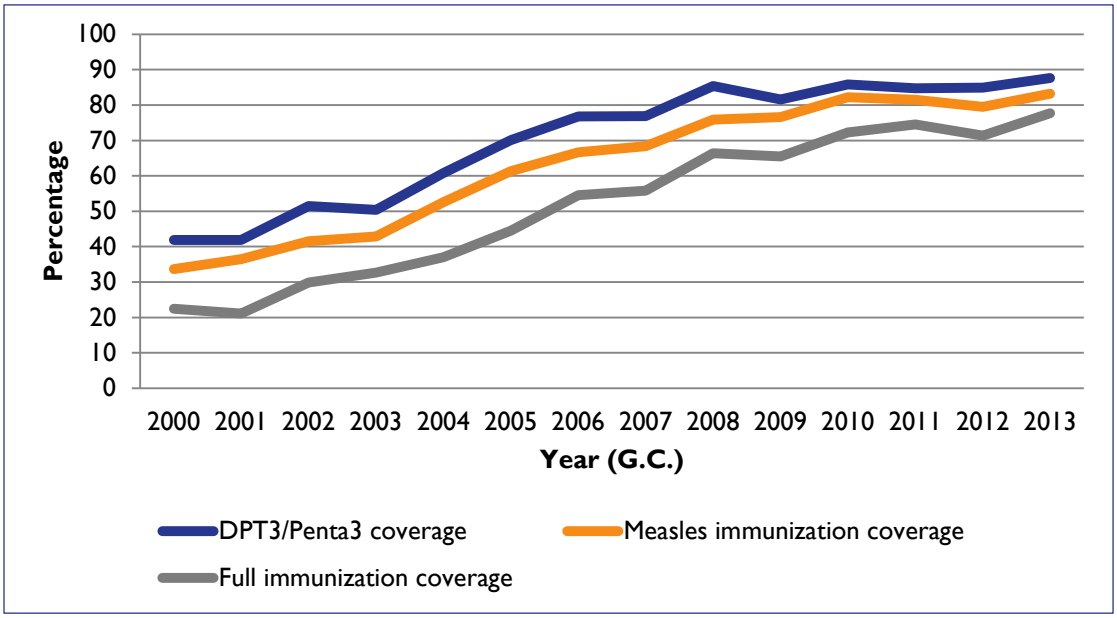
This section provides a snapshot of Ethiopia's progress towards UHC to provide a sense for how the country might monitor its UHC efforts. We use available indicators of health outcomes, service coverage, and financial coverage in Ethiopia. While mortality indicators – notably the Millennium Development Goals (MDG) and high-level impact targets – are not synonymous with coverage, they provide a snapshot of how health system performance has changed over a 12-year period.

Ethiopia has shown significant progress in reducing under-five, infant, and neonatal mortality rates over the last decade. These rates have declined by 47, 39, and 25 percent, respectively (see Figure 1). According to the latest United Nations report, Ethiopia achieved the MDG goal of reducing child mortality well ahead of 2015. Many of the child health services seem to have witnessed significant improvement in reaching their target populations (see Figure 2): since 2000, coverage of DPT3 has doubled; immunization against measles has increased by 150 percent and full immunization has increased by 230 percent, according to routine information systems. However, reported coverage rates vary significantly between population-based surveys and routine information systems.

Figure 1: Trends in Mortality Rate (# per 1,000)



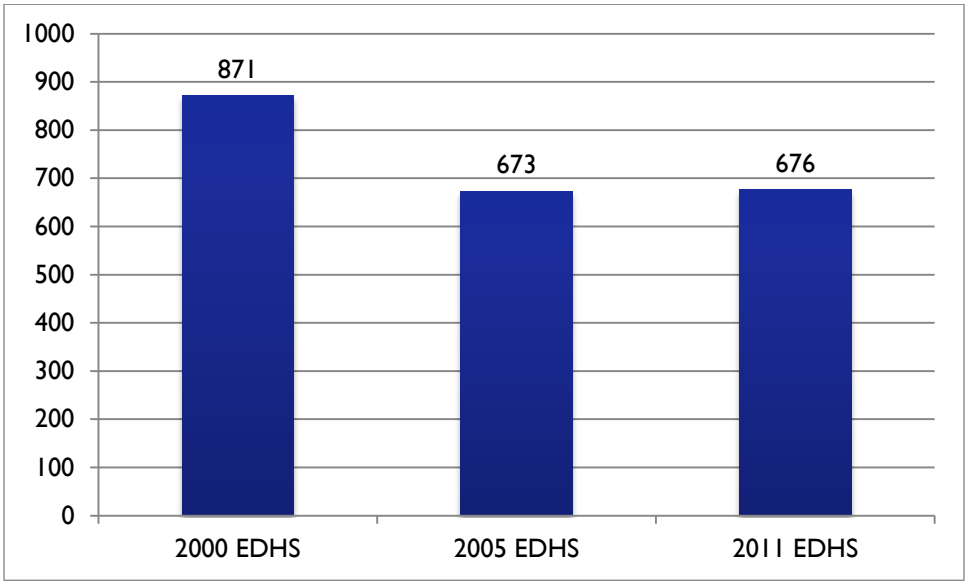
Sources: CSA (2001); CSA (2006); CSA (2012).Figure 2: Trends in Coverage (%) in Immunization



Source: FMOH, Annual HMIS reports from various years (EFY 2000-2013)

For maternal and reproductive health services, coverage trends have been mixed. Access to pre- and postnatal care and family planning has increased, but rates of skilled attendance at delivery – the major determinant for reducing the maternal mortality ratio – have shown only a very marginal increase since 2008, according to routine data sources. As shown in Figure 3, survey-based estimates of the maternal mortality ratio also showed no change from the 2005 DHS (673 maternal deaths per 100,000 live births) to the 2011 DHS (676).

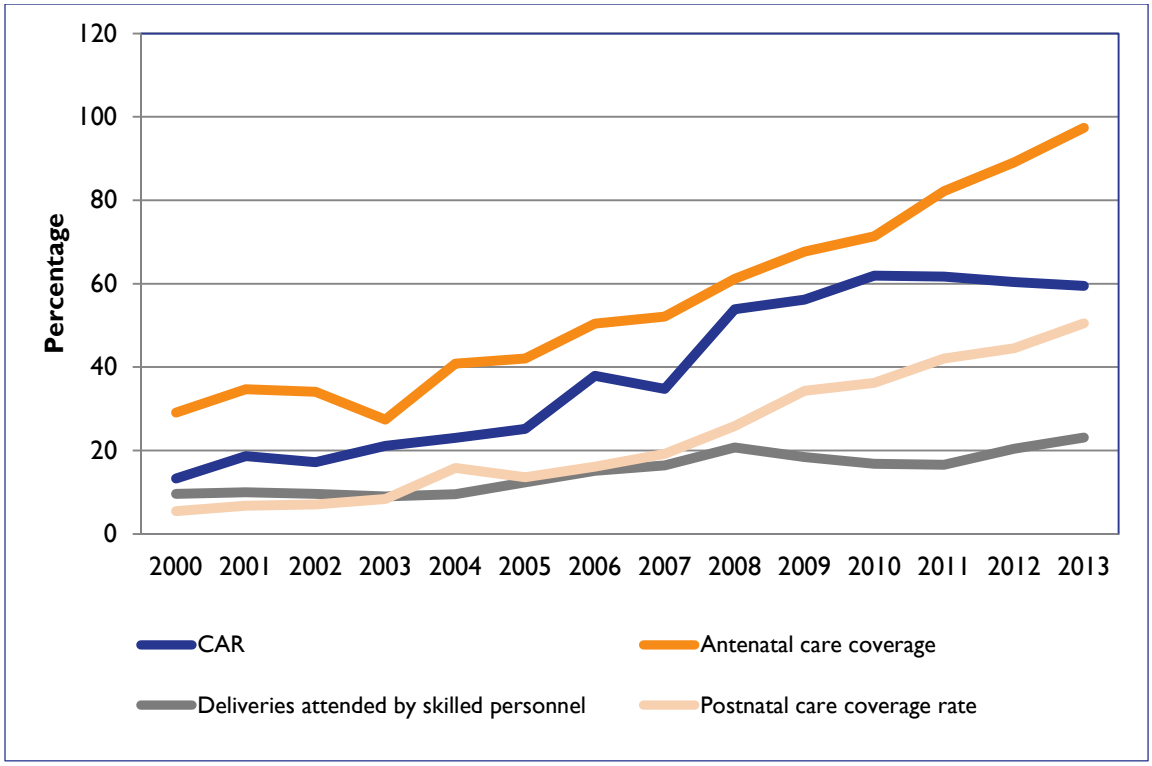
Figure 3: Trends, Maternal Mortality Ratio 2000–2011



Source: CSA and ICF International (2012)

One of Ethiopia's key priorities over the past decade has been to increase geographic access to care as measured by the number of primary health care facilities. Over 15,000 health posts and 2,780 health centers have been constructed since 2005, and the total number of health facilities nationwide (including those owned by the private sector) has increased more than tenfold. This investment has dramatically increased the reach of primary health care services (Figure 4). According to the WMS 2012, 65 percent (84 percent) of households are within five (ten) kilometers of the nearest health post, and 38 percent (60 percent) within five (ten) kilometers of a health center.

