Federal Ministry of Health

HMIS INDICATOR REFERENCE GUIDE

Technical Standards: Area 1

Policy and Planning Directorate

August 2017

Contents

Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ALOS	Average length of stay
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral drug
BEOC	Basic Emergency Obstetric Care
BoFED	Bureau of Finance and Economic Development (Regional)
BOR	Bed occupancy rate
CAR	Contraceptive Acceptance Rate
CBHI	Community Based Health Insurance
CBNC	community based newborn care
CD4	Cluster of Differentiation 4
CEOC	Comprehensive Emergency Obstetric Care
CINS	Comprehensive and Integrated Nutrition Service
CLTS	Community Led Total Sanitation
CPT	Co-trimoxazole prophylactic Therapy
CR	Cure rate
CSA	Central Statistical Authority
CTX	Co-trimoxazole
DHS	Demographic and Health Survey
DNA	Deoxyribonucleic Acid
DOTS	Directly Observed Treatment with Short Course
DR TB	Drug Resistant Tuberculosis
DST	Drug susceptibility test
DTC	Drug Therapeutic Committee
DTP	diphtheria, tetanus toxoid, pertussis
EDHS	Ethiopia Demographic and Health Survey
EHIA	Ethiopian Health Insurance Agency
EMT	Emergency Medical technician
EPC	Epidemic Prevention and Control
EPI	Expanded Program on Immunization
EPTB	extra-pulmonary tuberculosis
ESO	Emergency Surgical Officer
FCSW	Female Commercial Sex Workers
FIC	Fully Immunized Child
FMOH	Federal Ministry of Health
GMP	Growth Monitoring and Promotion
HAPCO	HIV/AIDS Prevention and Control Office

HC	Health Center
HDA	Health Development Army
HEP	Health Extension Program
HepB	Hepatitis B
HEW	Health Extension Worker
HF	Health Facility
HH	Household
Hib	Haemophilus influenza type B
HIT	Health Information Technicians
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HP	Health Post
HPV	Human Papilloma Virus
HSDP	Health Sector Development Program
HSTP	Health Sector Transformation Plan
ICCM	Integrated Community Case Management of Common Childhood Illnesse
ICCM	Integrated community based case management of childhood illnesses
ICU	Intensive Care Unit
IFA	iron and folic acid
IMNCI	Integrated Management of Newborn and Childhood Illness
IPD	Inpatient Department
IPPCAR	Immediate Postpartum Contraceptive Acceptance Rate
IPT	INH Preventive therapy
IPV	inactivated polio vaccine
IRS	Indoor residual spray
IUCD	Intra Uterine Contraceptive Device
KMC	Kangaroo Mother Care
L&D	Labor and Delivery
LBI	local bacterial infection
LBW	Low birth weight
LLITN	Long lasting Insecticide-treated nets
LNMP	last normal menstrual period
LQAS	Lot Quality Assurance Sampling
LTBI	Latent TB Infection
LTFU	Lost to Follow Up
M&E	Monitoring and Evaluation
MAM	Moderate acute malnutrition
MARPs	Most At Risk Population
MB	Multibacillary
MDA	Mass Drug Administration
MDG	Millennium Development Goals

MDR	Multi Drug Resistant
MIS	Management Information System
MoFED	Ministry of Finance and Economic Development
MUAC	Middle Upper Arm Circumference
NBTS	National Blood Transfusion Service
NGO	Non-Governmental Organization
NICU	Neonatal intensive care unit
NNT	Neonatal Tetanus
NVP	Nevarapine
ODF	Open Defecation Free
OI	Opportunistic Infection
OPD	Outpatient Department
OPV	Oral Polio Vaccine
OTP	out-patient therapeutic services
PAB	Protection at birth (from neonatal tetanus)
PAC	Post Abortion Care
PAP	Papanicolau smear
PB	Paucibacillary
PCP	Pneumocystis Caroni pneumonia
PCR	Polymerase Chain Reaction
PCT	Preventive chemotherapy
PCV	Pneumococcal conjugated vaccine
PEP	Post-exposure prophylaxis
PICT	Provider Initiated Testing and Counseling for HIV
PKDL	Post Kala-azar dermal leishmaniosis
PLHIV	People Living with HIV
PLW	pregnant and lactating women
PMTCT	Prevention of Mother to Child Transmission of HIV
PNC	Postnatal Care
POP	Progestin only Pills
PPD	Planning and Programming Department
PTB	Pulmonary Tuberculosis
RDF	Revolving Drug Fund
RDT	Rapid Diagnostic Test
RH	Reproductive Health
RHB	Regional Health Bureau
RR	Rifampcin Resistant
RRF	Resquisition and Report Form
RTA	Road Traffic Accident
SAM	Severe acute malnutrition
SARA	Services Availability and Readiness Assessment

ScHO	Subcity Health Office
SDG	Sustainable Development Goals
SFP	supplementary feeding program
SLDs	Second Line Drugs
STH	Soil Transmitting Helminthes
TB	Tuberculosis
TFP	Therapeutic Feeding Program
TL	Tubal Ligation
TSR	Treatment Success Rate
TT	Tetanus toxoid
VCT	Voluntary Counseling and Testing
VIA	Visual Inspection with Acetic acid
VL	Visceral Leishmaniosis
VSD	Very Severe Disease
WFA	Weight-for-age
WFH	weight for height
WHO	World Health Organization
WoFEDO	Woreda Finance and Economic Development Office
WorHO	Woreda Health Office
XDR TB	Extensive Drug Resistant Tuberculosis
ZHD	Zonal Health Department

Preamble

Monitoring and evaluation (M&E) is an action-oriented management tool that operates on adequate, relevant, and reliable and timely collected, compiled and analyzed information on Program/project objectives, targets and activities. The objectives of M&E are to improve the management and optimum use of the resources of a program and to make timely decisions to resolve constraints and/or problems of implementation. The key elements for successful Program management and implementation are the designing of a program built on a hierarchy of objectives, targets, activities and measurable indicators. The agreed indicators are the most important management tools for monitoring, review and evaluation purposes. Indicators are always directly linked to the objective setting of a Program. Monitoring and Evaluation is one of the key components and an integral part of the Ethiopian HSTP. Indicators play a key role in program implementation, management, monitoring and evaluation (M&E) of the Health Sector Transformation Plan (HSTP). The existing HMIS indicators (2014) is revised in 2017 due to a number of driving forces that have resulted in the need for indicator revision. Some of the driving forces for revision includes: more quality and equity indicators requirement by the HSTP, due to the introduction of new health initiative, requirements to align with international indicators and others factors.

The HMIS Indicators 2017 reference guide represents a summary of key health and health systems data that are routinely collected and analyzed on a monthly, quarterly or annually basis at different levels of the health system (Health posts, public health centers, public hospitals, private health facilities, WoHOs, ZHDs, RHBs and FMOH). The sources for the HMIS indicators is primarily data collected from routine health and administrative services. The indicators from the routine HMIS can further be triangulated with other sources such as household surveys (DHS, MIS etc…), facility surveys (SARA etc…), CSA, surveillance, research studies and other sources.

The purpose of The HMIS indicators 2017 reference guide is to:

- Serve as a standard reference and guidance for health indicators in the health sector of Ethiopia
- Enhance the availability and quality of data on performance and results
- Avoid duplicative reporting requirements so that data burden on health workers can be reduced
- Standardize data collection tools and procedures based on the selected core indicators at all levels of the health system

Scope

The HMIS indicators 2017 reference guide is a standard set of core indicators prioritized by the FMOH and RHBs to provide adequate information on the implementation of HSTP. It contains indicators that are relevant to measure the status and performance of health programs implemented in Ethiopia. It is intended for use at different levels of the health system. The intended users of this document are a range of stakeholders including health workers at different levels of the health system, program managers, policy makers and other stakeholders such as non-governmental organizations.

Classification of the indicators

The revision of HMIS in 2017 has resulted in the selection of 131 HMIS indicators and they are categorized into 4 major categories based on the HSTP strategic perspectives and into 12 based on programmatic categories. In the categorization of the indicators list, the prefix "C" refers to Community Perspective, "P" refers to the Internal Process, "F" refers to the financial stewardship and "CB" refers to the capacity building/Learning and Growth components of the four strategic perspectives that are used during the development of the HSTP.

C1: Improve Access to Health Services (97 indicators)

C.1.1. Maternal and Child Health, including nutrition (50 indicators)

- C.1.1.1. Maternal Health (14 indicators)
- C.1.1.2.PMTCT (7 indicators)
- C.1.1.3.Child Health including Expanded Program on Immunization (21 indicators)
- C1.1.4. Nutrition (8 indicators)

C1.3 Hygiene and Environmental (2 indicators)

C1.4. Prevention and Control of Diseases (45 indicators)

- C1.4.1 All diseases (3 indicators)
- C1.4.2 Communicable diseases (39 indicators)
  - C1.4.2.1 HIV/AIDS (10 indicators)
  - C1.4.2.2 Tuberculosis (15 indicators)
  - C1.4.2.3 Leprosy (3 indicators)
  - C1.4.2.4 TB/HIV (4 indicators)
  - C1.4.2.5 Malaria (5 indicators)
  - C1.2.4.6 Neglected tropical diseases (2 indicators)

C1.4.3. Non Communicable diseases (3 indicators)

C2. Community Ownership (3 indicators)

F1. Resource Mobilization and Utilization (4 indicators)

F2. Health Insurance (3 indicators)

P1. Quality of health Services (8 indicators)

P2. Pharmaceutical Supply and Services (4 indicators)

P5. Evidence Based Decision making (3 indicators)

CB1. Health Infrastructure (4 indicators)

CB2. Human Capital and leadership (4 indicators)

CB3. Regulatory System (1 indicator

C1 Access to health services

C1.1 Maternal and child health, and Nutrition

The Maternal and Child Health, and Nutrition indicators are classified into 4 categories: Maternal Health, PMTCT, child Health and Nutrition indicators. The total number of indicators in this category are 50.

C1.1.1 Maternal Health

There are 14 indicators for maternal health, all of which are analyzed monthly.

C1.1.1.1 Contraceptive Acceptance Rate (CAR)

<table>
<tr><td>Definition</td><td colspan="7">Proportion of women of reproductive age (15-49 years) who are not pregnant and are accepting a modern contraceptive method (new and repeat acceptors).</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of new and repeat acceptors</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Total number of women of reproductive age (15-49 years) who are not pregnant</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator is directly related to operations and measures the number of new and repeat contraceptive acceptors in one fiscal year. In order to increase contraceptive utilization (and hence prevalence), the numbers of both new and repeat acceptors should increase. Each acceptor is counted only once, during the first visit when s/he receives contraceptive services in the specified Ethiopian fiscal year.
“New acceptors” refers to the number of modern contraceptive method acceptors who receive family planning services from a recognized family planning providing facility for the first time irrespective of the method used. This does not include the number of consultations and emergency contraceptive. Each acceptor is counted once in the year, at the time a woman receives a modern contraceptive for the first time in her life during the fiscal year. The number of new acceptors measures the ability of the program to attract new clients to its services.

“Repeat acceptors” refers to the number of acceptors who have had received family planning services from a recognized family planning providing facility previously irrespective of the method used. Each repeat acceptor is counter once during the fiscal year, irrespective of number of times family planning services were received during that fiscal year. Long acting FP method users will also be counted as repeat every year including routine checkup for ongoing use of a long term method such as Implants, IUCD, TL and Vasectomy.

New and repeat contraceptive acceptors are reported as two separate counts, so that it will be possible to calculate each rate separately as needed. Contraceptive acceptors data is reported from NGOs, Private-for-Profit health facilities and other community-based non MOH sources should also be included in this calculation.

Note: Recognized family planning providing facilities are those that are approved to provide family planning service by Ethiopian FMHACA (Federal Food, Medicine and Health Care Administration & Control Authority).</td></tr>
<tr><td>Disaggregation</td><td colspan="7">By type of acceptors: New, repeat; By Age: 10-14, 15 - 19, 20–24, 25–29 , 30-49 years
By Methods: OCP, Injectable, Implants, IUCD, Vasectomy , Tubal ligation (TL) and Others</td></tr>
<tr><td>Sources</td><td colspan="7">Family planning register; Service delivery tally (for HP), RH register (for primary private clinics)</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.1.2 Immediate postpartum contraceptive acceptance rate (IPPCAR)

<table>
<tr><td>Definition</td><td colspan="7">The proportion of women of reproductive age (15-49 years) who are accepting a modern contraceptive method immediately (0- 48 hrs.) after delivery</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of women who accepted a modern contraceptive method immediately after delivery (0-48hours)</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Total number of deliveries</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator measures family planning (FP) services for women who have been provided contraceptives in the immediate post-partum period (0-48 hours after delivery). Women in the post-partum period are groups with the greatest unmet needs to FP. The post-partum Period, especially the immediate postpartum period, is an opportunity to reach this group and hence increase the access to the FP service. . Providing contraception during this time is cost-effective and efficient because it does not require significant increases in staff, supervision or infrastructure. Moreover, where there are taboos that prevents mothers from going out or visiting the health facilities before 45 days after delivery, providing FP services during post-partum period has additional benefits. Immediate Post-Partum Contraception (IPPC) can result in dramatic reductions of high risk and unwanted pregnancies, increase in meeting the need for FP, and improvements in the health and survival of mothers and children.

For the definitions of new and repeat acceptors, refer to the indicator above (i.e, Contraceptive Acceptance Rate).
Limitation of the indicator: The denominator may exclude women who delivered at home and came for PNC in the first 48 hours and received family planning methods.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">By Age: 10-14, 15 - 19, 20–24, 25–29, 30-49 years
By Methods: POP, Implants, IUCD, Tuba Ligation, Others</td></tr>
<tr><td>Sources</td><td colspan="7">Delivery registers,; PNC register, Service delivery tally (for HP), RH register (for primary private clinics)</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.1.3 Antenatal Care (ANC) coverage – First visit

<table>
<tr><td>Definition</td><td colspan="7">Proportion of pregnant women who received antenatal care first visit during the current pregnancy</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of pregnant women that received antenatal care – First Visit
Total number of expected pregnancies</td><td>X 100</td></tr>
<tr><td>Interpretation</td><td colspan="7">Antenatal Care (ANC) coverage is an indicator of access and use of health care services during pregnancy. The antenatal period presents opportunities for reaching pregnant women with interventions that may be vital to their health and wellbeing and that of their fetuses. ANC first visit coverage is categorized into two as: - early ANC (<16 weeks) and late ANC (those >=16 weeks so that ANC initiation period (Early Vs late) can be determined and monitored. Early ANC is often detected if the woman exactly knows her last normal menstrual period (LNMP), and/or using Ultrasound detection. Pregnant women who begin ANC visit before 16 weeks of pregnancy play a crucial role in early detection of complications that may affect the outcome of the pregnancy. Besides, early antenatal care first visit also increases the likelihood of a pregnant woman receiving continued care throughout her pregnancy by having four or more ANC visits for effective maternal health interventions and outcomes.
Note: Referral linkage should be strengthened between health posts and health centers to avoid double reporting. If a mother received ANC 1st visit in a health post and referred to a health center, it should be send via a referral form so that the health center can avoid double reporting.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">By Period: <16 weeks, >=16 weeks
Age: 10-14,15-19, >=20</td></tr>
<tr><td>Sources</td><td colspan="7">ANC register, Service delivery tally (for HP), Integrated RH register (for primary private clinics)</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.1.4 Antenatal Care (ANC) coverage – Four visits

Definition	Proportion of pregnant women who received antenatal care four or more times during the current pregnancy.						
Formula	Number of pregnant women that received four or more antenatal care visits / Total number of expected pregnancies						X 100
Interpretation	The fourth antenatal care visit is an indicator of quality and continued use of health care during pregnancy. The antenatal period presents opportunities for reaching pregnant women with interventions that may be vital to their health and wellbeing and to their infants. Receiving four focused antenatal care visits increases the likelihood of receiving effective maternal health interventions during antenatal visits. ANC service should be provided based on the focused antenatal care approach. Pregnant women who have had visit for medical illness is not part of the focused ANC service and should not be reported as ANC report. Also, women who have received four or more ANC visits will be counted only once as having completed four or more ANC visits. Also, women who have received four or more ANC visits will be counted only once as having completed four or more ANC visits.						
Disaggregation	By Age: 10-14,15-19, >=20						
Sources	ANC register, Integrated RH register (for primary private clinics)/Service delivery tally (for HP)						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.1.5 Proportion of pregnant women tested for syphilis

Definition	Proportion of pregnant women attending antenatal care tested for syphilis						
Formula	Number of pregnant women tested for syphilis / Total number of pregnant women who attended first ANC visit						X 100
Interpretation	Syphilis affects the health of pregnant mothers and their fetus. It may cause abortion, still birth, premature birth and congenital anomalies like saddle nose. Performing syphilis screening test for all pregnant mothers helps to detect the disease early so that appropriate treatment can be provided to protect the mother and the fetus from complications. Nowadays syphilis can be detected form during routine blood test (whole blood, plasma or serum) using rapid antibody test kits like syphilis-check. The tests are very sensitive and specific and the test can be performed even in areas with no electric power. For pregnant women, usually this syphilis testing is done during the first ANC visit.						
Disaggregation	By test Result:- Reactive and Non-reactive						
Sources	ANC Register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.1.6 Skilled delivery attendance