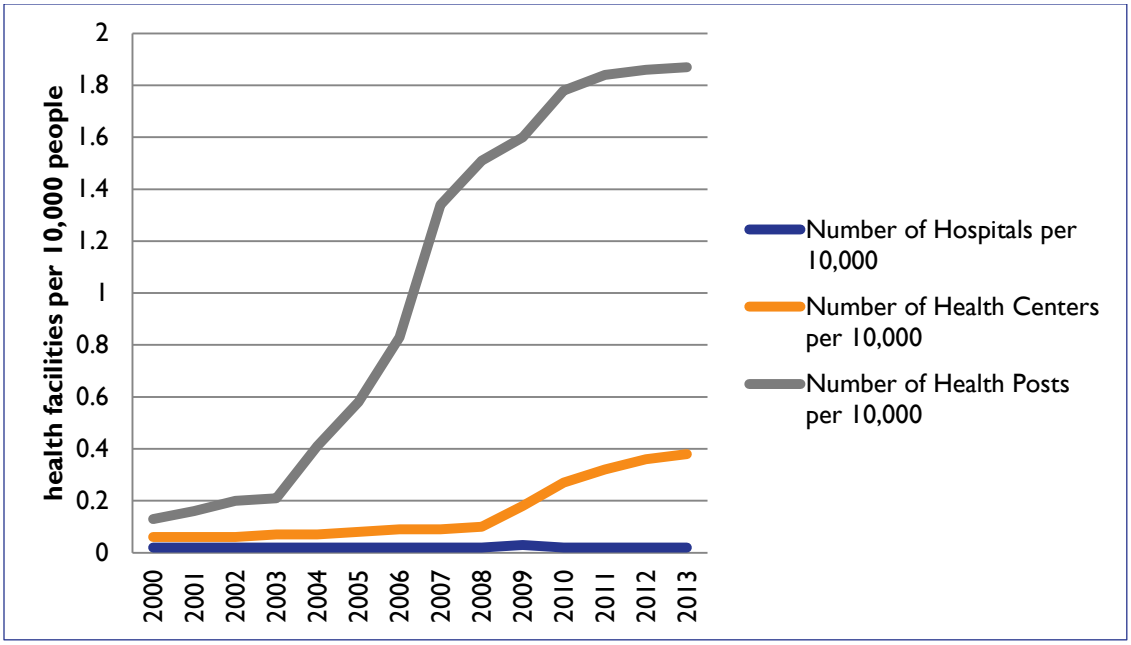
Figure 4: Trends in Coverage of Maternal and Reproductive Health Services



Source: FMOH, Annual HMIS reports from various years (EFY 2000-2013)
Note: CAR stands for Contraceptive Acceptance Rate; this is tracked via the HMIS and is used to proxy contraceptive prevalence rate.

Expansion of hospital-level services has taken place at a slower pace, as per Figure 5. From 2000 to 2011, while the number of hospitals increased from 103 to 212, hospital inpatient bed availability stagnated at around 2.1 per 10,000 due to population growth. However, with the government aiming to expand comprehensive obstetric care services, there is growing pressure to expand the number of primary hospitals to more than 800 (over one per district) over the next three years (FMOH 2010c). Currently, 14 percent of households live within five kilometers of a hospital, and 21 percent within ten kilometers.

Figure 5: Trend in the Number of Health Facilities per 10,000 People

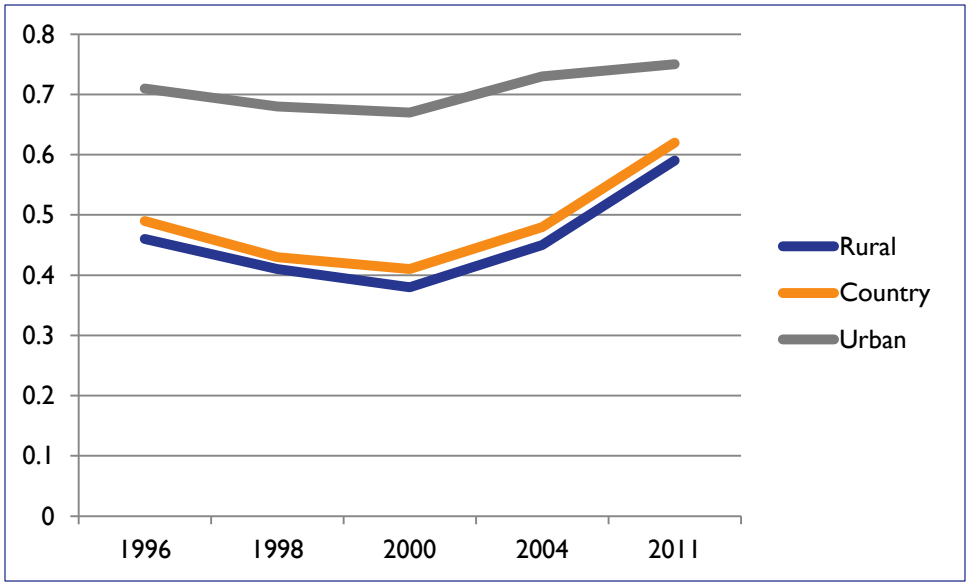


Source: FMOH, Health and health related indicator reports from various years (EFY 2000-2013)

The regional distribution of health facilities on a per capita basis is largely equitable, according to government reports. However, urban-rural disparities in the distribution of health facilities are significant. In urban areas, roughly 88 percent of households live within five kilometers of a primary health service provider, and nearly half of urban households are within five kilometers of a hospital. The corresponding proportion of rural households with this geographic access is 63 percent (health post), 24 percent (health center), and 1.5 percent (hospital) (CSA, WMS 2012).

Routine data sources and population-based surveys tell different stories about whether Ethiopians have been seeking outpatient care more frequently since 2000. Routine services statistics indicate that despite the expansion of primary health care facilities, outpatient visits per 10,000 population have increased only by about 14 percentage points. Data from population surveys on the other hand show a larger 22 percentage point increase in outpatient visits. There is again a wide difference in utilization between urban and rural areas (see Figure 6).

Figure 6: Number of Outpatient Department Visits per 10,000 People per Year for Curative Care



Source: CSA, WMS from various years (EFY 1997-2012)

There are also socioeconomic disparities in utilization of curative care. The WMS 2012 found that for the 30 percent of respondents who did not seek care for a recent illness, their major reported barrier was the cost of care. Analysis of utilization of selected fee-exempted services shows that the poorest quintile is far behind in using these services (see Table 9) for reasons related to social and cultural factors as well as cost and geographic access. Despite progress made in expanding primary care to rural areas across all regions and woredas, the largest improvements in service coverage between 2004 and 2011 occurred among the wealthiest households.