Definition	Proportion of births attended by skilled health personnel at a health facility						
Formula	The number of births attended by skilled health personnel at a health facility / Total number of expected deliveries						X 100
Interpretation	All women should have access to skilled care during pregnancy and childbirth to ensure prevention, early detection and management of complications of child birth. Assistance by properly trained health personnel with adequate equipment is key to reducing maternal deaths. It is one of the most important proved intervention that plays a great role in reducing the maternal mortality rate and is one of the Sustainable Development Goals (SDGs) indicators to track national effort towards safe motherhood. In addition, the proportion of births attended by skilled personnel at the given facility is a measure of the health system's function, accessibility, and quality of care. "Skilled attendant at birth" has been proposed as an intermediary, process or proxy indicator for monitoring progress towards the reduction of maternal mortality. A skilled personnel is defined as a health professional (such as a midwife, nurse, health officer or doctor who has been trained in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period and in the identification, management and referral of complications in women at the time of child birth and immediately thereafter. **Note**: For this indicator, the birth should be attended by the skilled health personnel at a health facility and service provided for a retained placenta should not be count as a delivery service report.							
Disaggregation	None						
Sources	Delivery Register, Integrated RH register for primary private clinics)						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.1.7 Stillbirth Rate

Definition	Proportion of stillbirths from total births attended						
Formula	Number of stillbirths / Total number of births (still and live) attended						X 1,000
Interpretation	The stillbirth rate mainly defines the access, availability and quality of obstetric care and the result of neglected obstructed labor in the Ethiopian set up, but could also be due to major congenital malformation, RH incompatibility, or many other causes. Still birth is birth of a baby born with no signs of life at or after 28 weeks of gestation. Still birth includes Intra Uterine Fetal Death (IUFD).						
Disaggregation	None						
Sources	Delivery register, Service delivery tally (for HP)						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.1.8 Early Postnatal care (PNC) coverage

Definition	Proportion of women who received post-natal care at least once during the early post-partum period (within 7 days after delivery).						
Formula	Number of women who received post-natal care visits at least once within 7 days of delivery / Total number of expected deliveries X 100						
Interpretation	Early Postnatal care (PNC) coverage is the proportion of women and newborns that get care, at least once during the first 7 days after delivery for reasons relating to post-partum services. For mothers who delivered in a health facility, the first post-partum visit is held within the first 24 hours after stay at facility and the woman is checked for bleeding, uterine contraction, fundal height, temperature and pulse. Those mothers who are discharged before 24 hour stay at facility are not recorded as first PNC. For home deliveries the first postnatal care contact should be within 0-24 hours. The second post-natal care visit is held within 25-48 hours followed by 49-72 hours and 73hours-7 days. During this periods mothers are checked for urinary incontinence, bowl functioning, healing of perineal wound, fatigue, back pain, breast pain and lochia. In each PNC visit, the neonate should also be evaluated for any ill health conditions. Ideally the PNC visit should be given for both the neonate and the mother at a time. Even though the post-partum period is 6 weeks (42 days) after delivery, the reproductive health program especially encourages a visit within the first 7 days, and specifically the first two days after delivery because it is considered as critical period. This indicator shows the utilization (accessibility and acceptability) of postnatal care services. For women who delivered at home and came to a health facility within the first day, it should be counted as a PNC if she stays for at least 24 hours in the facility. Note: A woman who received Postnatal Care services should be counted only once even though she may have a PNC care service more than once in the first seven days after delivery. The first postnatal visit that the woman had is the one that should be reported.						
Disaggregation	0-24 hours(1st day) 25-48 hours 49 – 72hours 73hrs-7 days						
Sources	Postnatal care register, Service delivery tally (for HP), Integrated RH register (for primary private clinics)						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.1.9 Caesarean Section (C/S) Rate

Definition	Percentage of births delivered by caesarean section among all births in a given time period.						
Formula	Number of women having given birth by caesarean section / Total number of expected deliveries						X 100
Interpretation	The percentage of births by caesarean section from the total expected deliveries is an indicator of access to and use of health care during childbirth. Caesarean section rate is one of the process indicators that tells us about the availability and quality of Comprehensive Emergency Obstetric Care (CEmONC) in the country. Five to fifteen percent of all pregnancies are expected to end up in complications and may require a caesarean section intervention during delivery. Therefore, C/S rate is expected to be between 5% and 15%. If C/s Rate is below 5% or more than 15%, further investigation should be done. If the C/S rate is below 5%, it may show less coverage of caesarean section service and if it is more than 15%, it may show unnecessary caesarean sections are performed for women who can deliver normally without a caesarean intervention. Nevertheless, even if C-section rate is within 5-15 %, it could be that those who need might not be receiving the services, while C-sections are performed unnecessarily on others. Corroboration of the data may be necessary to establish that C-sections are performed rationally and with due diligence.						
Disaggregation	None						
Sources	Delivery register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.1.10 Number of women receiving comprehensive abortion care services

Definition	Number of women receiving comprehensive abortion care. It includes women who received safe abortion and emergency post abortion care services.						
Formula	Number of women receiving comprehensive abortion care services, including safe abortion and emergency post abortion care services						
Interpretation	In Ethiopia, complications resulting from abortions account for one third of all maternal deaths. The Government of Ethiopia has enacted legislation that requires health care providers to provide services for safe abortion termination of pregnancy service including women who receive post abortion care in exceptional circumstances when the women asks for, and/or consents to the service.. This indicator measures the burden of unplanned pregnancy and access to abortion care services.						
Disaggregation	Type: Safe and PAC Age: 10-14, 15-19, 20- 24, 25-29 and 30+ Trimester: First Trimester (<12 weeks) and Second Trimester (≥12 -28 weeks)						
Sources	Abortion care register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.1.11 Institutional maternal deaths

<table>
<tr><td>Definition</td><td colspan="7">Proportion of maternal deaths from any cause related to or aggravated by pregnancy or its management in a health facility</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of maternal deaths in health facility
Total number of deliveries in health facility</td><td>X 100</td></tr>
<tr><td>Interpretation</td><td colspan="7">Maternal death is the death of a woman from conditions caused or aggravated by pregnancy, which occurs from time of conception to six weeks postpartum, but not from incidental or accidental causes. The cause of death could be direct – abortion, hemorrhage, pregnancy induced hypertension, obstructed labor or sepsis; or could be indirect like heart disease aggravated by pregnancy, malaria in pregnancy, anemia, etc... Ideally, the institutional proportion of maternal deaths should be less than 1%. Five major obstetric complications are known to be the major cause of maternal mortality: hemorrhage (post-partum, ante-partum), ruptured uterus, eclampsia, obstructed labor, infection. These conditions are included in the HMIS disease classification list for inpatient morbidity and mortality. The fatality rate for all five conditions taken together should be less than 1% of all deliveries. The reasons for every maternal death in a health institution should be investigated and appropriate quality/service improvement measures should be taken. Since the mortality is calculated from the total births in the facility, it is like a case fatality rate and be computed as a percentage.

Note: To capture all institutional maternal deaths, it is essential to review deaths from different registers where deaths are recorded, that includes all in patient registers from surgical, medical, obstetric, and gynecological wards; from delivery, PNC, OPD, emergency and ICU registers.

Limitations of this indicator: Mothers who did not deliver in the health facility but later came to the health facility for postpartum complication may die at the health facility and get counted as an institutional maternal death even though the denominator does not include these mothers.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">Admission/Discharge register; Delivery register; PNC register; OPD register; Emergency register, abortion register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.1.12 Number of maternal deaths in the community

Definition	Number of maternal deaths from any cause related to or aggravated by pregnancy or its management in the community (at home, on the way to HF and in the HP)						
Formula	Number of maternal deaths from any cause related to or aggravated by pregnancy or its management in the community (at home, on the way to HF and in the HP)						
Interpretation	Maternal death is the death of a woman from conditions caused or aggravated by pregnancy, which occurs from time of conception to six weeks postpartum, but not from incidental or accidental causes. The cause of death could be direct – abortion, hemorrhage, hypertension, obstructed labor or sepsis; or could be indirect like heart disease aggravated by pregnancy, or malaria in pregnancy. Five major obstetric complications are known to be the major cause of maternal mortality: hemorrhage (post-partum, ante-partum), ruptured uterus, eclampsia, obstructed labor, infection. The reasons for every maternal death in the community should be investigated and appropriate improvements measures taken.						
Disaggregation	Place of death: at home, on the way to health facility, at HP						
Sources	Service delivery tally (for HP), Administrative record						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly*		Monthly	Monthly	Monthly	Monthly

*N.B. HC aggregates reports received from HPs & sends to WorHO .

C1.1.1.13 Number of teenage girls < 19 years tested positive for pregnancy

Definition	Number of teenage girls tested positive for pregnancy					
Formula	Number of teenage girls tested positive for pregnancy					
Interpretation	Ideally teenage pregnancy (pregnancy <19 years) is not promoted and need to be decreased for safe motherhood and child health. But teenage pregnancy still exists and has been contributing significantly to mortality and morbidity of mothers and infants. The intention of this indicator is to determine the magnitude of adolescent girls (teen) getting pregnant and how best can we go about from all women tested for pregnancy in the facility. The indicators also help to predict how many of adolescents continue the pregnancy and how many of them decide for legal termination. Data is collected from the laboratory register.					
Disaggregation	Age: 10-14 , 15-19 years Total tested; positive tests					
Sources	Laboratory Register, Pregnancy test tally sheet					
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB
		Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.1.14 Proportion of kebeles that are 'home delivery free'

Definition	Proportion of kebeles declared home delivery free						
Formula	Number of kebeles that have been declared home delivery free / Total number of kebeles						X 100
Interpretation	Home delivery free kebeles are those kebeles with zero home delivery in the reporting period. This indicator intends to further strengthen implementation of community level integrated maternal and child health services. It gives an opportunity to further explore the existence and functionality of HDA network. It also creates positive competition among the neighboring kebeles. Network leader on monthly basis declares "home delivery free kebele" using the network structure that documents zero home delivery. Health Posts should report it on a quarterly basis.						
Disaggregation	None						
Sources	Administrative record						
Frequency of Reporting	HP	HC*/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Quarterly	Quarterly		Quarterly	Quarterly	Quarterly	Quarterly

*HCs aggregate report from health posts

C1.1.2 PMTCT

There are seven indicators for PMTCT including for mothers and infants (7 indicators)

C1.1.2.1 Percentage of pregnant, laboring and lactating women who were tested for HIV and who know their results

Definition	Percentage of women who were tested and know their HIV status during pregnancy, labor or delivery and post-partum period						
Formula	Number of women who were tested and know their HIV status during pregnancy, labor or delivery and post-partum period						*X 100*
	Estimated number of pregnant women						
Interpretation	Mother-to-child transmission of HIV infection can occur during pregnancy, labor and delivery or during breastfeeding. The risk of mother-to-child transmission can be reduced by a range of interventions, including providing antiretroviral therapy (ART) to women during pregnancy and labor and to the infant in the first weeks of life; obstetrical interventions, including elective caesarean delivery. Receiving HIV testing and counseling services as early as possible during pregnancy enables pregnant women living with HIV to benefit from HIV services and to access interventions for reducing HIV transmission to their infants. This indicator is used to track progress towards ensuring that all pregnant and lactating women attending ANC, labor and delivery and PNC know their HIV status and are initiated on ART. The numerator is the sum of the following: a) Pregnant women with an unknown HIV status who received an HIV test and result during antenatal care; b) Pregnant women attending labor and delivery with unknown HIV status who were tested for HIV in the labor and delivery facility and received their result; c) Women with unknown HIV status attending postpartum services who were tested for HIV and received their result; and` d) Pregnant women with known HIV positive status attending antenatal care, labor and delivery and postpartum for a new pregnancy linked from pre and ART through formal Transfer out format (TO) provided from ART unit. Note:- These women who are listed on a), b) and C) should be reported under PITC report (HIV testing and counseling section)						
Disaggregation	By Service area: ANC, L&D and PNC						
Sources	ANC, L&D and PNC Register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.2.2 Percentage of HIV-positive pregnant women who received ART to reduce the risk of mother-to child-transmission during pregnancy, labor & delivery (L&D) and postpartum

<table>
<tr><td>Definition</td><td colspan="7">Percentage of HIV-positive pregnant women who received ART to reduce the risk of mother-to child-transmission (MTCT) during pregnancy, L&D and postnatal. It includes number of HIV positive pregnant, laboring and lactating women who received ART at ANC+L&D+PNC for the first time and HIV positive pregnant, laboring and lactating women who get pregnant while on ART and linked to ANC.</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of HIV positive pregnant and lactating women who received ART at ANC, L&D and PNC for the first time and those women who get pregnant while on ART & linked to ANC</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Estimated HIV positive pregnant women in the year</td></tr>
<tr><td>Interpretation</td><td colspan="7">In the absence of any preventive interventions, infants born to and breastfed by women living with HIV have roughly a one in three chance of acquiring infection. This can happen during pregnancy, during labor and delivery or after delivery through breastfeeding. The risk of mother to child transmission can be significantly reduced through the complementary approaches of providing antiretroviral therapy for the mother and with prophylaxis to the infant, implementing safe delivery practices and using safe breastfeeding practices. Antiretroviral prophylaxis followed by exclusive breastfeeding for the first 6 months reduces the risk of vertical transmission. According to option B+, HIV positive pregnant and lactating women will be started on ART irrespective of their CD4 count and WHO clinical staging. This indicator measures the provision and coverage of antiretroviral treatment, by regimen type, for HIV-positive pregnant women in order to reduce the risk of mother to child transmission of HIV.

This indicator includes the number of HIV positive pregnant and lactating women who received ART to reduce the risk of mother to child transmission at ANC, L&D and PNC for the first time and HIV positive pregnant, laboring and lactating women who get pregnant while on ART and linked to ANC to reduce the risk of mother-to-child transmission. This linkage has to be functional for the purpose of counseling the mothers on birth preparedness plan, awareness on danger sign during pregnancy and during laboring, Provision of vaccination on Tetanus toxoid, maternal nutrition and improves counseling on the 1000 days practices for the mother and the family.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Newly started at: ANC, L&D, PNC

Linked from ART</td></tr>
<tr><td>Sources</td><td colspan="7">PMTCT Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.2.3 Proportion of HIV exposed infants with virological test

<table>
<tr><td>Definition</td><td colspan="7">Percentage of infants born to HIV-positive women who received a virological (DNA/PCR) HIV test within 12 months of birth</td></tr>
<tr><td rowspan="3">Formula</td><td colspan="7"></td></tr>
<tr><td colspan="6">Number of HIV exposed infants who received a virologic HIV test within 12 months of birth</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">Total number of expected live births from HIV positive mothers</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator measures the extent to which infants born to HIV-positive women are tested to determine their HIV status within the first 12 months of life. Additionally, the yield of HIV testing at 2 months of age may be a useful proxy of early mother-to-child transmission rates if coverage of testing is > 80%. It is recommended to establish the capacity to provide early virological testing of infants for HIV at 6 weeks, or as soon as possible thereafter to guide clinical decision-making at the earliest possible stage. Data from this indicator will be used to determine the rate of scale up and progress with Early Infant Diagnosis, to strategize scale-up programs and inform how the PMTCT program is successful in averting infection. The numerator is calculated from the PMTCT Register. The number of infants who received an HIV test within 12 months of birth should only be counted once. Only the first test for each HIV exposed infant should be counted in this indicator. Even though there is ongoing exposure of infants to HIV (through breastfeeding), this indicator is only measures early access to testing, and not repeat testing of exposed infants. The numerator should only include the initial test and not any subsequent tests.

Infants infected with HIV during pregnancy, delivery or early postpartum period often die before they are recognized as having HIV infection. Early diagnosis of infants who acquired HIV during pregnancy, delivery or in the early postpartum period is critical as infants have an increased risk of mortality if they go undiagnosed and untreated.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Disaggregated by testing period and test result
Negative: within 2 Months , between 2-12 Months
Positive: within 2 Months , between 2-12 Months</td></tr>
<tr><td>Source</td><td colspan="7">PMTCT Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.2.4 Percentage of infants born to HIV-infected women who were started on co-trimoxazole prophylaxis within two months of birth

<table>
<tr><td>Definition</td><td colspan="7">Percentage of infants born to HIV-positive women who started on co-trimoxazole prophylaxis within two months of birth</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of infants born to HIV infected women started on co-trimoxazole prophylaxis within two months of birth during the reporting period</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">Estimated number of HIV- infected pregnant women who gave live birth</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator permits monitoring trends in the numbers and proportion of HIV exposed infants who started CTX prophylaxis.

Co-trimoxazole prophylaxis is a simple and cost-effective intervention to prevent Pneumocystis Caroni Pneumonia (PCP) among HIV-exposed and -infected infants. PCP is the leading cause of serious respiratory disease among young HIV-infected infants and often occurs before HIV infection can be diagnosed. Because diagnosing HIV infection among young infants is difficult, all infants born to women living with HIV should receive Co-trimoxazole (CTX) prophylaxis starting at 4–6 weeks after birth and continuing until HIV infection has been excluded and the infant is no longer at risk of acquiring HIV through breastfeeding.

Individuals should be considered to be “receiving” CTX prophylaxis if CTX has been prescribed and obtained by the patient (provided by a program or procured by the patient). The indicator does not attempt to capture interruptions in drug availability or patient adherence to prescribed therapy. The reports will need to be interpreted in the context of national policies.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Source</td><td colspan="7">PMTCT Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.2.5 Percentage of infants born to HIV-infected women receiving antiretroviral (ARV) prophylaxis for prevention of mother-to-child transmission (PMTCT)

<table>
<tr><td>Definition</td><td colspan="7">Percentage of infants born to HIV positive women who received ARV prophylaxis to reduce risk of mother-to-child transmission.</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of HIV exposed infants who received ARV prophylaxis
Total number of expected live births from HIV positive mothers</td><td rowspan="2">X 100</td></tr>
<tr><td>Interpretation</td><td colspan="7">In the absence of any preventive interventions, infants born to and breastfed by women living with HIV have roughly a one in three chance of acquiring infection. This can happen during pregnancy, during labor and delivery, or after delivery through breastfeeding. The risk of mother to child transmission can be significantly reduced through the complementary approaches of providing antiretroviral therapy for the mother and with prophylaxis to the infant, implementing safe delivery practices and using safe breastfeeding for the first 6 months.

HIV positive pregnant women will be started on ART irrespective of its CD4 count and WHO clinical staging. Infants born to HIV positive women should receive NVP prophylaxis as per the national guideline.

All HIV exposed infant (HEI) born to HIV positive mothers who are on ART for over one month during pregnancy their HEI need to get the daily NVP ARV syrups for 6 weeks.

If the mother is identified HIV positive late and she took her ART for less than a month, the HIV exposed infant born to this mother should be provided the ARV prophylaxis for 12 weeks or 3 months

These mothers need better understanding why they give this prophylaxis for their HEI. They have to have demonstration and re demonstration how to give the syrup to their HEI regularly as prescribed before they are discharged at PNC and in PMTCT register or mother baby pair cohort follow up / ANC room for re demonstration and registering the NVP prophylaxis and the follow up appointment.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">For 6 weeks and 12 weeks</td></tr>
<tr><td>Sources</td><td colspan="7">PMTCT Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.2.6 Percentage of partners of pregnant, laboring and lactating women tested for HIV during the reporting month

<table>
<tr><td>Definition</td><td colspan="8">Percentage of partners of pregnant, laboring and lactating women tested for HIV during the reporting month</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="7">Number of partners of pregnant, laboring and lactating women tested for HIV</td><td rowspan="2">X100</td></tr>
<tr><td colspan="7">Total number of pregnant, laboring and lactating women tested for HIV</td></tr>
<tr><td>Interpretation</td><td colspan="8">All pregnant women tested negative or positive need to bring their spouse for HIV testing after a good counseling services provided for the women attended in ANC, labor delivery and post-natal services. If the mothers are prone for repeated HIV infection to take place the risk of MTCT is high. Repeated HIV transmission to pregnant and lactating mothers result in high viral load in the mothers' blood and consequently increase the risk of MTCT of HIV. Partner's HIV testing and follow up management is strongly recommended to minimize the risk of HIV transmission both ways, i.e from husband to his wife or from his wife to the husband. If HIV transmission is taking place repeatedly to the pregnant women and lactating mothers there is higher probability of creating high viral load in the mothers blood and that may increase the chance and or the risk of MTCT of HIV. In many settings, men's' involvement has resulted in:
More uptake of HIV testing and antenatal services
Improved couple counseling
Improved sharing of responsibilities among couples and this has contributed to reduce stigma and discrimination at family level
Reduced the act of hiding from each other
Better use of PMTCT services by their partners
Adhere to the appointment to collect ART for herself and NVP and CPT prophylaxis with no stigma
Better adherence to PMTCT interventions, such as:
Taking ARVs (by both the mother and infant)
Acceptance of post-test counseling
Communicating about and practicing safer sex during pregnancy and breastfeeding by partners, such as use of condom consistently……
Improve Emotional and or psychological support
Support each other economically
Delivering the infant in a health facility
Exclusive breastfeeding attachment
Partner support can help in various ways to lower transmission rates of HIV to a child.
If the partner is found to be HIV positive he will be treated as soon as possible per the test and treat strategy at the same health facility or through referral linkage with other health facility.</td></tr>
<tr><td>Disaggregation</td><td colspan="8">By test result: Negative result, Positive result</td></tr>
<tr><td>Sources</td><td colspan="8">ANC, Delivery and PNC registers</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td colspan="2">FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td colspan="2">Monthly</td></tr>
</table>

C1.1.2.7 Percentage of HIV exposed infants receiving HIV confirmatory (antibody test) test by 18 months

Definition	Percentage of HIV exposed infants tested and confirmed HIV status at 18 months by rapid antibody test.						
Formula	Number of HIV exposed infants receiving HIV confirmatory (antibody test) by 18 months / Total number of expected live births from HIV positive mothers						X100
Interpretation	HIV exposed infants will acquire risk of HIV transmission from their mothers during pregnancy, L&D, and during breast-feeding period. The risk of acquiring HIV infection during breast feeding period ranges from 10-25%. Appropriate breast feeding practices can reduce the risk of transmission during breast feeding. The national guideline for HIV exposed infants feeding practice recommends exclusive breast feeding for the first 6 months and continuing breast feeding with complementary feeding up to 18-24 months. Mixing in complementary foods in the first 6 months will increase the transmission of HIV. An HIV exposed infant will have DNA/PCR HIV test in the first 12 months of life, preferably within 2 months. At this time if the infant is positive he/she will be automatically put on ART and those negative infants will continue their follow up with their mothers up to 18-24 months in PMTCT services.						
Disaggregation	By test Result: Positive, Negative						
Source	PMTCT Register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.3 CHILD HEALTH

There are a total of 13 indicators for immunization and 8 indicators for other child health services. All of the indicators are analyzed monthly (A total of 21 indicators)

C1.1.3.1 DPT1-HepB1-Hib1 (Pentavalent first dose) immunization coverage (< 1 year)

Definition	Proportion of surviving infants who have received first (one) dose of the combined diphtheria, tetanus toxoid, pertussis, Hepatitis B & *Homophiles influenza* type B vaccine						
Formula	Number of children under one year of age who have received first dose of pentavalent vaccine / Estimated number of surviving infants						*X 100*
Interpretation	DTP-HepB1-Hib1 coverage indicates availability of access to and initial use of immunization services by children. Pentavalent first dose (DPT1-HepB1-Hib1) immunization coverage has a strong inverse correlation with the prevalence of these diseases, especially amongst children under 5. It is an essential component for reducing under-five mortality. Increasing coverage should be accompanied by decreasing cases of disease. It is a good indicator of health system performance and access to the beneficiary.						
Disaggregation	None						
Sources	Service delivery tally (for HP), Immunization register and Immunization Tally						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.3.2 DPT3-HepB3-Hib3 (Pentavalent third dose) immunization coverage (< 1 year)

<table>
<tr><td>Definition</td><td colspan="7">Proportion of surviving infants who have received third dose of the combined diphtheria, tetanus toxoid, pertussis, Hepatitis B and Homophiles influenza type b vaccine</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of children under one year of age who have received third dose of pentavalent vaccine</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Estimated number of surviving infants</td></tr>
<tr><td>Interpretation</td><td colspan="7">DTP-HepB3-Hib3 coverage indicates continuity of use by parents or care takers,, client satisfaction with services, and capability of the system to deliver a series of vaccinations.

Pentavalent third dose (DPT3-HepB3-Hib3) immunization coverage has a strong inverse correlation with the prevalence of these diseases, especially amongst children under 5. It is an essential component for reducing under-five mortality. Increasing coverage should be accompanied by decreasing cases of disease. It is a good indicator of health system performance and utilization by the beneficiary.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">Service delivery tally (for HP), Immunization register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.3 OPV 3 (Oral Polio Vaccine third dose) Immunization Coverage (< 1 year)

Definition	Proportion of surviving infants less than 1 year who have received three doses of the oral polio vaccine (OPV3)						
Formula	Number of surviving infants who have received third dose of oral polio vaccine / Estimated number of surviving infants						X 100
Interpretation	It is an essential component for the global polio eradication initiative where the OPV use hastens and maintains the interruption of poliovirus transmission. OPV3 coverage indicates continuity of the antigen use for infants irrespective of the birth dose of OPV (OPV0) they get. Increasing coverage should be accompanied by maintaining polio free status. As with other sequential scheduled vaccinations, it is a good indicator of health system performance and service utilization by the community.						
Disaggregation	None						
Sources	Immunization register, Service delivery tally (for HP),						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.3.4 Pneumococcal conjugated vaccine (PCV3) immunization coverage (< 1 year)

<table>
<tr><td>Definition</td><td colspan="6">Proportion of surviving infants who have received three doses of the pneumococcal conjugated vaccine</td><td></td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of children under one year of age who have received third dose of pneumococcal vaccine</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Estimated number of surviving infants</td></tr>
<tr><td>Interpretation</td><td colspan="7">Pneumococcal conjugated vaccine 3 immunization coverage has a strong inverse correlation with the prevalence of pneumococcal disease, it has direct effect in under five mortality rate (it can reduce by 10%), and it also indirectly significantly decreases adult pneumococcal morbidity and mortality through the herd effect. It is a good indicator of health system performance and will indicate the impact of this life-saving vaccine.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">Service delivery tally (for HP), Immunization register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.5 Rotavirus vaccine 2nd dose (Rota2) immunization coverage (< 1 year)

Definition	Proportion of surviving infants who have received second dose of the Rotavirus vaccine						
Formula	Number of children under one year of age who have received 2nd dose of Rotavirus vaccine / Estimated number of surviving infants *X 100*						
Interpretation	The second dose of the Rotavirus vaccine (Rota2) immunization coverage has a strong inverse correlation with the prevalence of Rotavirus diseases; it can reduce under five mortality by 5%. It is a good indicator of the ability of the program to deliver the vaccine series, ensuring that the vaccinated child is protected. Its schedule is different from Penta and PCV vaccine, and it is delivered in a narrow time period. The child will complete its Rotavirus vaccine series by the 2nd dose (Rota2) which is given four weeks after the first dose; ideally at 10 weeks of age.						
Disaggregation	None						
Sources	Service delivery tally (for HP), Immunization register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.3.6 IPV (Inactivated Polio Vaccine) Immunization Coverage (< 1 year)

Definition	Proportion of surviving infants who have received one dose of the inactivated polio vaccine (IPV)						
Formula	Number of children under one year of age who have received one dose of inactivated polio vaccine / Estimated number of surviving infants						*X 100*
Interpretation	As per global guidelines, Ethiopia introduced this new vaccine in late 2015 (G.C.). It is an essential component for the global polio end game strategy where the IPV hasten the interruption of all poliovirus transmissions and helps strengthen immunization systems. IPV is administered for children in a single dose after 14 weeks of age, irrespective of their OPV vaccination status. Increasing coverage should be accompanied by maintaining polio free status along with and beyond withdrawal of OPV from the immunization schedule.						
Disaggregation	None						
Sources	Service delivery tally (for HP), Immunization register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.3.7 Measles (MCV1) immunization coverage (< 1year)

Definition	Proportion of surviving infants who have received first dose measles (MCV1) vaccine before their first birthday.						
Formula	Number of children under one year of age who have received first dose of measles vaccine						*X 100*
	Total number of surviving infants						
Interpretation	Measles immunization coverage has a strong inverse correlation with the prevalence of the disease, especially amongst children under 5 years of age. It is an essential component for reducing under-five mortality. Increasing coverage should be accompanied by decreasing cases of the disease. It is a good indicator of health system performance. Measles is usually the last antigen for infant immunizations given, as per the current EPI schedule. Effect of the vaccine will be maximal after 9 months of age and that makes the vaccine dose as valid.						
Disaggregation	None						
Sources	Service delivery tally (for HP), Immunization register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.3.8 Measles second dose (MCV2) immunization coverage (12-24 months)

<table>
<tr><td>Definition</td><td colspan="7">Proportion of children who have received a second dose of measles vaccine before their second birthday.</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of children aged 12 to 24 months of age who have received measles second dose vaccine</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Total number of children aged 12-24 months of age</td></tr>
<tr><td>Interpretation</td><td colspan="7">Measles immunization coverage has a strong inverse correlation with the prevalence of the disease, especially amongst children under 5 years of age. It is an essential component for reducing under-five mortality. Increasing coverage should be accompanied by decreasing cases of the disease. Having the first dose of measles vaccine by the first year of life alone will not guarantee that a child would be fully protected from measles disease. Giving a second dose chance of measles containing vaccine to a child in the second year of life (preferably by 15-18 months of age) would maximize the chance of seroconversion and development of measles antigen closer to 100%. Aiming for the elimination of the measles disease, this indicator will provide closer and timely information for programs for action.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">Service delivery tally (for HP), Immunization register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.9 Full immunization coverage (< 1 year)

<table>
<tr><td>Definition</td><td colspan="7">Proportion of surviving infants who receive all doses of vaccines before their first birthday.</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of children received all vaccine doses before their first birthday</td><td>X 100</td></tr>
<tr><td colspan="6">Total number of surviving infants</td><td></td></tr>
<tr><td>Interpretation</td><td colspan="7">Fully immunized child (FIC): The indicator measures the capability of the system to provide all vaccines in the childhood schedule at the appropriate age and the appropriate interval between doses in the first year of life; also measures public demand and perceived quality of services.

Different surveys and routine reports consider all the antigens included in the routine EPI program to determine the FIC coverage (EDHS 2016, EPI coverage survey, 2006 &2011). Therefore, by definition all the antigens including the newly introduced PCV, Rota vaccines should be included in the definition of a fully vaccinated child in the context of Ethiopia.

Though the definition of FIC varies from country to country, the definition in Ethiopia should consider a child as fully immunized when he/she received BCG vaccine, 3 doses of DPT-Hib-HepB, 3 doses of Oral Polio, 3 doses of PCV, 2 doses of Rota , a dose of IPV and 1 dose of measles before the age of 1 year.

Surviving infants refers to infants who survive to their first birthday.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">Service delivery tally (for HP), Immunization register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.10 Proportion of infants protected at birth against neonatal tetanus

Definition	Proportion of infants who were protected from neonatal tetanus (NNT) by the immunization of their mothers with tetanus toxoid.						
Formula	*Number of Infants whose mothers had protective doses of TT* / *Estimated number of live births* *X 100*						
Interpretation	A case of maternal or neonatal tetanus represents a triple failure of public health system in terms of routine immunization, antenatal care and clean and safe delivery. TT immunization for pregnant and child bearing age women is a proven strategy for achieving the goal of eliminating neonatal tetanus. A child is considered as protected at birth against NNT if the child is born within the period of protection provided by the last valid dose of TT vaccine given to the mother. In Ethiopia PAB is considered as NNT prevention indicator. This indicator measures the percentage of infants who were protected from NNT at birth by the immunization of their mothers with TT before birth. Protection at birth is estimated by asking mothers about their TT immunization history (or reviewing TT record card, if available) when they bring an infant for pentavalent 1 immunization. One can consider that the infant was protected from NNT at its birth (PAB) if the mother has received: Two doses of TT during the recent pregnancy or at least three doses of TT in the past.						
Disaggregation	None						
Sources	Service delivery tally (for HP), Immunization register and Growth Monitoring register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.3.11 HPV 1 (Human Papilloma Virus vaccine (1st dose) Immunization coverage (9 years old girls)

<table>
<tr><td>Definition</td><td colspan="7">Proportion of girls (9 years old) who have received first dose of human papilloma virus vaccine</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of girls 9 year of age who have received first dose of human papilloma virus vaccine</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Estimated number of girls (9 years old)</td></tr>
<tr><td>Interpretation</td><td colspan="7">Human papilloma virus (HPV) vaccine for girls in early adolescence (before their first sexual contact) addresses the common Human papilloma viruses which are associated with the development of cervical cancer in later ages. Globally it is estimated to avert about 70% of cervical cancer in women by fully vaccinating girls against HPV. As the impact of the vaccine takes many years, routine disease surveillance and cancer registry need to be strengthened.

Routine cohort for the first dose of the vaccine (HPV1) in Ethiopia targets age 9 years of girls both in school and out of school. HPV1 coverage indicates access to the target girls with the vaccine using multiple service delivery strategies (School, outreach and health facility).</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">HPV Immunization register, Service delivery tally (for HP),</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.12 HPV 2 (Human Papilloma Virus vaccine (2nd dose) Immunization coverage (9 years old girls)

<table>
<tr><td>Definition</td><td colspan="7">Proportion of girls 9 years old who have received second dose of human papilloma virus vaccine.</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of girls 9 years of age who have received second dose of human papilloma virus vaccine in 6 months interval from the first dose</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Estimated number of girls (9 years old)</td></tr>
<tr><td>Interpretation</td><td colspan="7">Human papilloma virus (HPV) vaccine for girls in early adolescence (before their first sexual contact) addresses the common Human papilloma viruses which are associated with the development of cervical cancer in later ages. Globally it is estimated to avert about 70% of cervical cancer in women by fully vaccinating a girl against HPV. As the impact of the vaccine takes many years, routine disease surveillance and cancer registry need to be strengthened.