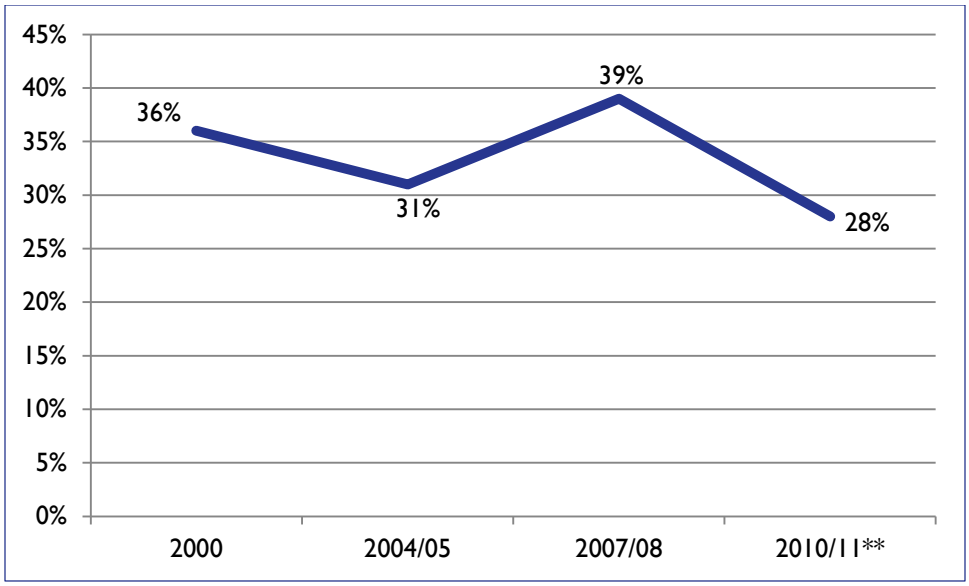
Table 9: Coverage Rates for Selected Indicators in the Poorest and Richest Wealth Quintiles

Coverage Indicator	Quintile	2004	2011
Skilled delivery	Poorest quintile	1%	2%
	Richest quintile	27%	46%
Postnatal care	Poorest quintile	1%	4%
	Richest quintile	24%	31%
DPT3	Poorest quintile	26%	26%
	Richest quintile	48%	62%
CPR	Poorest quintile	4%	13%
	Richest quintile	37%	52%
Unmet family planning needs	Poorest quintile	33%	31%
	Richest quintile	24%	15%

Source: CSA, 2005 and 2012 WMS

Ethiopia is moving to expand financial protection through various financing initiatives, as described in the background section. Nonetheless, OOP spending remains one of the major sources of health financing for the population, and one of the possible deterrents of use (see Figure 7).

Figure 7: OOP Spending as a Share of Total Health Sector Expenditure



Source: FMOH (2013b); FMOH (2010); FMOH (2006); FMOH (2003)

* A methodological revision in estimating OOP spending in the 2007/08 National Health Accounts may be the reason for the increase in OOP spending as a percentage of total health sector spending that year. Specifically, the 2007/08 OOP spending estimate is based on an independent household health expenditure survey while prior estimates were based on Central Statistics Agency-generated estimates.

** Preliminary data

6. RECOMMENDATIONS

To gain country-level commitment, UHC measurement indicators need to be technically sound, programmatically useful, and politically valued by country stakeholders. Key informants interviewed for this study suggested that if UHC is to become part of a post-2015 agenda and guide policy decisions, a smaller number of indicators should be tracked. They argued that the indicators for UHC should focus on a few impact, outcome, and health systems indicators rather than a list of many disease-specific indicators. Proposed global indicators should be further reviewed for the availability of data, relevance for local policy and programming, and cost of data collection. There must also be ownership and consensus on the list of indicators by all stakeholders, particularly health programs within countries. Some of the proposed financial protection indicators may be useful to understand whether the poor are being impoverished by health care costs, but they require costly surveys and as such may not be feasible for routine monitoring.

Below are several additional recommendations that the authors suggest:

- Ethiopia should work to consolidate its strategy for UHC and UHC measurement: Consolidating the various separate service delivery and financing strategies and plans into one UHC strategy for the 2015–2020 period would help to ensure a consistent vision and promote buy-in by policymakers at the federal, regional, and woreda levels. Developing a consolidated plan, sharing the plan with stakeholders, building awareness of what UHC means and how it will be implemented – and how it will be measured – will build momentum for this critical goal.
- The global community, and individual countries, should select a concise list of programmatically relevant indicators for systematic monitoring of UHC reforms: The list of proposed global indicators reviewed was very long and may not get buy-in at the country level. Fewer tracer indicators that balance the assessment of health system performance with more distal coverage outcomes are recommended. Selection of indicators at the country level should be guided by local programmatic relevance, priority health burdens (such as communicable vs. noncommunicable diseases), and the ability to mobilize political commitment. Both in Ethiopia and globally, there is need for better articulation of financial protection indicators that can be gathered routinely and used for annual planning and performance monitoring.
- Strengthen capacity for collecting, estimating, and sharing UHC indicators: Effective progress towards UHC will require good policy analysis capacity to inform strategy development as well as programming. Low- and middle-income countries, including Ethiopia, could benefit from technical assistance in the development of relevant UHC strategies. Poor countries just entering the epidemiological transition and beginning to establish risk pooling schemes are particularly in need of capacity investments in their routine information systems in order to generate NCD and financial protection indicators. In Ethiopia, the Federal Ministry of Health must proactively engage with the Central Statistics Agency when health information and welfare monitoring surveys are planned to ensure that UHC-relevant information is collected, analyzed, and disseminated. Finally, it would be useful to set up a technical group of epidemiologists, demographers, statisticians, and health economists from different UHC stakeholder institutions in Ethiopia to analyze health information system challenges and disparities in results gathered from routine and survey findings. Major capacity issues must be addressed systematically to

ensure greater concurrence between the routine and survey results and improve the quality of available UHC monitoring data.

ANNEX A: KEY INFORMANT LIST

NO	Institution
1	Planning, Policy and M&E Directorate, FMOH
2	Resource Mobilization Directorate, FMOH
3	Medical Service Directorate, FMOH
4	EHIA
5	WHO Ethiopia
6	United Nations Population Fund, Ethiopia
7	Italian Cooperation, Ethiopia
8	U.S. Agency for International Development Mission in Ethiopia
10	Abt Associates Inc., Ethiopia

ANNEX B: KEY RESEARCH QUESTIONS

The Ethiopian case study on UHC measurement was designed to answer a set of inter-related questions regarding the country's approach and capabilities in the area of UHC measurement.

Overview of the country's understanding of UHC and monitoring progress towards it

1. How would key stakeholders define UHC? How would they define service coverage and financial coverage (or financial protection)? What dimensions of equity do stakeholders consider important (by wealth/income, region, gender, ethnic group, immigration/citizenship status)?
2. To what extent has the country considered and/or prepared a plan for measuring service coverage and financial protection as well as equity in the distribution of services and financial resources?

Current status of monitoring progress towards UHC measured against internal and WHO standards

3. What indicators do key stakeholders consider relevant for tracking progress towards UHC? Which of these is the country's government currently tracking? Assess the availability, frequency, timeliness, and quality of these indicators. Are these data used by policymakers? What would the government like to measure, but does not currently have resources or capacity to measure?
4. Which of the WHO's proposed UHC indicators [to be provided] does the country currently measure through its existing HIS (from the routine HIS, surveys, vital statistics, surveillance, etc.) to monitor progress towards UHC? How are the data collected? To what extent are the WHO UHC indicators compatible with those captured by the country's routine HIS? Assess the availability, frequency, timeliness, and quality of these indicators.
5. How do the indicators that the government currently tracks or has identified compare to the WHO's proposed UHC indicators? Do government officials find the WHO UHC indicators relevant/helpful?
6. Is the country capturing measures of equity in financial protection and in service coverage? If so, how is equity being measured – along what dimensions?
7. The WHO is interested in measuring "effective coverage," the percentage of the population who receive services that are of adequate quality to improve health or well-being. Information about the quality of services received is important in assessing the real health implications of service coverage statistics. How does the country currently measure the quality of service provision?

Country's capacity to monitor progress towards UHC

8. Assess the country's capacity to produce the set of WHO indicators based on core HIS dimensions, including: sufficient human resources with relevant technical knowledge and skills, sufficient financial resources, conducive legal and regulatory policies, adequate organizational capacity, adequate IT and management systems strength.
9. What investments to improve or build capacity for monitoring progress towards UHC have been made already, if any?

10. What other investments would the country need to strengthen its capacity to track the WHO indicators? Possible examples include:
    a. Ensure adequate staffing of technical positions; recruit additional staff
    b. Improve technical skills and knowledge of available key staff through technical assistance and training (illustrative topics: surveys development and implementation, statistics, routine monitoring, producing indicators from raw data, basic data analysis skills)
    c. HIS strengthening, including IT infrastructure
    d. Organizational development and management skills building (e.g. professional development for senior-level people

ANNEX C: PROPOSED UHC INDICATORS: QUALITY AND AVAILABILITY BETWEEN 2000 AND 2013

The research team presented stakeholders with a list of indicators described as "under consideration" for global monitoring. These indicators were compiled with reference to three documents: *Measuring progress towards universal health coverage* , and *Measurement of trends and equity in coverage of health interventions in the context of universal health coverage* which also referenced a 2011 report by IHP+ and the WHO entitled *Monitoring, Evaluation, and Review of National Health Strategies*.

Health Services Coverage Indicators

1. Maternity Care

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ANC 4 or more visits	% of women that received antenatal care at least four or more times during pregnancy	EDHS 2000, 2005 and 2011	National household surveys	10.4					12.2						19.1		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ANC 1+ visit	% of women that received antenatal care at least once during pregnancy	Health and health related indicator (EFY 1992-2004) and report on annual performance report EFY 2005	Routine HMIS (Monthly and Quarterly) reports	29.1	34.7	34.1	27.4	40.8	42.1	50.4	52.1	61.2	67.7	71.4	82.2	89.1	99.3
ANC 1+ visit	% of women that received antenatal care at least once during pregnancy	EDHS 2000, 2005 and 2011	National household surveys	26.8					28.1						42.6		
Skilled birth attendance	Proportion of births attended by skilled health personnel	Health and health related indicator (EFY 1992-2004) and report on annual performance report EFY 2005	Routine HMIS (Monthly and Quarterly) reports	9.6	10	9.6	9	9.5	12.4	15.1	16.4	20.7	18.4	16.8	16.6	20.4	23.1
Skilled birth attendance	Proportion of births attended by skilled health personnel	EDHS 2000, 2005 and 2011	National household surveys	5.6					5.7						10		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Institutional Delivery			National household surveys														
Postnatal care	Proportion of women who seek care for reasons relating to post-partum at least once within 45 days after delivery	Health and health related indicator (EFY 1992-2004) and report on annual performance report EFY 2005	Routine HMIS (Monthly and Quarterly) reports	5.5	6.8	7.1	8.4	15.8	13.6	16.1	19.2	25.9	34.3	36.2	42.1	44.5	50.5
Postnatal care	Proportion of women who seek care for reasons relating to post-partum at least once within 45 days after delivery	EDHS 2000, 2005 and 2011	National household surveys	10.3					7.4						8.3		

b. Assessment of Indicator Availability and Quality

Core Tracer Indicators	Data Collection Frequency	Data Availability	Data Quality			Other General Comments
	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	
ANC 4 or more visits	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented at health facility level but not currently reported. Does not include all private health facility activity reports.	Recorded in HMIS but reported through surveys
ANC 1+ visit	Monthly	Published in official documents	yes	2-3 months	Indicator is recorded and reported through routine HMIS on a monthly basis. It is also collected through surveys. However, there are discrepancies between routine sources and surveys. Does not include all private health facility activity reports.	Recorded and reported in HMIS
ANC 1+ visit	Every 5 years	Published in official documents	yes	12 to 18 months		
Skilled birth attendance	Monthly	Published in official documents	yes	2-3 months	Indicator is recorded and reported through routine HMIS on a monthly basis. It is also collected through surveys. The discrepancies are minimal between routine and survey sources. Does not include all private health facility activity reports.	Recorded and reported in HMIS
Skilled birth attendance	Every 5 years	Published in official documents	yes	12 to 18 months		
Institutional delivery	Every 5 years			12 to 18 months	The definition of this indicator is similar to skilled birth attendance in the Ethiopian context (duplicate).	

Core Tracer Indicators	Data Collection Frequency (monthly, quarterly, annually, etc.)	Data Availability: Ease of retrieval	Data Quality: Are standardized forms or guidelines used for data collection ?	Data Quality: What is the time lag from data collection to report publication?	Data Quality: General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Postnatal care	Monthly	Published in official documents	yes	2-3 months	Indicator is recorded and reported through routine HMIS on a monthly basis. It is also collected through surveys. However, there is discrepancy on the values between routine and survey sources. There are concerns about the accuracy of documentation because of different understandings of the definition of PNC (i.e. 6 hours, 6 days, 6 weeks vs. 24 hours, 3 days, 1 week). Does not include all private health facility activity reports.	Recorded and reported in HMIS
Postnatal care	Every 5 years	Published in official documents	yes	12 to 18 months		

2. Child Nutrition

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Coverage of exclusive breastfeeding	Proportion of infants 0–5 months of age who are fed exclusively with breast milk	EDHS 2000, 2005 and 2011	National household surveys	54.2					49						52		
Children under 5 who are stunted	% of stunting (height-for-age less than -2 standard deviations of the WHO Child Growth Standards median) among children aged 0-5 years	EDHS 2000, 2005 and 2011	National household surveys	51.5					46.5						44.4		
Children under 5 who are stunted	% of stunting (height-for-age less than -2 standard deviations of the WHO Child Growth Standards median) among children aged 0-5 years	Nutrition Baseline Survey Report for the National Nutrition Program of Ethiopia, EHNRI 2009/10	National household surveys											38			

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Children under 5 who are underweight	% of underweight (weight-for-age less than -2 standard deviations of the WHO Child Growth Standards median) among children aged 0-5 years	EDHS 2000, 2005 and 2011	National household surveys	47.2					38.4						28.7		
Children under 5 who are overweight	% of overweight (weight-for-height above +2 standard deviations of the WHO Child Growth Standards median) among children aged 0-5 years	EDHS 2011	National household surveys												2		
Proportion of wastage in children under 5 years of age		EDHS 2000, 2005 and 2011	National household surveys	10.5					10.5						9.7		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Proportion of wastage in children under 5 years of age		Nutrition Baseline Survey Report for the National Nutrition Program of Ethiopia, EHNRI 2009/10	National household surveys											12			
Low birth weight among new born	% of live births that weigh less than 2,500 g out of the total of live births during the same time period	EDHS 2000, 2005 and 2011	National household surveys	12.4					14						10.8		

b. Assessment of Indicator Availability and Quality

Core Tracer Indicators	Data Collection Frequency	Data Availability	Data Quality			Other General Comments
	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	
Coverage of exclusive breastfeeding	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented but reported through surveys.	Reported through surveys

Core Tracer Indicators	Data Collection Frequency	Data Availability	Data Quality			Other General Comments
	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	
Children under 5 who are stunted	Every 5 years	Published in official documents	yes	12 to 18 months		It is good to taketo this indicator to health status section as it collected through welfare monitoring and DHS surveys.
Children under 5 who are stunted	Not known	Published in official documents	yes	2-3 months		
Children under 5 who are underweight	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented but reported through surveys. Does not include all private health facility activity reports.	Reported through surveys
Children under 5 who are overweight	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented but reported through surveys. Does not include all private health facility activity reports.	Reported through surveys
Proportion of wastage in children under 5 years of age	Every 5 years	Published in official documents	yes	12 to 18 months		It is good to taketo this indicator to health status section as it collected through welfare monitoring and DHS surveys.
Proportion of wastage in children under 5 years of age	Not known	Published in official documents	yes	2-3 months		
Low birth weight among new born	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented and reported through routine HMIS, but more accurate data is collected through surveys. Does not include all private health facility activity reports.	Recorded and reported in HMIS but not reliable. Therefore, main data source is surveys.