The second dose of the vaccine (HPV2) is administered to fully vaccinate the girl with 6 months interval from time of HPV1 vaccination. As girls get the first dose soon after age 9 years, by the time they get the second dose six months later, their age could fall in 10th year. HPV2 is a good indicator of the service utilization and ability of the program to deliver the vaccine using the school platform as well.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">Service delivery tally (for HP), HPV Immunization register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.13 Vaccine wastage rate

<table>
<tr><td>Definition</td><td colspan="7">Proportion of vaccine doses opened but not consumed during the delivery of immunization service to children.</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="7">Vaccine Wastage Rate = 100 – Vaccine usage Rate</td></tr>
<tr><td colspan="7">$Vaccine\ Usage\ Rate = \frac{Number\ of\ Doses\ Given}{Sum\ of\ Doses\ Opened,\ damaged/expired} X\ 100$
Doses opened = Sum of all doses in all vials opened. (Note: the same vaccine may be packaged in different size vials)

NOTE: Vaccine wastage rate for each specific vaccine should be calculated separately.</td></tr>
<tr><td>Interpretation</td><td colspan="7">Vaccines and their management form a major component of the national immunization Program. Regular supply of vaccines and their efficient management is paramount to the success and effectiveness of all immunization Programs. The acceptable vaccine wastage rate for a specific antigen is influenced by several factors that can be controlled by policy and vial size available.

The wastage rate should be monitored for each vaccine, and particularly for the more expensive ones. The policy in Ethiopia is to provide immunization on demand; this means that vaccine wastage rates may increase and may be difficult to control. Vaccine wastage includes wastage due to non-use after opening the vial or due to breakage or expiration or other factors.
This wastage rate traces only facility level wastage.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Doses opened/Damaged, Expired</td></tr>
<tr><td>Sources</td><td colspan="7">Service delivery tally (for HP), Immunization register and EPI logistics records</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.14 Early Institutional Neonatal Death Rate

<table>
<tr><td>Definition</td><td colspan="7">Proportion of neonatal deaths at the facility within the first 7 days of life among the total live births attended by skilled birth attendants at health centers, clinics and hospitals.</td></tr>
<tr><td>Formula</td><td colspan="6">Total Number of institutional neonatal deaths in the first 7 days of life
Total number of live births attended by skilled health attendants</td><td>X 1,000</td></tr>
<tr><td>Interpretation</td><td colspan="7">The institutional early neonatal death rate mainly defines the quality of obstetric care in the facility in the Ethiopian context. Among other potential causes of early neonatal death, the three main causes are prematurity, birth asphyxia, and neonatal sepsis (The three main causes, along with other neonatal conditions, are included in the HMIS inpatient morbidity and mortality report). Neonates who were delivered in a facility and died outside the facility in the first 7 days of life are not captured and not included in the calculation of this indicator.

In real set-up, neonates born at a health facility could die either in the facility where they were born or outside the health facility after discharge. Thus, estimating this indicator from facility records (service statistics) introduces huge bias as it excludes neonatal deaths that happen in the community after they were born in the facility and were discharged. In order to avoid this bias, calculating the indicator using number of deaths at the facility obtained from the delivery and IPD registers and number of neonatal deaths that occur at the community is recommended. To do so, the health posts should be able to report community neonatal deaths that happen in the community disaggregated by place of birth as neonatal community death after home or facility delivery (See the next indicator C1.1.3.15).</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Time of death: 0-24hrs; 1-7 days</td></tr>
<tr><td>Sources</td><td colspan="7">Delivery, PNC, IPD & NICU registers</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.15 Early Neonatal death at community

Definition	The proportion of deaths within the first seven days of life from total births in the kebele					
Formula	*Number of deaths in the first seven days of life* / *Total number of live births in the same kebele* *X 1,000*					
Interpretation	Early neonatal death rate at the community identifies the proportion of neonatal deaths with in the first seven days of life in the community. It captures death of neonates within 7 days of life only. This indicator measures the death of Newborn before arrival to a facility (HC & Hospital) and death at home, and health post. Early neonatal deaths at health institutions will be captured and reported by health facilities. Estimating total early neonatal deaths from institutions only is not sufficient since there are neonates who die outside of health facilities. The sum of early neonatal deaths at the community and early neonatal deaths in health institutions can be used as a good indicator to determine the overall early neonatal deaths.					
Disaggregation	Time of death: 0-24hrs; 1-7 days At home, on the way to HP and at HP					
Sources	Family folder					
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB
	Monthly	Monthly*		Monthly	Monthly	Monthly

****N.B. HC aggregates reports received from HPs & sends to WorHO .***

C1.1.3.16 Proportion of under-five children with pneumonia received antibiotic treatment

<table>
<tr><td>Definition</td><td colspan="7">Proportion of children treated for pneumonia at health facility and community (HP)</td></tr>
<tr><td>Formula</td><td colspan="6">Number of under 5 children treated for pneumonia
estimated number of under 5 children with pneumonia*</td><td>X 100</td></tr>
<tr><td>Interpretation</td><td colspan="7">Pneumonia is one of the leading causes of death among children younger than five years of age. In Ethiopia, several interventions have been in place to reduce child mortality due to pneumonia to realize the achievement of previously MDG 4 and currently SDGs 3.2.1 and 3.2.2 (reducing under-five mortality and neonatal mortality rates respectively). Integrated management of newborn and childhood illnesses (IMNCI) has been implemented at health center and hospital levels for over a decade and Integrated community based case management of childhood illnesses (ICCM) has been implemented at health post level since 2010. With the intention to bolster the newborn component of ICCM, community based newborn care (CBNC) has been implemented since 2013. The key activities in all these interventions for controlling pneumonia in children are prompt diagnosis and treatment of cases with a full course of appropriate antibiotics. Effective case management at health post and health facility levels is needed to ensure that sick children receive appropriate treatment. The introduction of pneumococcal vaccine and implementation of nutritional interventions will eventually contribute to the reduction of child mortality due to pneumonia.

This indicator shows the proportion of under-five children treated for pneumonia at health post and higher level health facilities from among the estimated cases. It measures the effectiveness of the above mentioned interventions in increasing care-seeking of communities and utilization of curative services for childhood pneumonia. As it is one of the HSTP indicators, it can help track the progress towards HSTP target.
*During the calculation of this indicator, the estimated prevalence should be updated based on recent research findings.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">No disaggregation</td></tr>
<tr><td>Sources</td><td colspan="7">CBNC, IMNCI/OPD, IPD, Disease information tally (for HP)</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.17 Proportion of Sick Young infants treated for sepsis/VSD (Very Severe Disease)

Definition	Proportion of sick Young infants treated for sepsis/VSD within a given period						
Formula	Number of sick young infants 0-2 months treated for sepsis/VSD Estimated number of Sick young infant 0-2 months with sepsis or VSD*	X 100					
Interpretation	The implementation of community based newborn care (CBNC) has brought the identification of sick young infants with VSD at community level. Health extension workers trained in CBNC are supposed to provide antibiotic treatment for possible severe bacterial infection among neonates when referral is not possible & can treat newborns with local bacterial infection (LBI) at health post level. At health centers, health care providers are supposed to treat neonates with very severe disease according to the IMNCI guideline. This indicator shows the proportion of neonatal sepsis (very severe disease &LBI) cases who received treatment at all levels of the health system. It measures the demand for neonatal sepsis (very severe disease) and utilization of health services in a given catchment population. In addition, the trend and comparative analysis of this indicator shows the effectiveness of demand generation activities. In situations when health facilities face stock of essential drugs required for the management of neonatal sepsis (very severe disease), the indicator may not actually indicate the care seeking in the catchment area for the period essential supplies were out of stock. * During the calculation of this indicator, the estimated prevalence should be determined based on recent research findings or estimates.							
Disaggregation	Classification type :-Very sever disease (VSD),Local bacterial infection (LBI)						
Sources	CBNC, IMNCI/OPD, IPD, NICU registers, Delivery and PNC						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.3.18 Proportion of children treated for diarrhea

<table>
<tr><td>Definition</td><td colspan="7">Proportion of children treated by Zinc and ORS for Diarrhea at health facility and community (HP)</td></tr>
<tr><td>Formula</td><td colspan="6">Number of under 5 children treated for Diarrhea by ORS & Zinc
estimated number of under 5 children with Diarrhea*</td><td>X 100</td></tr>
<tr><td>Interpretation</td><td colspan="7">Diarrhea is one of the leading causes of death among children younger than five years of age. Along with increasing demand for and improving awareness of communities on prevention and management of diarrhea at home and generating demand for care at health facility level, prompt treatment of cases with a full course of Zinc & ORS is a key intervention to reduce morbidities and mortalities among children younger than five years of age. Accessing effective diarrheal cases management at health post and higher level health facilities is needed to ensure that sick children receive appropriate treatment. Therefore, prevention of diarrhea and treatment of cases are essential to the achievement of SDG 3.2.1 and 3.2.2.

As such, this indicator shows the proportion of under-five children treated for diarrhea at health post and higher level health facilities. It measures the utilization of services for diarrheal cases and indicates the effectiveness of interventions to increase care seeking for childhood diarrhea. In addition, as it is one of the HSTP indicators, it can help track the progress towards HSTP target.
*During the calculation of this indicator, the estimated prevalence should be updated based on recent research findings.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Treated by ORS & Zinc
Treated by ORS only</td></tr>
<tr><td>Sources</td><td colspan="7">OPD/IMNCI/ICCM ,IPD, Disease information tally (for HP)</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.19 Proportion of low birth weight or premature newborns for whom KMC was initiated after delivery

Definition	Proportion of newborns weighing <2,000gm and/or premature newborns for whom thermal care in the form of KMC was initiated after delivery.						
Formula	Number of newborn weighing <2000gm and premature newborns for which KMC was initiated						X 100
	Estimated number of newborn weighing <2000gm and/or premature delivery*						
Interpretation	Kangaroo Mother Care (KMC) has proven effect on mortality for babies <2,000 g. This indicator shows the proportion of low birth weight weighing less than 2000 gm or premature newborns for which KMC was initiated after delivery. It measures the practice of initiation of KMC for low birth weight weighing less than 2000 gm or premature babies with advices from health care workers at the facilities. * During the calculation of this indicator, the estimated prevalence of weighing less than 2000 gm or prematurity should be updated based on recent research findings.						
Disaggregation	None						
Sources	HF Registers(Delivery, IPD,PNC & NICU						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.3.20 Proportion of asphyxiated neonates who were resuscitated (with bag & mask) and survived

<table>
<tr><td>Definition</td><td colspan="7">Proportion of newborns with birth asphyxia who were resuscitated and survived</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of neonates resuscitated for birth asphyxia & survived
Estimated number of neonates with birth asphyxia</td><td>X 100</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator shows the proportion of asphyxiated newborns that were resuscitated using bag and mask and have survived. It measures the readiness of facilities (i.e. availability of trained health care provider and equipment) and the quality of neonatal resuscitation services (i.e. mainly related to the competency and skills of health care providers) at the health facilities. In addition, as it is one of the HSTP indicators, it can help track the progress towards HSTP target.

* During the calculation of this indicator, the estimated prevalence should be updated based on recent research findings.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Total resuscitated , survived</td></tr>
<tr><td>Sources</td><td colspan="7">Delivery , IPD &PNC, NICU registers</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.3.21 Treatment outcome of neonates admitted to NICU

<table>
<tr><td>Definition</td><td colspan="7">Proportion of Neonates admitted with problems that were treated and discharged as cured, improved, died, and others from the NICU among total discharges (Outcome need to be calculated separately for each category)</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">The number of admitted neonates that were recovered, transferred, died or with other treatment outcomes from NICU (Separately by outcome category)</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">The total number of admitted neonates discharged from NICU</td></tr>
<tr><td>Interpretation</td><td colspan="7">Neonatal intensive care unit (NICU) is a unit where intensive treatment and care is provided for babies who have problems such as prematurity, who have problems during delivery, or who develop problems while still in the hospital. The service is only provided in Hospitals with NICU standard, with a trained manpower, adequate space as per the standard and with basic equipment.

This indicator measures the quality of NICU service in hospitals. The total number of neonates discharged from NICU is the sum of those who are cured, improved, died and other treatment outcomes. Note: Treatment outcome should be calculated separately for each outcome.
<u>Treatment outcomes:</u>
Recovered: - If the admitted neonate is cleared clinically or confirmed by laboratory investigation. It is decided by health professionals to go to home with good health condition and the expected recovery rate is more than 85 %.
Transferred: - When the admitted neonate is in good health relative to the condition on admission and the neonate may have to follow up outside the NICU.
Dead: When the neonate is dead while he/she is on follow up in the NICU and the expected death rate is less than 15 %.
Others: - When the neonate is discharged from the NICU against medical advice or if absconded.
<u>Definition of terms:</u>
Neonate (Newborn): - Neonate (newborn) refers to an infant in the first 28 days after birth; the term applies to premature, full term, and post mature infants; before birth.
Neonatal Intensive Care Unit (NICU): - The place where all neonates with health problem get care with strict follow-up in the hospital for admitted in the Unit.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Condition at discharge: Recovered, Transferred, Dead, Others
Others (Absconded, Left against medical advice…)</td></tr>
<tr><td>Source</td><td colspan="7">NICU Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.4 Nutrition

There are 8 indicators for child and maternal nutrition program monitoring. All of the indicators are analyzed on a monthly basis.

C1.1.4.1 Percentage of low birth weight (LBW) newborns

<table>
<tr><td>Definition</td><td colspan="7">Percentage of live births that weigh less than 2,500 gms out of the total live births during the same time period</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of live-born babies with birth weight less than 2,500 gms</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">Total number of live births weighed</td></tr>
<tr><td>Interpretation</td><td colspan="7">The LBW proportion is a rough summary measure of many factors, including maternal nutrition (during childhood, adolescence, pre-pregnancy and pregnancy), lifestyle (e.g. alcohol, tobacco and drug use), and other exposures in pregnancy. LBW is strongly associated with a range of adverse health outcomes, such as peri-natal mortality and morbidity, infant mortality, disability and disease in later life, but is not necessarily part of the cause. The main strength of LBW data is that they are relatively easy to measure. LBW is a strong predictor of an individual baby's survival. The lower the birth weight, the higher the risk of death. Groups with lower mean birth weights show higher infant mortality rates. Examples are twins and infants of mothers with lower socioeconomic status. Efforts should focus on measuring birth weight immediately after delivery, on its accuracy and on appropriate care after birth, including growth monitoring.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Source</td><td colspan="7">Delivery Register; Service delivery tally (HPs)</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.4.2 Proportion of children under 2 years of age who participated in Growth Monitoring and Promotion

<table>
<tr><td>Definition</td><td colspan="7">Proportion of children under two years who participated in Growth Monitoring and Promotion monthly</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of Children less than 2 year weighted during GMP session</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">Total Estimated children under 2 years</td></tr>
<tr><td>Interpretation</td><td colspan="7">Growth Monitoring (GM) is one of the key components of community nutrition programs. Evidences showed that Growth monitoring and promotion (GMP), as part of a package of nutrition and health programs, brought positive impacts on child growth outcomes. GMP is a prevention activity and is based on growth monitoring of children, especially children under 2 years of age. It primary focuses on monthly measurement of weight on children under 2 because early identification of malnutrition in children under 2 years of age can be reversible with appropriate nutritional interventions.

The primarily objective of GMP is to determine inadequate growth early enough and undertake actions to prevent further faltering before the child reaches a status of under-nutrition; hence it is primarily a preventive and promotive activity. GMP facilitates communication and interaction with caregiver and to generate adequate action to promote child growth through: Increased caregiver’s awareness about child growth, improved caring practices and increased demand for other services, as needed

The GMP process includes three stages: I) measuring and interpreting growth adequacy, ii) analysis of the reasons for adequate or inadequate growth, and iii) counseling; which corresponds to the triple-A approach (Assessment, Analysis, Action). This process must include the active engagement of the caregiver in problem-solving about the child’s growth. These conditions can best be met in the community setting, and have the best opportunity for producing results on a public health level if all children 0-24 months are reached in a defined catchment area.
Based on weight measurement, the child’s nutritional status can be classified as follows:
• Severe : WFA Z Score less than -3 standard deviations of the WHO Child Growth Standards
• Moderate: WFA Z Score between -2 and -3 (-3 < Z Score < -2) less than -3 standard deviations of the WHO Child Growth Standards
• Normal: WFA Z Score greater or equal to -2 standard deviations of the WHO Child Growth Standards</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Age: 0-5, 6-23 month
Severity: Severe, moderate, Normal</td></tr>
<tr><td>Source</td><td colspan="7">Comprehensive and Integrated Nutrition (CINS) Register, Immunization register, Service delivery tally (HPs)</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.4.3 Proportion of children under five years screened for acute malnutrition

Definition	Proportion of children under five years screened for malnutrition						
Formula	Total number of children under five years screened for acute malnutrition / Total number of children under five years						X100
Interpretation	This is an indicator used for monitoring/identification of nutritional status of children under five years of age, complement early warning system through provision of nutrition data and prevents acute severe malnutrition through linkages with supplementary feeding and prevents deaths from acute severe malnutrition. This is the first step in identifying subjects who may be at nutritional risk or potentially at risk, and who may benefit from appropriate nutritional intervention. Screening may need to be repeated regularly (monthly basis). It is always better to prevent or detect problems early by screening than discover serious problems later. Screening may be conducted using anthropometric measurements and the result of the screening is classified as follows: • Severe acute malnutrition(SAM): MUAC <11cm or WFH (weight for height) <70% of the median or <-3 Z score (Used in health centers and hospitals) and/or bilateral pitting edema (used in all health facilities) • Moderate acute malnutrition(MAM): MUAC 11cm to <12cm or WFH (weight for height/ length) Z score between -2 and -3 (Z score ≥ -3Z to < -2Z) or WFH ≥ 70% to < 80% median or (Used in health centers and hospitals) and No edema of both feet • Normal: MUAC ≥ 12 cm or WFL/H ≥ 80% or ≥ -2Z score and No edema of both feet Infants and children who are 6–59 months of age and have a mid-upper arm circumference <11 mm or a weight-for-height/length <–3 Z-scores of the WHO growth standards, or have bilateral edema, should be immediately admitted to a program (OTP or SC) for the management of severe acute malnutrition.						
Disaggregation	Age: 0-5, 6-59 months Severity: SAM, MAM,						
Source	CINuS register/ICCM/IMNCI registers, Service delivery tally						
Frequency of Reporting	HP	HC	Hospital	WorHO	ZHD	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.4.4 Treatment outcomes for management of severe acute malnutrition in children under 5 year

<table>
<tr><td>Definition</td><td colspan="7">Proportion of children under-five with severe acute malnutrition that recovered or died or defaulted or non-respondent or medical transfer or transfer out or with unknown treatment outcomes from treatment centers (OTP or SC).</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">No. of children under five that recovered or died or defaulted or non-responded or medical transfer or transfer out or unknown treatment outcome from treatment center (Separately by outcome category)</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">The total number of children exiting from treatment for acute malnutrition</td></tr>
<tr><td>Interpretation</td><td colspan="7">The time needed to achieve the outcome indicators for a therapeutic feeding program (TFP) is 1-2 months and for targeted supplementary feeding program (SFP) is 2-3 months. The total number of exited individuals is the sum of those who have recovered, referred, defaulted, died, medically transferred, non-respondents and others with unknown treatment outcomes.