3. Child Vaccination

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
DPT3/ penta	Proportion of surviving infants who have received three doses of the combined diphtheria, tetanus toxoid, pertussis, Hepatitis B and Haemophilus influenzae type B vaccine	Health and health related indicator (EFY 1992-2004) and report on annual performance report EFY 2005	Routine HMIS (Monthly and Quarterly) reports	41.9	41.9	51.5	50.4	60.8	70.1	76.8	76.8	85.4	81.6	85.8	84.7	84.9	86.9
DPT3/ penta	Proportion of surviving infants who have received three doses of the combined diphtheria, tetanus toxoid, pertussis, Hepatitis B and Haemophilus influenzae type B vaccine	EDHS 2000, 2005 and 2011	National household surveys	20.7					31.9						36.5		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Measles	Proportion of surviving infants who have received a dose of measles vaccine before their first birthday	Health and health related indicator (EFY 1992-2004) and report on annual performance report EFY 2005	Routine HMIS (Monthly and Quarterly) reports	33.7	36.5	41.5	42.9	52.6	61.3	66.7	68.4	75.9	76.6	82.2	81.5	79.5	83.3
Measles	Proportion of surviving infants who have received a dose of measles vaccine before their first birthday	EDHS 2000, 2005 and 2011	National household surveys	26.6					34.9						55.7		
BCG	Proportion of children who have received a dose of BCG vaccine at birth	EDHS 2000, 2005 and 2011	National household surveys	45.6					60.4						66.3		
Polio	Proportion of surviving infants who have received three doses of polio vaccine before their first birthday	EDHS 2000, 2005 and 2011	National household surveys	34.6					44.7						44.3		
Hep B	*(Included in pentavalent vaccine, above)*																

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
DPT3/penta	Monthly	Published in official documents	yes	2-3 months	Indicator is recorded and reported through routine HMIS on a monthly basis. It is also collected through surveys. However, there are discrepancies between routine sources and surveys. Does not include all private health facility activity reports.	Recorded and reported in HMIS
DPT3/penta	Every 5 years	Published in official documents	yes	12 to 18 months		
Measles	Monthly	Published in official documents	yes	2-3 months	Indicator is recorded and reported through routine HMIS on a monthly basis. It is also collected through surveys. However, there is discrepancy on the values from routine and survey due to measles campaign. Does not include all private health facility activity reports.	Recorded and reported in HMIS
Measles	Every 5 years	Published in official documents	yes	12 to 18 months		
BCG	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented but reported through surveys. Does not include all private health facility activity reports.	Recorded in HMIS but reported through surveys
Polio	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented but reported through surveys. Does not include all private health facility activity reports.	Recorded in HMIS but reported through surveys
Hep B	There is no separate Hep B vaccination program in the country. It is included in the DPT3/Penta vaccination program.					

4. Treatment of Sick Children

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Suspected pneumonia (ARI) taken to health facility	Proportion of children aged 0–59 months who had 'presumed pneumonia' (ARI) in the last 2 weeks and were taken to an appropriate health-care provider	EDHS 2000, 2005 and 2011	National household surveys	15.8					18.7						27		
Suspected pneumonia (ARI) treated with antibiotics	% of children ages 0-59 months with suspected pneumonia receiving antibiotics	EDHS 2005 and 2011	National household surveys						4.9						6.8		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Diarrhea treated with ORT	% of children aged 0–59 months who had diarrhea in the last 2 weeks and were treated with oral rehydration salts or an appropriate household solution	EDHS 2000, 2005 and 2011	National household surveys	44.9					37.1						39.7		

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Suspected pneumonia (ARI) taken to health facility	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented through HMIS and reported as disease report. Does not include all private health facility activity reports. However, the main data source is surveys.	Reported through surveys

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Suspected pneumonia (ARI) treated with antibiotics	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented through HMIS and reported as disease report. Does not include all private health facility activity reports. However, the main data source is surveys.	Reported through surveys
Diarrhea treated with ORT	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented through HMIS and reported as disease report. Does not include all private health facility activity reports. However, the main data source is surveys.	Reported through surveys

5. Family Planning

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Unmet need for FP	The proportion of women of reproductive age (15-49 years) who are married or in union and who have an unmet need for family planning, i.e. who do not want any more children or want to wait at least two years before having a baby, and yet are not using contraception	EDHS 2000, 2005 and 2011	National household surveys	29.1					21.9						25.3		
Contraceptive use (CPR)	% of women aged 15-49 years, married or in-union, who are currently using, or whose sexual partner is using, at least one method of contraception, regardless of the	EDHS 2000, 2005 and 2011	National household surveys	8.1					14.7						28.6		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	method used																
Contraceptive use (CAR)	The proportion of women of reproductive age (15-49 years) who are not pregnant who are accepting a modern contraceptive method (new and repeat acceptors)	Health and health related indicator (EFY 1992-2004) and report on annual performance report EFY 2005	Routine HMIS (Monthly and Quarterly) reports	13.3	18.7	17.2	21.1	23	25.2	37.9	34.8	53.9	56.2	61.9	61.7	60.4	59.5

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Unmet need for FP	Every 5 years	Published in official	yes	12 to 18 months		Reported through surveys

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
		documents				
Contraceptive use (CPR)	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented based on number of methods used, and CYP is applied to calculate CPR. However, there is concern about the reliability and the preferred data source is surveys.	Reported through surveys
Contraceptive use (CAR)	Monthly	Published in official documents	yes	2-3 months	Indicator is routinely documented based on number of methods used, and CYP is applied to calculate CPR. However, there is concern about the reliability and the preferred data source is surveys.	CAR is a proxy indicator used in the routine HMIS; Recorded and reported in HMIS

6. Malaria

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Children sleeping under ITN	% of children under 5 who slept under an insecticide treated bed net last night	EDHS 2005	National household surveys						1.5								
Children sleeping under ITN	% of children under 5 who slept under an insecticide treated bed net last night	MIS 2007, and 2011	National household surveys								33.1				30.1		
Fever treated with antimalarials/ ACT		EDHS 2000, 2005 and 2011	National household surveys	3					3						3.6		
Households with IRS	Proportion of houses in IRS targeted areas that were sprayed in the last 12 months	EDHS 2005, MIS 2007 and 2011	National household surveys						10.5		20				20.2		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Households with IRS	Proportion of houses in IRS targeted areas that were sprayed in the last 12 months	Health and health related indicator (EFY 2002-2004) and annual performance report EFY 2005	Routine HMIS (Monthly and Quarterly) reports											57.2	49.7	73.1	49

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Children sleeping under ITN	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is reported through surveys. Only counts activities carried out in the last 24 hrs. Not accurate to document life time activity.	Reported through surveys
Children sleeping under ITN	Every 3-4 years	Published in official documents	yes	12 to 18 months		

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Fever treated with antimalarials/ACT	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports. However, the main data source is surveys.	Reported through surveys
Households with IRS	Every 3-4 years	Published in official documents	yes	12 to 18 months	Indicator is recorded and reported through routine administrative report. It is also collected through surveys. However, there are discrepancies between routine sources and surveys. There are concerns on the data reliability from routine sources.	
Households with IRS	Annually	Published in official documents	yes	2-3 months		Reported through administrative reports

7. Tuberculosis

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
TB Detection rate	The number of new smear positive/ all forms TB cases detected	Tuberculosis, Leprosy, and TB/HIV Program Status, Health Promotion and Disease Prevention, General Directorate /FMOH March 2010, annual performance report EFY 2004 and 2005	Routine Program Quarterly reports	31	34	36	36	38	35	32	32	35	34	36	37	71.8	58
Treatment success rate	% of a cohort of new smear-positive TB cases registered in a specified period that successfully completed treatment	Health and health related indicator (EFY 1992-2004) and annual performance report EFY 2005	Routine HMIS Quarterly reports	78	78.8	81.3	81.9	81.2	81.3	76	85	84	84	84	82.5	90.6	91.4

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Treatment success rate	% of a cohort of new smear-positive TB cases registered in a specified period that successfully completed treatment	Tuberculosis Prevention and Control Program, Annual Bulletin Vol.3, No. 3, March 24 2011	Routine Quarterly reports	80	76	76	70	79	84	85	84	84	84	84			

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
TB Detection rate	Quarterly	Published in official documents	yes	2-3 months	Indicator is routinely used. Does not include all private health facility activity reports.	Recorded and reported in HMIS
Treatment success rate	Quarterly	Published in official documents	yes	2-3 months	Indicator is routinely used. Does not include all private health facility activity reports. There are concerns on the reporting mechanism (i.e. the report is not coming from the diagnosing health facility. So, there are cases of more than 100% coverage at region level). There	Recorded and reported in HMIS

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
					are marginal differences from program and routine HMIS reports.	
Treatment success rate	Quarterly	Published in official documents	yes	2-3 months		

8. HIV/AIDS

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Condom use at higher risk sex	% of women and men aged 15–49 who have had more than one sexual partner in the past 12 months who report the use of a condom during their last sexual intercourse	EDHS 2000, 2005 and 2011	National household surveys	Male = 30, Female = 13					Male = 52, Female = 24						Male =47.2, Female = 61.6		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ARV therapy among those in need (Currently on ART)	% of adults and children with advanced HIV infection receiving antiretroviral therapy	Annual Performance report (EFY 1998 - 2005)	Routine HMIS (Monthly and Quarterly) reports							7.6	28.3	37.9	45.4	52.2	64.5	68.9	71.5
ARV prophylaxis among HIV+ pregnant women	% of HIV-infected pregnant women who received antiretroviral medicines to reduce the risk of mother-to-child transmission, among the estimated number of HIV-infected pregnant women	Annual Performance report (EFY 1998 - 2005)	Routine HMIS (Monthly and Quarterly) reports							3.1	5.1	5.7	7.7	7.7	19.3	25.5	25.1
PMTCT among HIV positive women																	
Male circumcision rate		EDHS 2005 and 2011	National household surveys						92.5						92.2		

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
Condom use at higher risk sex	Every 5 years	Published in official documents	yes	12 to 18 months	Indicator is reported through surveys. There are concerns about accuracy of recall.	Reported through surveys
ARV therapy among those in need (Currently on ART)	Monthly	Published in official documents	yes	2-3 months		Recorded and reported in HMIS
ARV prophylaxis among HIV+ pregnant women	Monthly	Published in official documents	yes	2-3 months	Different definitions of the indicator exist (i.e. complete prophylaxis considering both mother and child vs. the current Option B+ considering only mother).	Recorded and reported in HMIS
PMTCT among HIV positive women					The definition of this indicator is similar with ARV prophylaxis among HIV+ pregnant women.	
Male circumcision rate	Every 5 years	Published in official documents	yes	12 to 18 months		Reported through surveys

9. Cardiovascular Diseases

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Hypertension prevalence	% of defined population with raised blood pressure (systolic blood pressure >=140 OR diastolic blood pressure >=90)	Nshisso et al., *Diabetes Metab Syndr.* 2012 ; 6(1): 36-41.	Research (cross-sectional study)											19.1			
Salt intake																	
Hypertension control follow up visit																	
Acute Myocardial Infarction (AMI) survival																	
Physical activity measures																	
Hypertension treatment coverage																	
Angina treatment coverage																	

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
CVD preventive drug therapy for higher risk groups																	

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Hypertension prevalence	Irregular	Published inline	yes		Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	The service is provided in health facilities, but reported to national levels
Salt intake						The current data available is amount of iodized and distributed salt from producers
Hypertension control follow up visit					Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	Not available as defined

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
Acute Myocardial Infarction (AMI) survival						The service is not documented
Physical activity measures						The service is not documented
Hypertension treatment coverage					Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	Not available as defined
Angina treatment coverage					Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	Not available as defined
CVD preventive drug therapy for higher risk groups						The service is not documented

10. Other Noncommunicable Diseases

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
HPV vaccination																	
Tobacco use	Current smoking of any tobacco product	EDHS 2005 and 2011	National household surveys						13.3						9.1		
Cervical cancer screening (20-64 years)																	
5 year survival rate (specific cancer)																	
Mammography																	
Diabetes treatment coverage	% of defined population with fasting glucose >= 126 mg/dl (7.0 mmol/l)or on medication for raised blood glucose																
Coverage of pain relief for those with chronic pain																	
Asthma/ COPD																	

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
treatment coverage																	
Arthritis treatment coverage																	
Depression treatment coverage																	
Spectacle coverage																	
Cataract surgery coverage																	
Hearing aid coverage																	
Dental care coverage																	
Asthma (re) admission rate																	
Smoking cessation rate																	
Coverage with rapid emergency response																	

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
HPV vaccination						The service has not been yet started in Ethiopia; Not available as defined
Tobacco use	Every 5 years	Published in official documents	yes	12 to 18 months		Not available as defined
Cervical cancer screening (20-64 years)						The service is not provided widely and also not recorded and reported to national levels
5 year survival rate (specific cancer)						The service is not provided widely and also not recorded and reported to national levels
Mammography						The service is not provided widely and also not recorded and reported to national levels
Diabetes treatment coverage					Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	Not available as defined
Coverage of pain relief						The service is not documented

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Asthma/ COPD treatment coverage					Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	Not available as defined
Arthritis treatment coverage					Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	Not available as defined
Depression treatment coverage					Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	Not available as defined
Spectacle coverage						The service is not documented
Cataract surgery coverage					Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	Not available as defined
Hearing aid coverage						The service is not documented
Dental care coverage					Indicator is routinely documented through HMIS and reported as disease report. Does not include all private health facility activity reports.	Not available as defined

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
Asthma (re) admission rate					Indicator is routinely documented through HMIS and reported as # of cases treated. Does not include all private health facility activity reports.	Not available as defined
Smoking cessation rate						The service is not documented
Coverage with rapid emergency response						The service is not documented

Financial Risk Protection Indicators

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Direct																	
Incidence of catastrophic health expenditure due to out-of-pocket payments																	
Mean positive overshoot of catastrophic payments																	
Incidence of impoverishment due to out-of-pocket payments																	
Poverty gap due to out-of-pocket payments																	
Indirect																	
Out-of-pocket payments as a share of total health expenditure	Level of out-of-pocket expenditure expressed as share of expenditure on total health expenditure	NHA 2004/2005 and NHA 2007/2008	National Health Accounts						31			37			29		
Legal																	

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
entitlement to health services through insurance or direct government funding/provision																	
Government health expenditure as a share of GDP	Level of total expenditure on health (THE) expressed as a percentage of gross domestic product (GDP)		Routine administrative reports; National accounts														
Government health expenditure as a share of general government expenditure	Level of general government expenditure on health (GGHE) expressed as a percentage of total government expenditure	Annual Performance Report, EFY 2000, 2001, 2002, 2003	Routine Administrative reports							4.1%	3.6%	6.8%	7.5%	7.3%			
Median price of generic drugs compared to international reference pricing																	

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
Direct						
Incidence of catastrophic health expenditure due to out-of-pocket payments					HICE collects the average OOP per household, but does not show the incidence. Could be calculated from the raw data	Currently not available as defined
Mean positive overshoot of catastrophic payments					HICE collects the average OOP per household, but does not show the incidence. Could be calculated from the raw data	Currently not available as defined
Incidence of impoverishment due to out-of-pocket payments					HICE collects the average OOP per household, but does not show the incidence. Could be calculated from the raw data	Currently not available as defined
Poverty gap due to out-of-pocket payments					HICE collects the average OOP per household, but does not show the incidence. Could be calculated from the raw data	Currently not available as defined
Indirect						
Out-of-pocket payments as a share of total health expenditure	Every 3-4 years	Published in official documents	yes	6 months	Government budget and expenditure reports do not directly match NHA data classifications. A small amount of donor spending is reported by the government and NGOs, but this does not compensate for all the missed data. Marginally underestimated spending from some local NGOs and	Reported through surveys
Legal entitlement to health services through insurance or direct government funding/provision						There are entitlements for exempted services and waivers; Not available as defined