▪ Recovery rates: a discharged individual must be free from medical complications and have achieved and maintained sufficient weight gain (e.g. for two consecutive weightings). Malnourished Children admitted to feeding programmers are discharged with the following criteria: MUAC ≥11.0 cm AND ≥15% weight gain from admission weight with no edema for 2 consecutive visits (at hospital level WFH ≥85 %.). The expected cure rate is >75%.
▪ Defaulter rates can be high when the program is not accessible to the population. Accessibility may be affected by the distance of the treatment point from the community, an ongoing armed conflict, a lack of security, the level of support offered to the care giver of the individual treated, the number of care givers who are left at home to look after other dependents (this may be very few in situations of high HIV/AIDS prevalence), and the quality of the care provided. A defaulter from a feeding program is an individual who has not attended 3 consecutive visits and it is confirmed that the child is alive for out-patient services. Expected default rate is <15%.
▪ Died: Mortality rates should be interpreted in the light of coverage rates and the severity of malnutrition treated. Expected death rate is <5%.
▪ Non-responder : Patient that has not reached the discharge criteria from OTP/ SC
▪ Medical transfer: Patient that is referred to other health facility/ hospital for medical reasons and this health facility will not continue the nutritional treatment or transfer the patient back to the program
▪ Transferred out: Patient who has started the nutritional therapeutic treatment in your in-patient care/outpatient to continue the treatment
▪ Unknown: Patient that has left the program but their outcome (actual defaulting or death) is not confirmed/verified by home visits.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Treatment Outcome: Recovered, died, defaulted, non-respondent, medical transfer, transfer out, Unknown)</td></tr>
<tr><td>Source</td><td colspan="7">TFP Register, Service delivery tally (HPs)</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC</td><td>Hospital</td><td>WorHO</td><td>ZHD</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.1.4.5 Proportion of children aged 6-59 months who received vitamin A supplementation

Definition	Proportion of children aged 6–59 months who received two doses of vitamin A supplement						
Formula	Total number of children aged 6-59 months who received two doses of vitamin A supplementation / Estimated number of children aged 6-59 months						X100
Interpretation	Supplementation with vitamin A is a critically important intervention for child survival owing to the strong evidence that exists for its impact on reducing child mortality by 23 %. Therefore, monitoring the number of children who have received vitamin A every 6 month/twice per year is crucial for monitoring coverage of interventions towards the child survival-related Sustainable development Goals. Children are expected to receive vitamin A twice a year. When the child received 2 doses of vitamin A in the fiscal year, he/she will be reported. Vitamin A doses given for treatment purpose should not be counted as supplementation.						
Disaggregation	Age: 6-11 and 12-59 months						
Source	Service delivery tally sheet (HPs), CINuS register, Immunization register						
Frequency of Reporting	HP	HC	Hospital	WorHO	ZHD	RHB	FMOH
	Monthly	monthly	monthly	Monthly	Monthly	Monthly	Monthly

C1.1.4.6 Proportion of children 24-59 months dewormed

Definition	Proportion of children aged 24-59 months who received deworming drugs twice per year month						
Formula	Total number of children aged 24-59 months de-wormed twice per year / Estimated number of children aged 24-59 months						X 100
Interpretation	Supplementation with Albendazole (de-worming) is a critically important intervention for prevention of anemia in children and it has an impact on reducing child mortality. Therefore, measuring the proportion of children who have received of Albendazole (de-wormed) every 6 months /twice per year is crucial for monitoring coverage of interventions. This indicator shows the coverage of deworming in children aged 2 to 5 years of age.						
Disaggregation	None						
Source	Service delivery tally sheet (HPs), CINuS register						
Frequency of Reporting	HP	HC	Hospital	WorHO	ZHD	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.4.7 Proportion of pregnant and lactating women (PLW) screened for acute malnutrition

Definition	Proportion of Pregnant and lactating women screened for acute malnutrition						
Formula	The total number of PLW screened for acute malnutrition / Estimated number of PLW				X 100		
Interpretation	A mother's nutritional status, diet and lifestyle influence pregnancy & lactation outcomes and can have lasting effects on her offspring's health. Inadequate intake of certain micronutrients during pregnancy, such as folic acid & iodine, can contribute to birth defects and/or the inability of the child to develop to his/her full cognitive potential. Screening pregnant and lactating women for malnutrition and providing the appropriate nutrition counselling and services greatly reduces adverse malnutrition related health effects on the mother and the infant. This should be provided in a program that is designed for a nutritional screening service in health facilities and at community levels. Additionally, antenatal care offers an opportunity for assessment/screening of the nutritional status of a pregnant woman, as well as the assessment of essential nutritional actions and continuous monitoring throughout pregnancy and also after delivery till 6 months.						
Disaggregation	MUAC <23 and ≥ 23						
Source	Service delivery tally (HPs); PLW screening Register						
Frequency of Reporting	HP	HC	Hospital	WorHO	ZHD	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.1.4.8 Proportion of pregnant women received iron & folic acid supplements at least 90 plus

Definition	Proportion of pregnant women who received iron and folic acid (IFA) supplements for at least 3 months during their pregnancy						
Formula	Total number of Pregnant women received IFA at least 90 plus / Total estimated number of pregnant women					X 100	
Interpretation	Pregnant women should take daily oral Iron and Folic Acid supplements for 180 days/ or at least 90 days during pregnancy as part of the antenatal care service, in order to reduce the risk of low birth weight, maternal anemia and Iron deficiency (WHO). If she didn't finish the full dose during pregnancy, she can finish the dose after delivery to the maximum of 180 tabs (for 6 months). A formulation containing 30-60 mg elemental Iron and 400µg Folic Acid is recommended. In addition to Iron and folic acid supplementation, pregnant women should receive deworming during the second or third trimesters of pregnancy.						
Disaggregation	Age group: 10-14 years; 15-19 years; >=20 years						
Source	Family folder; ANC Register						
Frequency of Reporting	HP	HC	Hospital	WorHO	ZHD	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.2 Hygiene and Environmental

There are two indicators in the hygiene and environmental health category. Both are analyzed quarterly.

C1.2.1 Proportion of households with access to latrine, by type

Definition	Proportion of households that have access to any type (improved and un-improved) of latrine facility						
Formula	No. of households with any type of latrine facilities (both unimproved & improved) / Total number of households						X 100

Interpretation	This indicator measures access to any type of latrine at household level.
	
	Use of latrines is known to reduce the morbidity of communicable diseases, particularly those transmitted by the fecal oral route, such as diarrhea, hepatitis, etc. Access to a latrine must be accompanied by appropriate utilization and availability of hand washing facilities after use. This is usually assessed by surveys; in Ethiopia, routine visits to each household by Health Extension Workers (HEWs) offer an alternative method to surveys.
	
	Population with access to any latrine facility, which is disaggregated as follows:
	• Unimproved Latrines: These facilities refer to one of the following
	  ○ pit latrines without a slab or platform,
	  ○ shared latrines
	• Improved Latrines: These facilities refer to one of the following ; plus a hand washing facility with soap and water
	  ○ Flush/pour flush to piped sewer system;
	  ○ Flush/pour flush to septic tank;
	  ○ Flush/pour flush to pit latrine, soak pit or cesspool;
	  ○ Ventilated improved pit (VIP) latrine;
	  ○ Pit latrine with cleanable slab;
	  ○ Composting toilet						

Disaggregation	Improved; Unimproved						
Sources	Family folder						
Frequency of Reporting	HP: Quarterly	*HC/Clinic: Quarterly	Hospital:	WorHO: Quarterly	ZHD: Quarterly	RHB: Quarterly	FMOH: Quarterly

*: HC aggregates report received from HPs and sends to worHO

C1.2.2 Proportion of kebeles declared Open Defecation Free (ODF)

<table>
<tr><td>Definition</td><td colspan="7">Proportion of kebeles declared ODF registered as new and existing among total number of kebeles</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of kebeles that have been declared open defecation free ([Existing + New]-dropped)</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Total number of Kebeles</td></tr>
<tr><td>Interpretation</td><td colspan="7">Percentage of Kebeles which have been declared open defecation free, through the Woreda WASH Team verifying and certifying (all households and institutions (including schools, health facilities, churches etc.) to have access to at least a basic latrine; latrines have been constructed for the use of travelers & in public areas; previously identified open defecation sites are confirmed as free from open defecation; and proper practice of hand washing and household water handling at home in their respective Kebele (HH and institution)

Existing: number of ODF kebeles declared in previous quarter and still sustained ODF until reporting quarter

New: Number of ODF Kebeles declared in reporting quarter

Dropped: Number of kebeles dropped/slip from existing ODF</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Existing, New, Dropped</td></tr>
<tr><td>Source</td><td colspan="7">Administrative record</td></tr>
<tr><td rowspan="2">Frequency of reporting</td><td>HP</td><td>HC/clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Quarterly</td><td></td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td></tr>
</table>

C1.3 Prevention and Control of Diseases

The Disease Prevention and Control indicators are classified into three categories: All diseases, Communicable Diseases, and Non-communicable Diseases. There are 45 Disease Prevention and Control indicators; 19 are analyzed monthly, and 24 analyzed quarterly, and 2 analyzed annually.

Facility based morbidity and mortality rates for specific diseases are available as needed from disease reports compiled monthly at facilities and forwarded to woredas/subcities, zones, regions, and FMOH. Case counts for morbidity are the sum of outpatient department (OPD) diagnoses and inpatient department (IPD) discharge diagnoses. To avoid double counting, OPD diagnoses are reported only if the patient is not admitted.

C1.3.1 All diseases

There are 3 indicators in the all diseases category; all are analyzed monthly.

C1.3.1.1Top 10 causes of morbidity

Definition	The ten leading causes of morbidity per 1000 population						
Formula	Number of new OPD + IPD Cases from specific diseases					X 1,000	
	Total population in the catchment area						
Interpretation	Provides evidence regarding priorities for planning and resource allocation. The top ten causes should be listed, from highest to lowest. The total number of cases seen at OPD and IPD and the cases per 1,000 should also be included for comparison. This indicator may show the burden of specify diseases in the community. **Note**:-The numerator should include only those who are new cases so that a person will not be counted more than once for the same illness/disease.						
Disaggregation	Age: 0-4, 5-10, 11-19, 20-29, 30-45, 46-65, >=66 Sex: Male, Female						
Source	Outpatient (OPD) registers, Inpatient register, Emergency register; Disease information tally (HP)						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.1.2 Top 10 causes of Institutional mortality

Definition	The ten leading causes of mortality						
Formula	*Number of deaths in a health facility from specific disease* / *Total number of discharge* X100						
Interpretation	The top ten causes can be known from the annual totals of monthly IPD deaths reported. Provides evidence regarding priorities for planning and resource allocation. The top ten causes should be listed, from highest to lowest. The total number of IPD deaths and the case fatality rate should also be included for comparison with other locations. While deaths are reported monthly, the top ten are calculated annually, based on the sum of monthly totals. IPD death is death of a patient who was alive when he/she came to the health facility and died afterwards. Note that patients who died at arrival before admission/at emergency should not be counted and include deaths from OPD, emergency, IPD, ICU and NICU.						
Disaggregation	Age: 0-4, 5-10, 11-19, 20-29, 30-45, 46-65, >=66 Sex: Male, Female						
Source	In-patient registers, NICU register, Emergency register, ICU register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.1.3 Inpatient mortality rate

Definition	Inpatient deaths before discharge per 100 patients discharged.						
Formula	*Number of inpatient deaths* / *Total number of discharges*			X100			
Interpretation	Provides rough evidence regarding quality of care when compared with other facilities. Care should be exercised, however. The level and location of a facility may affect its case mix. The inpatient mortality rate is calculated as the number of IPD deaths divided by the number of IPD discharges in the facility during a given time period. The number of deaths can be known from the monthly totals of IPD deaths reported. The inpatient mortality rate can be estimated at all levels except Health Post.						
Disaggregation	Age: 0-4, 5-10, 11-19, 20-29, 30-45, 46-65, >=66 Sex: Male, Female						
Source	In-patient registers.						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.2 Communicable diseases

There are 42 routine HMIS indicators in the Communicable diseases category; 17 are analyzed monthly, 23 quarterly, and 2 annually. The Communicable disease category is further divided into five categories: HIV/AIDS, TB and leprosy, TB/HIV co-infection, Malaria, and Neglected Tropical Diseases (NTDS).

C1.3.2.1 HIV/AIDS Indicators

There are 10 indicators related to HIV/AIDS; all are reported on a monthly basis.

C1.3.2.1.1 Percentage of people living with HIV who know their status

<table>
<tr><td>Definition</td><td colspan="6">Percentage of people living with HIV who know their status</td><td></td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of people living with HIV who know their status</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">Estimated Number of people living with HIV</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator can be used as a proxy for the first 90 target of the 90-90-90 HIV targets. It is Critical to determine the proportion of people living with HIV who know their HIV status, as this knowledge is the entry point to the continuum of care for PLHIV.
The three 90s are:
• 1st 90 = 90% of all people living with HIV will know their HIV status.
• 2nd 90 = 90% of all people with diagnosed HIV infection will receive ART
• 3rd 90 = 90% of all people receiving antiretroviral therapy will have viral suppression.
The numerator should be the sum of:
1) PLHIV who were reported as currently on ART in the previous reporting month
2) Total new HIV positives identified through HCT program in the reporting period
3) Total number of lost in the previous reporting period.
Limitation of this indicator: This indicator may miss those previously identified positives and who are alive and not started on ART.

At Zonal, Woreda and facility levels, it is difficult to get estimates of PLHIV to compute the first 90. Therefore, these levels should monitor HCT uptake (Number of people tested for HIV) and its yield (Number of people tested positive for HIV).</td></tr>
<tr><td>Disaggregation</td><td colspan="7">For HTC testing and its results report, the disaggregation should be :
<u>Age group</u>: <1, 1-4, 5–9, 10–14, 15-19, 20–24, 25–49, 50+
<u>Sex</u>: Male, Female
<u>HIV test result</u>: Positive
<u>Population groups</u>: FCSW, Long distance drivers, Mobile/Daily Laborers, Prisoners, OVC, Children of PLHIV, Partners of PLHIV, Other MARPS, General population</td></tr>
<tr><td>Source</td><td colspan="7">PITC tally and VCT register, PMTCT Register, ART register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.3.2.1.2 Percentage of people living with HIV receiving ART

<table>
<tr><td>Definition</td><td colspan="7">Percentage of adults and children living with HIV receiving ART</td><td></td></tr>
<tr><td rowspan="2">Formula</td><td colspan="7">Number of adults & children receiving ART at the end of the reporting period</td><td rowspan="2">X100</td></tr>
<tr><td colspan="7">Estimated number of people living with HIV</td></tr>
<tr><td>Interpretation</td><td colspan="8">This indicator measures the ongoing scale-up and uptake of ART and retention in ART programs as a critical step in HIV service provision and assesses progress towards coverage of ART. It also measures the progress towards providing antiretroviral therapy to all people living with HIV and the extent to which ART needs are met. Provision of Antiretroviral therapy has been shown to reduce HIV-related morbidity and mortality among those living with HIV, and onward HIV transmission. This indicator measures the 2nd 90 target.

Data for this indicator is generated by counting the number of adults and children who are currently receiving ART in accordance with the nationally approved treatment protocol at the end of the reporting period. Patients who have died, stopped treatment, transferred out, lost (patient not seen for 1 to 3 months from last visit) and dropped out (patient not seen for > 3 months from last visit) are NOT counted. Patients on ART who initiated or transferred in during the reporting period should be counted. Some people pick up several months of antiretroviral medicines (ARVs) at one visit, and efforts should be made to include these people in the numerator as receiving antiretroviral even if they do not attend the clinic in the last month of the reporting period.