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
Government health expenditure as a share of GDP	Annually				employers. Household surveys may have overestimated the per capita health expenditures because of recall bias. It is very common for communities in Ethiopia to make in-kind (labor and material) contributions to health facility construction and other health undertakings. The NHA study does not capture these contributions.	Not available as defined
Government health expenditure as a share of general government expenditure	Annually	Published in official documents	yes	2-3 months		Consistent and accurate data are found from 2008 onward from MOFED; Reported through administrative reports
Median price of generic drugs compared to international reference pricing						There is no systematic data collection system

Additional Indicators

1. Health Financing

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total health expenditure per capita	Per capita total expenditure on health (THE) expressed in PPP international dollars	NHA 2004/2005 and NHA 2007/2008	National Health Accounts	5.6				7.14			16.1				23		

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Total health expenditure per capita	Every 3-4 years	Published in official documents	yes	6 months	Household surveys may have overestimated the per capita health expenditures because of recall bias.	Reported through surveys

2. Health Workforce

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Health workers (specialists, GPs, health officers, nurses, midwives) per 10,000 population	Number of health workers (specialists, GPs, health officers, nurses, midwives) per 10, 000 population																
Number of physicians (specialists and GPs) per 10,000 population	Number of doctors per 10,000 population	Health and health related indicator (EFY 1992-2002) and report on annual performance report EFY 2003	Routine HMIS (Monthly, Quarterly and Annual) reports	0.20	0.21	0.28	0.29	0.28	0.34	0.29	0.24	0.27	0.28	0.18	0.19	0.35	
Number of health officers per 10,000 population	Number of health officers per 10,000 population	Health and health related indicator (EFY 1992-2002) and report on annual performance	Routine HMIS (Monthly, Quarterly and Annual) reports	0.03	0.05	0.07	0.09	0.10	0.11	0.10	0.11	0.16	0.21	0.39	0.45	0.58	

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		EFY 2003															
Number of all nurses (including midwives) per 10,000 population	Number of nurses per 10,000 population	Health and health related indicator (EFY 1992-2002) and report on annual performance EFY 2003	Routine HMIS (Monthly, Quarterly and Annual) reports	1.06	1.18	1.91	2.05	2.19	2.58	2.48	2.45	2.21	2.58	3.31	3.60	4.35	
Number of all nurses (excluding midwives) per 10,000 population	Number of nurses per 10,000 population	Health and health related indicator (EFY 1992-2002) and report on annual performance EFY 2003	Routine HMIS (Monthly, Quarterly and Annual) reports	0.93	1.05	1.78	1.88	2.01	2.37	2.31	2.32	2.05	2.41	3.06	3.31	3.89	
Number of midwives per 10,000 population	Number of midwives per 10,000 population	Health and health related indicator (EFY 1992-2002) and report on annual performance EFY 2003	Routine HMIS (Monthly, Quarterly and Annual) reports	0.13	0.13	0.13	0.17	0.18	0.21	0.17	0.14	0.16	0.18	0.25	0.29	0.46	
Annual number of																	

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
graduates per 100,000 population																	
Annual number of graduates (MDs, health officers, nurses, midwives) of health profession educational institutions per 100,000 population			Routine Administrative reports	0.33	0.29	0.36	0.41	0.41	0.42	0.25	0.22	0.21	0.34	0.42	0.40	0.68	
Annual number of graduates (HOs) of health professions educational institutions per 100,000 population			Routine Administrative reports	0.25	0.28	0.27	0.26	0.35	0.44	0.34	1.07	3.02	0.54	1.12	1.15	0.60	
Annual number of graduates (nurses) of health professions educational			Routine Administrative reports	2.20	3.31	2.32	2.12	3.37	6.12	2.25	2.34	2.65	0.85	1.10	0.94	1.29	

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
institutions per 100,000 population																	
Annual number of graduates (midwives) of health professions educational institutions per 100,000 population			Routine Administrative reports	0.25	0.43	0.27	0.16	0.24	0.06	0.00	0.16	0.14	0.17	0.19	0.05	0.32	

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Health workers per 10,000 population (doctors, nurses midwives; urban-rural)					Complete and accurate information on HRH is not available. Reports do not include all private health facilities.	Reported through administrative reports
Number of physicians (specialists and GPs)	Annually	Published in official documents	yes	2-3 months		

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
per 10,000 population						
Number of health officers per 10,000 population	Annually	Published in official documents	yes	2-3 months		
Number of all nurses (including midwives) per 10,000 population	Annually	Published in official documents	yes	2-3 months		
Number of all nurses (excluding midwives) per 10,000 population	Annually	Published in official documents	yes	2-3 months		
Number of midwives per 10,000 population	Annually	Published in official documents	yes	2-3 months		
Annual number of graduates per 100,000 population					Complete and accurate information not available. Reports do not include all private colleges and universities.	Reported through administrative reports
Annual number of graduates (MDs) of health professions educational institutions per 100,000 population	Annually	Published in official documents	yes	2-3 months		
Annual number of graduates (HOs) of health professions educational institutions per 100,000 population	Annually	Published in official documents	yes	2-3 months		

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Annual number of graduates (nurses) of health professions educational institutions per 100,000 population	Annually	Published in official documents	yes	2-3 months		
Annual number of graduates (midwives) of health professions educational institutions per 100,000 population	Annually	Published in official documents	yes	2-3 months		

3. Infrastructure

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Health facilities per 10,000 population	Number of health facilities (health post, health center, hospital) per																

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	10,000 population																
Number of hospitals per 10,000 population	Number of hospital per 10,000 population	Health and health related indicator (EFY 1992-2002) and report on annual performance report EFY 2003	Routine HMIS (Monthly, Quarterly and Annual) reports	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02	
Number of health centers per 10,000 population	Number of Health center per 10,000 population	Health and health related indicator (EFY 1992-2002) and report on annual performance report EFY 2003	Routine HMIS (Monthly, Quarterly and Annual) reports	0.06	0.06	0.06	0.07	0.07	0.08	0.09	0.09	0.10	0.18	0.27	0.32	0.36	
Number of Health Posts per 10,000 population	Number of Health post per 10,000 population	Health and health related indicator (EFY 1992-2002) and report on annual performance	Routine HMIS (Monthly, Quarterly and Annual) reports	0.13	0.16	0.20	0.21	0.41	0.58	0.83	1.34	1.51	1.60	1.78	1.84	1.86	

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year												
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		report EFY 2003															
Hospital beds per 10,000 population	The number of hospital beds available per every 10,000 inhabitants in a population	Health and health related indicator (EFY 1992-2002) and report on annual performance report EFY 2003	Routine HMIS (Monthly, Quarterly and Annual) reports	2.07	1.76	2.03	1.93	2.13	2.12	2.15	2.05	1.92	2.14	NA	2.85	2.48	

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Health facilities per 10,000 population					Complete and accurate information on private health facilities is not available. HSDP's three-tier system has primary-level health care (comprises both primary hospitals and health centers with health posts), secondary-level health care (comprises general hospitals) and tertiary-level	Reported through administrative reports

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
					health care (comprises specialized hospitals), but there is no clear definition on the current and existing health facilities, so it is difficult to get the number of health facilities in each tier of the system.	
Number of hospitals per 10,000 population	Annually	Published in official documents	yes	2-3 months		
Number of health centers per 10,000 population	Annually	Published in official documents	yes	2-3 months		
Number of health posts per 10,000 population	Annually	Published in official documents	yes	2-3 months		
Hospital beds per 10,000 population	Annually	Published in official documents	yes	2-3 months		Reported through administrative reports

4. Vital Registration

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Percent of deaths that are registered																	
Percent of births registered																	

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Percent of deaths that are registered						The program has not been yet started. A strategic plan has been designed.
Percent of births registered						The program has not been yet started. A strategic plan has been designed.