As it will be difficult to get the PLHIV estimate or the expected number of individuals who know their status at the Zone/woreda and lower levels level, this indicator will be calculated at these levels based on the target allocation during the planning phase.

This indicator includes currently receiving clients at ART clinic and those currently receiving ART at PMTCT clinic based on option B+. All option B+ implementing PMTCT only sites are expected to report ART currently receiving clients on monthly basis.</td></tr>
<tr><td>Disaggregation</td><td colspan="8">Age: .<1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+; Sex: Male, Female; By Pregnancy Status: pregnant, non-pregnant ; By regimen: 1st line, 2nd line and 3rd line</td></tr>
<tr><td>Source</td><td colspan="8">ART Register, PMTCT register, ART regimen tally</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td colspan="2">FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td colspan="2">Monthly</td></tr>
</table>

C1.3.2.1.3 Viral load suppression

<table>
<tr><td>Definition</td><td colspan="7">Percentage of patients on ART with a suppressed viral load (<1000 copies/ml) in the past 12 months</td></tr>
<tr><td>Formula</td><td colspan="6">Number of adult and pediatric patents on ART with an undetectable viral load (<1000copies/ml) in the past 12 months
Estimated number of PLWHIV</td><td>X100</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator could provide information that can contribute to quality improvement activities designed to maximize rates of viral suppression in patients on ART and therefore prevent the acquisition of HIV drug resistance. The viral load of patients receiving antiretroviral therapy provides an indication of adherence to treatment, patient compliance with disease monitoring and the quality of care delivered. The increasing ART coverage in resource-limited settings in the absence of routine viral load monitoring is raising concerns about the development of resistance to first-line ART regimens, long-term individual patient outcomes, and increased risk of transmission of HIV, including drug-resistant HIV. To sustain the progress made in reducing morbidity and mortality from HIV through ART, it is important that HIV-infected patients continue to have access to safe, tolerable, and potent ARVs. To accomplish this, the use of viral load test to monitor HIV treatment will need to be expanded.

Measuring viral suppression is a key programmatic indicator related to effective treatment. It helps as a proxy indicator to monitor the third 90 of UNAIDS' 90-90-90 treatment target, that 90% of people receiving antiretroviral therapy will have viral suppression by 2020.

For the numerator: It can be the actual report or estimated number of people that have suppressed viral loads at the end of the reporting period depending on the viral load testing coverage. In either case, viral load testing should be routine rather than episodic: for example, when treatment failure is suspected. If viral load test is done repeatedly, it should be reported only once.

For the denominator: Estimation models such as Spectrum are the preferred source for the number of people living with HIV. If models other than Spectrum are used, documentation of the estimation method and uncertainty bounds should be provided. Please refer UNAIDS Global AIDS Monitoring 2017 document for further explanation.

As it will be difficult to get the PLHIV estimate or the expected number of individuals who know their status at the Zone/woreda and lower levels level, this indicator can be monitored by calculating from the total viral load tested.
Note: Viral load tests for PMTCT clients should also be included in this indicator.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">By Age: .<1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+; By Sex: Male, Female; By Pregnancy status: Non-pregnant and pregnant</td></tr>
<tr><td>Source</td><td colspan="7">ART and PMTCT registers</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.3.2.1.4 Early viral load suppression rate

Definition	Percentage of ART patients with an undetectable viral load at 6 month after initiation of ART						
Formula	*Number of adult and pediatric patients with an undetectable viral load (<1,000 copies/ml) at 6 months* / *Number of adults and children who initiated ART in the 6 months prior to the beginning of the reporting period with a viral load test at 6-month* X100						
Interpretation	This indicator is about those who initiated ART prior to six month of the current reporting period. And it helps to provide information that can contribute to quality improvement activities designed to maximize rates of viral suppression in patients on ART and therefore prevent the acquisition of HIV drug resistance. The increasing ART coverage in resource-limited settings in the absence of routine viral load monitoring is raising concerns about the development of resistance to first-line ART regimens, long-term individual patient outcomes, and increased risk of transmission of HIV, including drug-resistant HIV. To sustain the progress made in reducing morbidity and mortality from HIV through ART, it is important that HIV-infected patients continue to have access to safe, tolerable, and potent ARVs. To accomplish this, the use of viral load testing to monitor HIV treatment will need to be expanded.						
Disaggregation	**By Age:** .<1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+; By Sex: Male, Female; Pregnancy status: Non-pregnant and pregnant						
Source	*ART and PMTCT registers*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.2.1.5 ART retention rate

<table>
<tr><td>Definition</td><td colspan="7">Percentage of adults and children known to be on treatment 12 months after initiation of ART</td></tr>
<tr><td>Formula</td><td colspan="6">Number of adults and children who are still on treatment at 12 months after initiating ART
Total number of adults and children who initiated ART in the 12 months prior to the beginning of the reporting period (net current cohort)</td><td>X100</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator measures the proportion of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy and it is one important measure of program success and is a proxy for overall quality of program.
The Numerator: Number of adults and children still alive and on ART at 12 months after initiating treatment. A 12-month outcome is defined as the outcome (i.e. whether the patient is still alive and on ART, dead or lost to follow-up) 12 months after starting. The numerator does not require patients to have been on ART continuously for the 12-month period. Patients may be included in the numerator (and denominator) if they have missed an appointment (not more than 30 days) or drug pick-up or temporarily stopped treatment during the 12 months since initiating treatment, as long as they are recorded as still being on treatment at month 12. On the contrary, those patients who have died, stopped treatment, or been lost to follow-up as of 12 months since starting treatment are not included in the numerator. The number of adults and children on ART at 12 months includes patients who have transferred in (and their initiation date is known) at any point from initiation of treatment to the end of the 12-month period and excludes patients who have transferred out during this same period to reflect the net current cohort at each facility.
The denominator: Number of adults and children in the ART start-up groups initiating ART at 12 months prior to the end of the reporting period (The denominator is the total number of adults and children in the (monthly) ART start-up groups who initiated ART at a point 12 months prior to the beginning of the reporting period, regardless of their 12-month outcome. This includes all patients, both those on ART as well as those who are dead, have stopped treatment or are lost to follow-up at month 12. Again, the denominator includes patients that have transferred in (and their initiation date is known) and excludes patients that transferred out during the time period.
The net current cohort is the number of patients in the start-up group plus any transfers in, minus any transfers out.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Disaggregation Age: 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+
Sex: Male, Female, pregnant, non-pregnant</td></tr>
<tr><td>Source</td><td colspan="7">ART Register, PMTCT register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.3.2.1.6 Number of adults and children with HIV infection newly started on ART

Definition	Number of adults and children newly started on antiretroviral therapy (ART)						
Formula	*Number of adults and children newly started on antiretroviral therapy (ART)*						
Interpretation	The indicator measures the ongoing scale-up and up-take of ART programs. This measure is critical to monitor along with number of patients currently on ART in relation to the number of PLHIV that are estimated to be eligible for treatment to assess progress in the programs response to the epidemic in specific geographic areas and population as well as at the national level. Reporting the number of new patients enrolled on ART is critical to monitoring the HIV services cascade, specifically the successful linkage between HIV diagnosis and initiating ART. This indicator includes newly initiated clients at ART clinic and those newly started ART at PMTCT clinic based on option B+. All option B+ implementing PMTCT only sites are expected to report ART new initiation on monthly basis. This indicator permits monitoring trends in initiation but does not attempt to distinguish between different lines or regimens of ART or to measure the cost, quality or effectiveness of treatment provided. These will each vary within and between countries and are liable to change over time.						
Disaggregation	Age: 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+ Sex: Male, Female, *pregnant, non-pregnant*						
Source	ART Register; PMTCT Register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.2.1.7 Proportion of clinically undernourished People Living with HIV (PLHIV) on ART who received therapeutic or supplementary food

<table>
<tr><td>Definition</td><td colspan="7">The proportion of individuals receiving therapeutic or supplementary food among those whose nutritional status was assessed and found to be undernourished</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">No. of clinically undernourished PLHIV on ART who received therapeutic or supplementary food</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">No. of PLHIV on ART who were nutritionally assessed & found to be clinically undernourished.</td></tr>
<tr><td>Interpretation</td><td colspan="7">Provision of nutritional treatment, care and support for those undernourished PLHIVs is important to prevent morbidity and mortality. Under nutrition significantly increases mortality risk for HIV-infected individuals regardless of treatment status Among the clinically undernourished PLHIVs, those with severely undernourished (SAM) cases will receive the Ready -To-Use Therapeutic food(RUTF) and those with moderately undernourished (MAM) cases receive Supplementary food(RUSF) based on availability of supplies.
Severe acute malnutrition(SAM):
Adult: -BMI less than 16 kg/m2.
Pregnant and lactating: -MUAC less than 19 cm
Children: -under 5: MUAC <11cm or WFH (weight for height) or <70% median or <-3 Z score
-5-18 years of age: BMI -for-Age <-3 z-score
Moderate acute malnutrition(MAM):
Adult: BMI 16-18.49 kg/m2
Pregnant and lactating: MUAC 19-23 cm
Children: -under 5: MUAC 11cm to <12cm or WFH (weight for height/ length) <-3 Z or ≥ 70% to < 80% median or ≥ -3Z to < -2Z score
-5-18 years of age: BMI-for-Age between -2 and -3 z-score
Normal/No Undernutrition:
-Ault: BMI⩺18.5, or MUAC ⩺23cm
-Children: WHZ⩺-2 or WHM⩺80%, MUAC ≥ 12 cm,
-BMI-for-Age: 5-18 years ⩺-2 Z- score.
This indicator is the key to measure and work to improve the nutritional intervention service coverage, enabling and supporting adherence and retention to HIV care/ART for improved quality of life.
The indicator enables the scale and coverage of these services to be tracked and monitors the extent to which these services are reaching those that need nutrition service.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Age: <1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+;
Sex: Male/Female
Pregnancy status: Non-pregnant and Pregnant
Nutritional status :MAM, and SAM</td></tr>
<tr><td>Sources</td><td colspan="7">ART register and PMTCT registers, clinical care tally sheet</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.3.2.1.8 Number of persons provided with Post-Exposure prophylaxis

Definition	Number of persons provided with post-exposure prophylaxis (PEP) for risk of HIV infection through occupational and/or non-occupational exposure to HIV.					
Formula	*Number of persons provided with post-exposure prophylaxis (PEP) for risk of HIV infection as per the national guideline.*					
Interpretation	Individuals should be counted only if they have received PEP drugs (in accordance with national protocols).This indicator does not intend to capture the type and quality of PEP services provided. PEP services include first aid, counseling, testing, provision of ARVs, medical care, trauma counseling, linkages with police, and other follow-up and support. Simple monitoring of PEP availability through program records does not ensure that all PEP-related services are adequately provided to those who need them. PEP services for occupational exposure include a comprehensive package of services for occupationally exposed health care workers and patients. PEP services for non-occupational exposure include sexual violence. The indicator can be generated by counting the number of individuals receiving PEP for occupational and non-occupational purposes. And individuals should only be counted if they have received PEP drugs.					
Disaggregation	Exposure type: Occupational, Non-occupational					
Sources	PEP Register					
Frequency of Reporting	**HP**	**HC**	**Hospital**	**WorHO**	**RHB**	**FMOH**
		Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.2.1.9 Percentage of non-pregnant women living with HIV on ART using a modern family planning method

Definition	**Percentage of non-pregnant women living with HIV on ART using a modern family planning method**						
Formula	Number of non-pregnant **women living with HIV on ART** aged 15-49 reporting the use of any method of modern family planning						X 100
	Total number of non-pregnant **women living with HIV on ART** aged 15-49						
Interpretation	This indicator will be used to monitor HIV/FP integration at ART sites. This indicator is a subset of contraceptive prevalence rate, but focuses specifically on HIV-infected women to measure progress in prong 2 ("prevent unwanted pregnancies among women living with HIV") of the four prongs of PMTCT. Preventing unintended pregnancies in women living with HIV is a critical step towards reducing mother-to-child transmission and is a core component of the international standards for a comprehensive approach to PMTCT. Inherent within this indicator is the principle that integrated HIV/FP program activities must respect a client's right to make informed decisions about his or her reproductive life. This means that clients should have access to an appropriate and comprehensive range of contraceptive options; and/or to safer conception/pregnancy counseling depending upon their fertility desire and intentions. All non-pregnant PLHIV women on ART reporting the use of modern contraceptive irrespective of where the service provided will be reported as using modern family planning method.						
Disaggregation	Age: 10-14, 15 - 19, 20–24, 25–49 years Method: - long acting / short acting						
Sources	ART register, PMTCT register, Clinical care tally sheet						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.2.1.10 Proportion of Sexually Transmitted Infection (STI) cases tested for HIV

Definition	Proportion of STI cases tested for HIV in the reporting period						
Formula	*Number of STI cases tested for HIV in the reporting period* / *Total number of STI cases in the reporting period*						X 100
Interpretation	This indicator is intended to provide information on the proportion of STI cases that are tested for HIV. It is helpful to measure the magnitude of the HIV and STI co-infection and to intensify the HIV prevention interventions. It also helps to track the number of STI cases. Additionally, the proportion of STI cases detected can be tracked by dividing the number of detected STI cases by the estimated number of STI cases in the catchment area. Note: Total number of STI cases can be obtained from the monthly OPD and IPD disease reports and STI cases tested for HIV is reported from monthly service delivery report.						
Disaggregation	HIV test result: Positive, Negative Sex: Male, Female						
Sources	*PICT Tally, OPD and IPD registers*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.2.2 Tuberculosis

There are 15 indicators for TB including Drug Resistance (DR) TB; all of which are reported and analyzed quarterly.

C1.3.2.2.1 Tuberculosis case detection rate (all forms)

<table>
<tr><td>Definition</td><td colspan="7">Proportion of all forms of TB (New & relapse) cases detected during a specified time period</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of all forms of TB (New and Relapse) cases detected during the reporting period</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">Estimated number of all forms of TB cases in the population during the same period*</td></tr>
<tr><td>Interpretation</td><td colspan="7">TB case detection rate is one of the key indicators in evaluating the effectiveness of TB control. The highest priority in TB control is the identification of the infectious cases, i.e. patients with bacteriologically confirmed pulmonary tuberculosis (PTB+). However, identification and treatment of all forms of TB cases, i.e. bacteriologically confirmed, and clinically diagnosed pulmonary tuberculosis (PTB-), extra-pulmonary tuberculosis (EPTB) and other previously treated TB cases with unknown and undocumented treatment outcome is important to measure the burden of the disease and to monitor the effectiveness of the TB treatment and the program. TB case detection rate is calculated as the number of detected new all forms of TB cases (including bacteriologically confirmed, clinically diagnosed and all relapse cases) divided by the total number of TB cases estimated to occur in the area during a given time period.

*The denominator is provided by annual WHO-Estimates for the whole country. There may be real differences in TB epidemiology in urban, Agrarian and pastoralist regions, though this indicator tells annual trend in TB detection of the country. However, over and under achievement of this indicator should be interpreted by considering existing factors including burden of the diseases, and other population factors.

NOTE: TB cases diagnosed by Smear microscopy, Culture, or any WHO approved Rapid diagnostics (WRD) such as Xpert MTB/RIF) are classified under Bacteriologically Confirmed TB cases.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Age: 0-4, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65+
Sex: Male, Female
Types of TB : Bacteriologically Confirmed :New and Relapse
: Clinically diagnosed : (New Pulmonary negative TB, all Extra Pulmonary TB)</td></tr>
<tr><td>Data Source</td><td colspan="7">Unit TB Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td></tr>
</table>

C1.3.2.2.2Tuberculosis Re-treatment Rate

<table>
<tr><td>Definition</td><td colspan="7">The Proportion of re-treatment TB Cases (Relapse, Treatment –after -failures Treatment –after -lost to follow up & other previous treated with unknown or undocumented treatment outcome) among new and retreatment TB cases detected in the reporting period</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Total number of retreatment TB cases</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Total number of new and retreatment TB cases registered during reporting period</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator shows the number of cases who are presumed to have DR –TB; and should be sent for drug sensitivity testing (DST). Ineffective treatment or incorrect administration of medication may result in a large proportion of retreatment cases, which points to deficiencies in the medication used and/or non adherence to DOTS on the part of patients and providers. This indicator indirectly reveals the effectiveness of the National TB Program, since under a well-functioning TB control program, retreatment cases should make up a smaller proportion than new cases. Additionally, relapse is more likely in patients with HIV, so the indicator should be interpreted in light of HIV prevalence.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Sex: Male, Female
Type: Treatment after Relapse, treatment after Failure, treatment after lost to follow up cases, other previously treated cases</td></tr>
<tr><td>Source</td><td colspan="7">Unit TB register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td></tr>
</table>

C1.3.2.2.3 Cure Rate for bacteriologically confirmed new PTB cases (CR)

Definition	The percentage of a cohort of new bacteriologically confirmed PTB cases that were cured as demonstrated by bacteriologic evidence in the reporting period.						
Formula	Number of cohort of new bacteriologically confirmed Pulmonary TB cases registered during specified cohort period and cured						X100
	Total number of new bacteriologically confirmed PTB cases registered in the same cohort period						
Interpretation	TB cases recorded as cured must have a negative sputum smear result recorded during the last month of treatment and on at least on one previous occasion during treatment. This indicator measures the program's capacity to retain patients through a complete course of chemotherapy with a favorable clinical result. TB cure rate is the key indicator in evaluating the effectiveness of TB control. TB treatment cure rates can be calculated at all Health Centers and hospitals that provide DOTS services. Cure rate at woredas, Zones, regions, and FMOH can also be calculated by aggregating the reported data from health facilities that provide DOTS. This indicator also measures the presence of strict laboratory follow up of patients by the facility.						
Disaggregation	None						
Source	Unit TB register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.4 Treatment Success Rate (TSR) among bacteriologically confirmed NEW PTB cases

Definition	Proportion of new bacteriologically confirmed PTB cases registered during specific cohort period that successfully completed treatment (cured plus completed treatment).						
Formula	Number of cohort of new bacteriologically confirmed PTB cases registered during the same period of the previous year that were cured plus the number completed treatment						X100
	Total number of New bacteriologically confirmed PTB cases registered during the same cohort period						
Interpretation	Successful completion entails clinical success with or without bacteriological evidence of cure. This indicator measures the program's capacity to retain patients through a complete course of chemotherapy with a favorable clinical result. Treatment success rate measures the effectiveness of the program in settings where it may not be possible to perform a sputum test at the completion of treatment. The TB treatment success can be estimated and monitored at Health Centers and hospitals that provide DOTS services, Woredas, regions, and FMOH.						
Disaggregation	None						
Source	Unit TB Register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.5 Treatment success rate among clinically diagnosed new TB cases

Definition	Percentage of new clinically diagnosed (pulmonary and all EPTB) cases who completed treatment						
Formula	Number of new clinically diagnosed cohort of pulmonary PTB and all EPTB cases registered during the same period of the previous year that completed the treatment						X100
	The total number of new clinically diagnosed PTB and all EPTB cases registered during the same cohort period						
Interpretation	As this group of TB patients accounts for about 50 -60% of all TB cases notified annually, the status of their treatment outcome should be assessed. The only favorable treatment outcome for this group of patients is completing the whole course of anti TB treatment. Thus, this indicator measures the program's capacity to retain all patients through a complete course of chemotherapy with a favorable clinical result. High treatment completion rate indicates the effectiveness of the program as well as completion of TB treatment with favorable clinical result. TB treatment completion rate for new clinical diagnosed pulmonary and all EPTB cases can be estimated at all Health Centers and hospitals that provide DOTS services. Treatment success rate at woredas, zones, regions, and FMOH can also be calculated by aggregating the reported data from health facilities that provide DOTS. Note that New clinically diagnosed TB cases refer to P/negative TB and all EPTB cases (Diagnosed by clinical symptoms and bacteriologically confirmed EPTB)						
Disaggregation	Clinically diagnosed pulmonary ; all EPTB cases						
Source	Unit TB register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.6 Death Rate among new all forms of TB cases

Definition	The percentage of a cohort of new all forms of TB cases registered in a specified period that died during treatment, irrespective of the cause.						
Formula	The number of new all forms of TB cases registered in the same period of the previous year that died during treatment, irrespective of the cause						X100
	The total number of new all forms of TB cases registered during the same cohort period						
Interpretation	This indicator indicates the quality and effectiveness of the treatment. This indicator is significant in the context of HIV prevalence, since a high proportion of HIV-associated TB will result in greater number of deaths. This is one of the important indicators used to evaluate the progress of the country towards achieving the End TB strategy. The target in the END TB strategy is to reduce TB deaths by 35% in 2020 and by 95% in 2035 compared to the 2015 level. TB death rates can be calculated at all Health Centers and hospitals that provide DOTS services, woredas, zones, regions, and FMOH. Currently, we do not have a death vital registration that identifies the causes of death. As a result, we will report all TB deaths irrespective of the cause of death.						
Disaggregation	None						
Source	Unit TB register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.4.2.2.7 Lost to follow up rate among new all forms of TB cases

Definition	The percentage of a cohort of new all form of TB cases (Bacteriologically confirmed, clinically diagnosed) registered in a specified period that interrupted treatment for two or more consecutive months						
Formula	Number of all forms of TB cases registered in the specific cohort period that interrupted treatment for two or more consecutive months / Total number of new all forms of TB cases registered during the same cohort period						X100
Interpretation	This indicator measures the capacity of the program to retain patients through a complete course of chemotherapy. The TB lost to follow up rate can be calculated at all Health facilities that provide DOTS services, woredas, zones, regions, and FMOH. The numerator includes all lost to follow ups of smear positive pulmonary tuberculosis cases, clinically diagnosed pulmonary tuberculosis cases and all forms of EPTB cases. Definition: Lost to follow up means a Tuberculosis patient who was on TB treatment for more than one month and has interrupted treatment for 2 or more consecutive months						
Disaggregation	None						
Source	Unit TB Register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.8 TB case detection contributed by community

Definition	Proportion of TB cases detection contributed by the community out of all TB cases identified during reporting period						
Formula	Number of TB cases detection contributed by the community / Total number of TB cases (all forms) notified during the same period						X100
Interpretation	The indicator is intended to measure the extent of community involvement in TB case detection. Efficient community involvement translates into early detection of cases, one of the main and most effective strategies for reducing the transmission of TB. The community in the context of community TB care refers to trained community volunteers, Health Development Army, health extension workers or, community members supporting patients (treatment supporter) NB: the denominator of this indicator "all forms of notified TB cases" refers to the number of all forms of TB (New + relapse) cases registered in TB unit. The numerator of this indicator doesn't include those presumed TB cases referred by the community for further investigation and diagnosis.						
Disaggregation	None						
Source	Unit TB Register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.9 Treatment success of TB patients who received community-based treatment support

Definition	Proportion of all forms of new TB cases successfully treated (cured plus completed treatment) among those received treatment adherence support at community for at least full course of the continuation phase treatment.						
Formula	Number of cohort all forms of new TB cases registered in the same quarter of previous EFY successfully treated with treatment adherence support by the community in the reporting period / Total number of new patients with TB (all forms) given treatment adherence support at community level for at least full course of the continuation phase in the same period						X100
Interpretation	Evidence has shown that community-based treatment results in treatment success rates comparable to or higher than those of hospital- or facility-based treatment. In settings with high-quality implementation, the vast majority of patients choose community-based treatment. The indicator therefore is intended to measure the scope and quality of implementation of community involvement particularly relating to treatment outcome of patients. The data for calculating this indicator should be reported along with treatment outcome report for the same cohort by the health care workers at the health facility. Note that at least full course of continuation phase refers to patients who took their treatment during intensive phase and continuation phase or during continuation phase only at the community.						
Disaggregation	None						
Source	Unit TB register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.10 Latent TB Infection (LTBI) treatment coverage for under five years children who are contacts of pulmonary TB cases

Definition	Proportion of children aged <5 years who have history of contact with of pulmonary TB cases started on LTBI treatment						
Formula	Number of children aged <5 years who are contacts of pulmonary TB cases on LTBI treatment						X100
	Total number of children aged <5 years who are contact of pulmonary TB cases eligible for LTBI treatment						
Interpretation	Children exposed to contacts of TB case have a high risk of being infected and acquired TB. The risk is particularly high among infants and small children aged less than 5 years. The risk is increased if the index case is bacteriologically confirmed, and if the index patient is the mother of the child. So children who are contacts of pulmonary TB cases should be screened for TB and those children who are eligible (free from TB symptoms at the time of screening) should start and took LTBI treatment for six months. They should be followed up at the TB clinic and information should be recorded both in the TB register and TB contact screening and LTBI treatment follow up register. This indicator provides no information on the number of individuals who adhere to or complete the course of treatment. It is preferable to have TB contact screening and LTBI treatment follow up register to regularly monitor the quality of the service in terms of adherence to LTBI treatment and evaluate the patients after completion of preventive therapy. Therefore, TB contact screening and LTBI treatment follow up register included to TB program. The register is kept in TB Unit to record contact of Drug susceptible and Drug Resistant-TB index cases that comes to TB screening service. This register also serves to monitor treatment adherence of under five children who are enrolled to LTBI treatment (IPT) and as a data source to report TB contact screening coverage.						
Disaggregation	None						
Source	TB unit register , TB contact screening and LTBI treatment follow up register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.11 Drug Susceptibility Test (DST) coverage for TB patients

Definition	Percentage of Pulmonary TB (new and retreatment) cases and presumptive DR-TB cases with documented DST result during the reporting period
Formula	Number of pulmonary TB (new and retreatment) cases and contacts of DR-TB cases with documented DST results
	Total number of Pulmonary TB (new and retreatment) cases and contacts of DR-TB cases in the same period*
Interpretation	Early detection of resistance is intended to ensure an appropriate drug regimen from the start and presumably increase likelihood of success and alleviate amplification of resistance patterns. This indicator measures the availability and access to drug susceptibility testing for at least rifampicin for TB patients registered in TB unit. Culture and drug susceptibility tests (DST) for at least rifampicin are indicated for all eligible clients including:- • New and all retreatment (Relapse, after lost to follow up, after failure of new regimen)pulmonary TB cases, • New pulmonary TB patient cases who remain sputum smear positive at 2nd month of treatment, • Presumptive/confirmed TB cases from congregated settings (prison, homeless shelters, refugee camps, high DR-TB prevalent area), • Presumptive or confirmed TB cases working in Health facilities including support staffs, • Presumptive TB who have contact with confirmed Drug Resistant -TB cases and • Patient in HIV care with symptoms of TB. DST coverage includes results from molecular (e.g. Xpert MTB/RIF) as well as conventional phenotypic DST results. *The denominator includes all notified pulmonary TB (new and retreatment) cases, presumptive TB/DR-TB cases who have contact with confirmed Drug Resistant -TB cases and patient in HIV care with symptoms of TB.
Disaggregation	Age: < 5, 5-14, 15+ Registration group: New, previously treated including relapse, unknown treatment history
Source	Unit TB Register, ART register, Contact register

Frequency of Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.12 Number of Drug Resistant (DR) TB cases detected

Definition	The Number of DR-TB cases detected during the reporting period						
Formula	Number of DR-TB cases detected during reporting period						
Interpretation	Culture and Drug susceptibility tests (DST) for at least rifampicin are indicated in patients presumed to harbor drug-resistant TB strains. This indicator is useful to estimate the burden of DR-TB in the country. Furthermore, it helps national TB control program for planning of DR-TB treatment expansion, forecasting, quantification and procurement of second line drugs (SLDs) and reagents. *NB: All detected DR-TB cases are expected to be reported by health facilities including DR TB Treatment initiating centers where they were first detected. The detection could be completed within the facility or with the support of external laboratory facility (after sample is sent for detection). In order to avoid double reporting of detected cases, treatment initiating centers should not include DR-TB cases detected and referred by other facilities for DR-TB treatment in their DR detection report*						
Disaggregation	Sex: Male ,Female Type: RR only, MDR ,Pre-XDR, XDR Age: <15, >= 15						
Source	Unit TB register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.13 DR-TB cases enrolled on DR TB Treatment (Second Line Drugs)

Definition	Number of DR TB cases started on DR -TB treatment during the reporting period						
Formula/	Number of DR-TB cases registered and started on a prescribed DR-TB treatment regimen during reporting period						
Interpretation	This indicator measures the capacity of programs to enroll DR-TB cases on appropriate treatment. The program manager is responsible for ensuring that all cases in which DR-TB is detected are placed on appropriate treatment in the shortest time possible. Early detection of resistance is intended to ensure a correct drug regimen from the start and lower risks of further amplification of drug resistance. A comparison of the number of enrolled DR-TB cases to those detected gives an indication of access to care. It is a crude indicator given that patients started on treatment during a given period may have been detected prior to the period of assessment.						
Disaggregation	**HIV status**: Positive, Negative , Unknown HIV Status **Registration group**: New, Previously Treated with first line anti TB drug (FLD), Previously Treated with second line anti TB drug (SLD) ,Unknown treatment history **Diagnosis**: Bacteriologically confirmed pulmonary, bacteriologically confirmed extra pulmonary and clinically diagnosed (Pul+EPTB) **Type of Regimen** : Short term regimen : Long term regimen with new drug : Long term regimen without new drug						
Source	DR TB Register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.2.14 Percentage of Drug resistant TB (DR TB) cases with six month interim result

<table>
<tr><td>Definition</td><td colspan="7">A cohort of DR-TB cases for whom six month interim result has been determined (negative, positive, died, lost to follow-up (LTFU), and not evaluated) among those enrolled on second-line anti-TB treatment during the year of assessment</td></tr>
<tr><td>Formula</td><td colspan="6">Number of cohort of DR-TB cases enrolled on second-line anti-TB treatment for whom six month Interim result has been determined during reporting period
Number of DR-TB cases initiated on second-line anti-TB treatment regimen during the same cohort period.</td><td>X 100</td></tr>
<tr><td>Interpretation</td><td colspan="7">Final outcomes of DR –TB patients usually assessed two to three years after enrolment. The Program manager often needs an indication of how patients are being managed before final outcome is determined. This is particularly important when a drug-resistant TB treatment Program starts. Assessing culture conversion (for confirmed pulmonary DR-TB cases) and death by six months is widely used as a proxy of final outcomes. Information on lost to follow up cases by 6 months is helpful.

All patients registered and starting treatment during the period of assessment are included in the calculation. Indicators are measured for cohort cases enrolled nine months prior to the current report period. This gives sufficient time for culture results at month 6 to be issued and retrieved.

N.B: Six month Interim result includes: Positive ,negative, died, LTFU and not evaluated</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Interim outcome: Negative culture result, Positive culture result ,Died, Lost to follow up, not evaluated
Regimen type: short term Regimen, long term regimen</td></tr>
<tr><td>Source</td><td colspan="7">DR-TB Register.</td></tr>
<tr><td rowspan="2">Frequency of</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>quarterly</td><td>quarterly</td></tr>
</table>

C1.3.2.2.15 Final Outcome of DR-TB cases

<table>
<tr><td>Definition</td><td colspan="8">A cohort of DR-TB cases for whom final outcome (cured, completed, failed, died, lost to follow up, not evaluated) has been determined among those
enrolled on DR -TB treatment during the year of assessment</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="7">Number of cohort of DR-TB cases enrolled on second-line anti-TB treatment during reporting period for whom final outcome has been determined</td><td rowspan="2">X100</td></tr>
<tr><td colspan="7">Total number of DR-TB cases enrolled on second-line anti-TB treatment during the same cohort period</td></tr>
<tr><td>Interpretation</td><td colspan="8">This report shows the final treatment outcomes for patients enrolled to DR-TB treatment. Final treatment outcome of cohort of DR TB patients report should be reported based on the timeline recommended for specific regimen type. Generally final outcome of the patient both in short and long term regimen should be compiled at 24 months after the last patient in the cohort starts treatment.
Most of the patients will finished their treatment within the first evaluation periods. However there are patients who will continue their treatment longer than the majority group especially patient enrolled to long term regimen. Therefore, the final outcome of these cohort cases are compiled and monitored twice at 24 and 36 months. Thus written document of the final outcome of DR-TB patients on long term regimen should be recorded in DR-TB Register and reported once again to the National TB program at 36 months.</td></tr>
<tr><td>Disaggregation</td><td colspan="8">Outcome: Cured, Completed, Failed, Died, Lost to follow up, Not evaluated
Regimen type: short term Regimen, long term regimen</td></tr>
<tr><td>Source</td><td colspan="8">DR-TB Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td></tr>
</table>

C1.3.2.3 Leprosy

There are 3 indicators related with Leprosy, all of which are analyzed quarterly.

C1.3.2.3.1 Leprosy case notification

Definition	Proportion of leprosy cases detected among estimated number of leprosy cases in the population						
Formula	Total number of leprosy cases detected during reporting period / Estimated number of population in the catchment area						X10,000
Interpretation	The number of leprosy cases reflects on the performance of the leprosy control program. This indicator is a proxy for leprosy incidence in a given area. It has to be calculated at national and subnational level up to population size of 10, 000. It has also been shown that the number of cases detected increases with the frequency of examinations: very frequent examinations will identify a number of self-healing cases that would otherwise never have come forward. The indicator should be compared with leprosy estimates which are updated annually by Ministry of Health and mapping data of the respective administrative level. Having the total number of relapse cases will reflect the quality of treatment service provided and also the number rises, it indicates magnitude of transmission of leprosy and circulation of drug resistant strain of leprosy.						
Disaggregation	Age: <15, >=15 Sex: Male, Female Type: Paucibacillary, Multibacillary Registration group : New, Relapse , other retreatment (defaulters, others)						
Source	Leprosy register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.3.2 Grade II disability rate among new cases of leprosy

Definition	The proportion of new cases of leprosy with disability grade II at the time of diagnosis.						
Formula	Total number of new leprosy cases having disability grade II at time of diagnosis during reporting period						X100
	Total number of new leprosy cases detected during the same period						
Interpretation	This indicator measures the quality and effectiveness of the case-finding activities. A high disability rate among new cases signals that cases are detected late during the course of the disease. If the rate is high, it is essential to strengthen case-finding activities and develop health education in order to encourage the population to seek treatment before disabilities appear.						
Disaggregation	Age :<15 ;>=15 Sex: Male, Female						
Source	Leprosy register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.3.3 Leprosy treatment completion rate

Definition	Percentage of a cohort of leprosy cases registered in a specified period that successfully completed the treatment.						
Formula	The number of leprosy cases who completed treatment successfully during specified cohort period						X100
	The total number of leprosy cases registered during the same *cohort period*						
Interpretation	Treatment completion rate (both for PB and MB types of leprosy) measures the program's capacity to retain patients through a complete course of chemotherapy with a favorable clinical result.						
Disaggregation	Type: PB, MB						
Source	Leprosy register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.2.4 TB/HIV Indicators

There are 4 HMIS indicators related to TB/HIV co-infection; one is analyzed monthly and three are analyzed quarterly.