5. Service Access and Readiness

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
General service readiness index (from SARA or other assessment tool)															43%		
Service-specific readiness indicators																	
Average availability of 14 selected medicines (using WHO/HAI tool)																	
Median consumer price ratio for tracer medicines (using WHO/HAI tool)																	

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number and mean outpatient visits per person per year	Number of outpatient visits per person per year	Health and health related indicator (EFY 1992-2002) and report on annual performance report EFY 2003	Routine HMIS (Monthly and Quarterly) reports	0.27	0.27	0.18	0.27	0.36	0.30	NA	0.33	0.25	0.30	0.29	0.30		
Incidence of consultation		Ethiopian Welfare Monitoring Survey 2011, CSA	National household surveys	41.1				47.9							61.9		

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
General service readiness index (from SARA or other assessment tool)					There are concerns on the completeness of the information	Not available as defined

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
Service-specific readiness indicators					There are concerns on the completeness of the information	Not available as defined
Average availability of 14 selected medicines (using WHO/HAI tool)					There are concerns on the completeness of the information	In the routine HMIS there is an indicator on tracer drug availability (11 drugs for hospitals and health center, 6 drugs for health posts)
Median consumer price ratio for tracer medicines (using WHO/HAI tool)						There is no systematic data collection system
Number and mean outpatient visits per person per year	Monthly	Published in official documents	yes	2-3 months		Recorded and reported in HMIS
Incidence of consultation	Every 5 years	Published in official documents	yes	12 to 18 months		

6. Service Quality and Safety

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
30-day hospital case fatality rate acute myocardial infarction																	
30-day hospital case fatality rate from stroke																	
Waiting time to elective surgeries (cataract, angioplasty, hip replacement)																	
Surgical wound infection rate (% of all surgical interventions)																	

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	**(monthly, quarterly, annually, etc.)**	**Ease of retrieval**	**Are standardized forms or guidelines used for data collection ?**	**What is the time lag from data collection to report publication?**	**General comments on data quality (how validated, accuracy, completeness of reporting)**	**Other General Comments**
30-day hospital case fatality rate from acute myocardial infarction						There is no systematic data collection system
30-day hospital case fatality rate from stroke						There is no systematic data collection system
Waiting time to elective surgeries (cataract, PTCA [angioplasty], hip replacement)						There is no systematic data collection system
Surgical wound infection rate (% of all surgical interventions)						There is no systematic data collection system

7. Risk Factors and Behaviors

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Alcohol per capita consumption (per drinker)																	
Obesity among adults	% of defined women aged 15-49 with a body mass index (BMI) of 30 kg/m2 or higher	EDHS 2005 and 2011	National household surveys						0.7						1		
Access to safe water	% of population using an improved drinking water source	Health and health related indicator (EFY 1992-2004) and report on annual performance report EFY 2005	Routine Administrative reports	27.9		28.4	28.4	37.3	35.9			59.5	66.2	68.5			

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Access to improved sanitation	% of population using an improved sanitation facility	Health and health related indicator (EFY 1992-2004) and report on annual performance report EFY 2005	Routine Administrative reports			11.5	11.5	28.9				37	60	74.9	86	84.1	84.5

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Alcohol per capita consumption (per drinker)						There is no systematic data collection system
Obesity among adults	Every 5 years	Published in official documents	yes	12 -18 months		Reported through surveys

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Access to safe water	Annually	Published in official documents	yes	2-3 months	There is concern on the reliability of the count of households having safe water (definition of safe water).	Reported through administrative reports
Access to improved sanitation	Annually	Published in official documents	yes	2-3 months	There is concern on the reliability of the count of households having improved sanitation (definition of sanitation).	Reported through administrative reports

8. Health Status

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Life expectancy at birth	The average number of years that a newborn could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death	Health and health related indicator (EFY 1992-2004) and report on annual performance report EFY	Global estimate	M = 51, F = 53	M = 53.4, F = 55.4	M = 53.4, F = 55.4	M = 53.4, F = 55.4	M = 53.4, F = 55.4	M = 53.4, F = 55.4	M = 53.4, F = 55.4	M = 53.4, F = 55.4	M = 53.4, F = 55.4	M = 53.4, F = 55.4	M = 53.4, F = 55.4	M =58.4, F = 60.4		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	rates prevailing at the time of his or her birth, for a specific year, in a given country	2005															
Under five mortality rate	The probability of a child born in a specific year or period dying before reaching the age of five	EDHS 2000, 2005 and 2011	National household surveys	166					123						88		
Infant mortality rate	The probability of a child born in a specific year or period dying before reaching the age of one	EDHS 2000, 2005 and 2011	National household surveys	97					77						59		
Neonatal mortality rate	The probability of a child born in a specific year or period dying before reaching the age of one month	EDHS 2000, 2005 and 2011	National household surveys	49					39						37		
Perinatal mortality rate	The probability of a child born in a specific year or period dying during the perinatal period	EDHS 2000, 2005 and 2011	National household surveys	52.4					37						46		

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Maternal mortality ratio	Maternal deaths per 100,000 live births, for a specified year	EDHS 2000, 2005 and 2011	National household surveys	871					673						676		
TB prevalence	The number of cases of TB (all forms) in a population at a given point in time (the middle of the calendar year), expressed as the rate per 100 000 population																
HIV prevalence among young people (15-24)	The estimated number of adults aged 15-49 years with HIV infection, whether or not they have developed symptoms of AIDS, expressed as per cent of total population in that age group	Single point HIV prevalence estimate, 2007 and EDHS 2011	National household surveys; sentinel surveillance					2.2	2.1	2.1	2.1	2.2	2.3	2.4	1.5		
Incidence of measles																	
Incidence of neonatal																	

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
tetanus																	
Adolescent fertility rate	The annual number of births to women aged 15-19 years per 1,000 women in that age group	EDHS 2000, 2005 and 2011	National household surveys	5.9					5.4						4.8		

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Life expectancy at birth	not known	Published online			Based on international estimates	There is no systematic documentation of life expectancy at birth. The system uses global estimates by international organizations like WHO
Under five mortality rate	Every 5 years	Published in official documents	yes	12 to 18 months		Reported through surveys
Infant mortality rate	Every 5 years	Published in official documents	yes	12 to 18 months		Reported through surveys
Neonatal mortality rate	Every 5 years	Published in official documents	yes	12 to 18 months		Reported through surveys

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
Perinatal mortality rate	Every 5 years	Published in official documents	yes	12 to 18 months		Reported through surveys
Maternal mortality ratio	Every 5 years	Published in official documents	yes	12 to 18 months		Reported through surveys
TB prevalence		Published in official documents	yes			Reported through surveys
HIV prevalence among young people (15-24)	Every 4-5 years; Annually			12-18 months; 2-3 months		Reported through surveys
Incidence of measles						Not available as defined
Incidence of neonatal tetanus						Not available as defined
Adolescent fertility rate	Every 5 years	Published in official documents	yes	12 to 18 months		Reported through surveys

9. Responsiveness

a. Indicator Definitions and Values

Core Tracer Indicators	Specific indicator definition (numerator, denominator, timeframe and age group)	Data Retrieval		Indicator Value by Year													
		Data Sources (citation of reports)	Data Collection Method	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
User satisfaction with health services			Occasional surveys														

b. Assessment of Indicator Availability and Quality

	Data Collection Frequency	Data Availability	Data Quality			
Core Tracer Indicators	(monthly, quarterly, annually, etc.)	Ease of retrieval	Are standardized forms or guidelines used for data collection ?	What is the time lag from data collection to report publication?	General comments on data quality (how validated, accuracy, completeness of reporting)	Other General Comments
User satisfaction with health services	Irregular					

10. Alternative Basis for Evaluating the Quality of Care

	Waiting Time	Courtesy of Staff	Availability of Medicines	Cleanliness of the Facility	Privacy
Very Satisfied	41%	51%	44%	45%	51%
Satisfied	40%	40%	36%	43%	42%

	Waiting Time	Courtesy of Staff	Availability of Medicines	Cleanliness of the Facility	Privacy
Partially satisfied	13%	8%	13%	8%	5%
Not at all satisfied	5%	2%	8%	4%	2%

Summary

Waiting Time	Courtesy of Staff	Privacy
Not available as defined	46	47%
Recorded and reported in HMIS	11	11%
Recorded and reported in HMIS but not reliable. Therefore, main data source is survey	1	1%
Recorded in HMIS but in different definition	1	1%
Recorded in HMIS but reported through surveys	3	3%
Recorded through administrative report	8	8%
Reported through surveys	27	28%

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