C1.3.2.4.1 HIV screening for TB patients

<table>
<tr><td>Definition</td><td colspan="7">The proportion of TB patients enrolled in DOTS who have documented HIV result</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">The number of TB patients enrolled in DOTS who have documented HIV result in the reporting period</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">The total number of TB patients enrolled in DOTS during the same period</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator measures the HIV status among TB patients. TB is the leading cause of morbidity and mortality among people living with HIV. Ensuring that TB patients receive HIV testing and counseling services should be a high priority. Knowledge of HIV status enables HIV-positive TB patients to access the most appropriate HIV prevention, treatment, care and support services. Ideally, all TB patients with unknown HIV status should be offered an HIV test, and preferably within the context of the TB service provider, in which case the HIV test can be recorded in the patient record and the TB register. Patient confidentiality must be maintained. The following point are crucial for effective HIV Screening of TB patients.
1. Where HIV counseling and testing is carried out in a different part of the same facility or even at a distant site, the TB program needs to record when a TB patient is referred for an HIV test and receives the result.
2. TB patients should preferably be tested at the start of TB treatment so that they can benefit from appropriate care throughout TB treatment.
3. The numerator should include all TB patients who were previously known to be HIV-positive (documented evidence of enrolment in HIV care) or their negative documented HIV result from previous testing acceptable to the health care provider (such as performed in the past 3–6 months from a reliable laboratory).
This indicator measures the combined services' ability to ensure that TB patients know their HIV status under program conditions.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Sex: male , female,
HIV status: HIV positive, HIV Negative</td></tr>
<tr><td>Source</td><td colspan="7">Unit TB Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td></tr>
</table>

C1.3.2.4.2 TB Screening for HIV positive Clients

<table>
<tr><td>Definition</td><td colspan="7">The proportion of patients on ART who were screened for TB during the reporting period</td></tr>
<tr><td>Formula</td><td colspan="6">Number of patients on ART whose TB status was assessed during the reporting period
Total number of patients on ART during the reporting period</td><td>X100</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator is intended to provide information on the proportion of HIV positive patients in HIV care and treatment who are screened for TB at last visit. This indicator measures the burden of known TB co-morbidity among people in HIV care. It may be used in drug supply planning for ART drug substitution in people treated for TB.

An increase in this indicator suggests that a higher proportion of HIV patients are being screened for TB and other increased efforts such as: developing a standard screening algorithm, training HIV staff, revising cards/registers, etc. A decrease in this indicator suggests that a lower proportion of PLWH are being screened for TB and change in policy or program. For example, a turnover in trained staff, decreased supervision visits, shortage of screening tools, etc.

Enrolled in care includes all those continuing in care and those newly enrolled during the reporting period. The numerator is taken ART registers by counting the number of patients whose TB status was assessed during the reporting period. Any patients who started on ART during the reporting period should be counted in the ART register.

<u>For ART patients</u>, the denominator is those current on ART during the reporting period. The denominator is taken from ART registers by counting the number of patients with a visit during the reporting period.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Age: - <15, >15
Sex: Male, Female</td></tr>
<tr><td>Source</td><td colspan="7">ART register, PMTCT register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.3.2.4.3 Latent TB infection (LTBI) treatment for HIV positive clients newly enrolled to care

<table>
<tr><td>Definition</td><td colspan="7">Proportion of newly enrolled HIV-positive people started on LTBI treatment during the reporting period</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Total number of people living with HIV newly enrolled in HIV care who are started on treatment for latent TB infection during the reporting period</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">Total number of LTBI treatment eligible HIV positive clients newly enrolled in to HIV care during the reporting period.</td></tr>
<tr><td>Interpretation</td><td colspan="7">IPT is provided to ensure eligible HIV-positive individuals are given treatment for latent TB infection and thus to reduce the incidence of TB in people living with HIV.
People living with HIV should have their TB status assessed at each scheduled visit. Those found not to have evidence of active TB will be offered TB preventive therapy according to national guidelines. All those accepting TB preventive therapy and receiving at least the first dose of treatment should be recorded. This information is recorded in a column in ART registers. The proportion of clients likely to start IPT depends on the health care providers' capacity to rollout active TB using standard screening algorithm and the type of facility at which HIV diagnosis is made.
N.B. Number of clients who will not meet the eligibility criteria for LTBI treatment should be excluded from denominator counting. For example, patients with active TB or on TB treatment at time of enrollment to HIV care should be excluded from the denominator. This indicator can be estimated and monitored at HC and Hospital level, woreda, zone, region and national level on a quarterly basis.
The program should aim to achieve more than 60% in starting isoniazid preventive therapy for the eligible group as this indicator does not capture some group of patients may be started on LTBI treatment lately after reporting period</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Age : <1, 1-4, 5-14, 15+
Sex: Male, Female
Service delivery: ART, PMTCT</td></tr>
<tr><td>Source</td><td colspan="7">ART register, PMTCT register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td></tr>
</table>

C1.3.2.4.4 Anti-Retroviral Therapy (ART) for HIV positive TB patients

<table>
<tr><td>Definition</td><td colspan="8">Number of HIV-positive TB patients who are started on or continue previously initiated ART during their TB treatment, expressed as a proportion of all HIV-positive TB patients</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="7">All HIV-positive TB patients, registered over the reporting period, who Received ART (are started on or continue previously initiated ART)</td><td rowspan="2">X100</td></tr>
<tr><td colspan="7">Total no. of HIV-positive TB patients registered during the reporting Period</td></tr>
<tr><td>Interpretation</td><td colspan="8">This is an outcome indicator to measure commitment and capacity of TB services to ensure that HIV-positive TB patients are able to access ART, measure the degree to which health-care providers encourage ART as a part of routine care, and the success of TB and ART health services in referring, managing and tracking registered TB patients eligible for ART (i.e. the strength of the referral process).

In settings where TB patients are referred to chronic HIV care unit or other care services to be assessed and started on ART, a system must be established to ensure that the TB Program is informed of the outcome of the referral, i.e. whether or not TB patients are started on ART or not. The information on outcome of the referral should be recorded in the TB register (TB/HIV columns). This is important not only for Program management but also for individual patient care. TB Program personnel need to be aware of a TB patient starting on ART so that they can manage drug reactions and interactions appropriately. Note that irrespective of the CD4 cell count, ART should be provided as soon as possible to HIV positive TB patients and no later than eight weeks after TB treatment begins. It should be given as a matter of emergency within the first two weeks of TB treatment among HIV-positive TB patients with profound immune-suppression (i.e.CD4 count < 50 cells/mm3).

ART significantly improves the quality of life, reduces morbidity, and enhances the survival of people with advanced HIV infection or AIDS. HIV-positive TB patients are one of the largest groups who are likely to benefit from ART, and efforts should be made to identify and treat those who are eligible.
This indicator measures the extent to which HIV-positive TB patients are provided with ART during TB treatment. TB and HIV programs should aim to achieve TB treatment and ART in more than 90% of HIV positive TB patients. Therefore, reconciliation of the information between the TB and ART registers at facility level should be done regularly.

However, this indicator may miss patients diagnosed towards the end of reporting period whose ART treatment status may not be updated in the TB registers. Also, this indicator does not capture timeliness of ART initiation.</td></tr>
<tr><td>Disaggregation</td><td colspan="8">Sex: Male , Female
Age: 0-4, 5-14, 15+
Previously known HIV Positive; newly tested HIV-positive</td></tr>
<tr><td>Source</td><td colspan="8">Unit TB register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td></tr>
</table>

C1.3.2.5 Malaria

There are 5 indicators related to malaria; 3 indicators are analyzed monthly and 2 are analyzed annually.

C1.3.2.5.1 Morbidity attributed to malaria

Definition	Malaria cases per 1000 population						
Formula	Number of new malaria OPD + IPD cases (All malaria cases, of any species, should be included – whether clinical or laboratory diagnosis.)						X1,000
	Total population in the catchment area						
Interpretation	Malaria case counts are quite sensitive and specific indicators for probability of an epidemic. According to EPC (Epidemic Prevention and control) guideline, malaria cases should be plotted and reviewed weekly. When the epidemic threshold is reached, the higher level should be notified and more frequently monitoring may be required. Followed over years, the trends in morbidity should show the effects of improved prevention and control efforts. Compared across geographic locations, malaria morbidity can help identify priority areas for intervention. Disaggregated by species, the morbidity patterns can suggest the emergence of increasing drug resistance.						
Disaggregation	Age: 0-4, 5-14 >=15; Sex: Male, Female; Diagnosis: clinical, laboratory confirmed (*P. falciparum* /*P. vivax/Mixed*)						
Source	Outpatient register, IPD register, Emergency register, disease tally (for HPs)						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.2.5.2 Facility-based malaria deaths

Definition	Percentage of all deaths due to malaria (according to confirmed malaria diagnosis)						
Formula	*The total number of all inpatient deaths with laboratory-confirmed (RDT/Microscopy) malaria* / *Total number of deaths reported in the health facilities*						X100
Interpretation	This indicator indicates the contribution of malaria to the total deaths in the facility. Further investigation should be done if the percentage of malaria deaths among the total deaths is increasing.						
Disaggregation	Age: 0-4, 5-14 >=15 Sex: Male, Female						
Source	IPD Register, Emergency register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.2.5.3 Malaria positivity rate

Definition	Percentage of slides or rapid diagnostic tests found positive among all slides and rapid diagnostic tests performed.						
Formula	*Number of slides or RDT positive for malaria* / *Total number of slides or RDT performed for malaria diagnosis* X100						
Interpretation	The slides or RDT positivity rate assesses the proportion of slides/RDT positive for malaria among slides or RDT from patients with fever. The slide or RDT positivity rate is usually computed for a specified period of case detection activities. In areas with unstable malaria, an increasing slide or RDT positivity rate by **50%** is one of the warning signs of a possible epidemic.						
Disaggregation	Age:0-4, 5-14, 15+ Sex: Male, Female						
Source	Laboratory register, Service delivery tally (for HPs)						
Frequency of Reporting	HP	HC/Clinic	Hospital	Wrho	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.2.5.4 Proportion of targeted Households (HH) covered with Long Lasting Insecticide Treated Bed Nets (LLIN) in the last 12 months

Definition	Proportion of targeted HHs covered with LLINs in the last 12 months						
Formula	Number of targeted HHs received at least one LLIN in the last 12 months in targeted areas						X100
	Total number of HHs that need LLIN in the last 12 months in targeted areas						
Interpretation	Insecticide-treated nets are one of the principal strategy for preventing malaria. Insecticide-treated nets have been shown to reduce malaria-related morbidity and mortality in areas with high and moderate endemicity. Although this indicator is meant to be the one, among the service delivery indicators, it measures early replacement and addressing of the population in need of LLIN, it should not be equated with indicators which are to be measured through household surveys. One bed net should serve 3-5 years if proper handling of LLINs exist in that household. Proper utilization of LLITNs can reduce under 5 year children mortality from all causes by about 20%.						
Disaggregation	None						
Source	Administrative record						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Annually	Annually*		Annually	Annually	Annually	Annually

*N.B. HC aggregates reports received from HPs & sends to WorHO.

C1.3.2.5.5 Proportion of unit structure covered by Indoor residual spraying

Definition	Proportion of unit structures in IRS targeted areas that were sprayed in the last 12 months.						
Formula	*Number of* unit structures *sprayed* / *Total number of unit structures in the target area for IRS*						X100
Interpretation	This indicator is directly related to operations: It indicates the proportion of houses sprayed with insecticide among targeted houses and is useful to increase the level of prevention of malaria in the entire population. This indicator requires program-level data to be collected about each house sprayed during each spraying event in the target area. Careful attention should be given to identify houses not considered as part of the target area so that they can be excluded from the calculation. Ideally, (1) all dwellings and relevant structures in the target areas should be sprayed; (2) all sprayable surfaces in the dwelling or structure should be covered; (3) insecticide application should be uniform across surfaces; and (4) spraying should be done at intervals consistent with the manufacturer's guidelines for specific insecticides. Collectively, these ideal activities comprise the level of adequacy referred to above. N.B on average one HH is equivalent to 1.5 unit structures						
Disaggregation	None						
Source	Administrative record						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
				Annually	Annually	Annually	Annually

C1.3.2.6 Neglected tropical diseases (NTDs)

There are 2 indicators for neglected tropical diseases; both of which are analyzed quarterly.

C1.3.2.6.1 Therapeutic Coverage for preventive chemotherapy diseases (PCT)

Definition	Proportion of individuals, expressed as a percentage, in a targeted population who are treated by preventive chemotherapy Medicines.						
Formula	Number of individuals who are treated by Zithromax or TEO for Trachoma Total number of eligible population living in the catchment area. Number of individuals who are treated by Ivermectin for Onchocerciasis. Total number of eligible population living in the catchment area. No. of individuals who are treated by Ivermectin & Albendazole for lymphatic Filariasis. Total number of eligible population living in the catchment area Number of individuals who are treated by Praziquantel for Schistosomiasis. Total number of eligible population living in the catchment area. No. of individuals treated by Mebendazole or Albendazole for Soil transmitted helminthiasis. Total number of eligible population living in the catchment area						X 100
Interpretation	This indicator counts the number of persons who are treated by MDA drugs at community/school level. The indicator issued to evaluate the number of persons who ingested MDA drugs among the total population who are eligible to take the drugs. .The indicator can be used at all levels to report therapeutic coverage quarterly and annually. It evaluates MDA drug coverage of five diseases (Trachoma, Onchocerciasis, lymphatic Filariasis, schistosomiasis and STH) which are amenable to preventive chemotherapy and targeted for elimination by 2020 as per the national and global NTD strategies.						
Disaggregation	By disease type: Trachoma, Onchocerciasis, Lymphatic Filariasis, Schistosomiasis and Soil transmitting helminthes (STH)						
	Age: • Trachoma: < 5, 5-14, >=15 • Schistosoma, Onchocerciasis: Lymphatic filariasis: 5-14, >=15 • STH: 5-14, 15-19, >=20 Sex: Male and Female						
Source	Integrated MDA register, Tally sheet or Family folder						
Frequency of reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Quarterly	Quarterly		Quarterly	Quarterly	Quarterly	Quarterly

*N.B.HC aggregates reports received from HPs & sends to WorHO.

C1.3.2.6.2 Number of visceral leishmaniasis cases treated

Definition	Number of visceral leishmaniosis patients treated						
Formula	Total number of visceral leishmaniosis cases treated						
Interpretation	Ethiopia is one of the six high burden countries for visceral leishmaniosis and highest reported VL/HIV co infection rate globally. National disease risk mapping showed that 3.3 million people are at risk. VL is the leading cause of hospital admission and death in facilities found in VL endemic areas. The disease is epidemic prone and overlaps with malaria on its endemicity and occurs in remote and low land part of the country affecting mainly the young and productive population group. It requires intensive inpatient management which otherwise is 100% fatal. So that this indicator will help to follow the reduction in case fatality rate of VL as indicated in HSTP and NTD multiyear strategic plan. The indicator also helps to monitor the trend of visceral leishmaniosis cases and number of individuals treated for VL among diagnosed patients in an effort towards the implementation of the national and global leishmaniosis control strategy. The indicator will also help to continuously monitor VL/HIV co infection rate which are potential reservoirs for VL transmission and treatment failure/or drug resistant. The indicator can be used at facility levels to report VL case diagnosed and treated on quarterly basis.						
Disaggregation	Age: <5, 5-14, >=15, Sex: Male, Female By VL type: Primary VL, Relapse VL, Post Kala-azar dermal leishmaniosis (PKDL) By treatment outcome: Cured, Defaulted, Death, Treatment failure, By HIV status: Reactive, non-Reactive						
Source	Leishmaniasis register						
Frequency of reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
Frequency of reporting		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C1.3.3 Non Communicable diseases

There are 3 indicators in the non-communicable disease category; 2 are analyzed monthly and 1 is analyzed quarterly.

C1.3.3.1 Proportion of women age 30-49 screened for cervical cancer with visual inspection with acetic acid (VIA)

<table>
<tr><td>Definition</td><td colspan="7">Proportion of women between ages 30 – 49 screened with VIA for cervical cancer</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of women age 30-49 screened with VIA for cervical cancer</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Total number of women age 30-49 within the catchment area</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator is intended to monitor trends in provision of counseling and screening services for cervical cancer. Data should be generated by counting the total number of individuals who received screening service at service delivery points (family planning clinics) from health facilities providing the service. Recent developments in technologies adapted to low-resource settings make screening and treatment of cervical pre-cancer lesions feasible and highly cost-effective for all countries.
Early detection and treatment of precancerous lesions can result in massive improvements of survival, and are especially important in developing countries where access to expensive cancer treatment is limited.
The service is provided integrated with family planning service and during the service cervical intake form will be used to document the required information during screening.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">By outcome: Normal cervix
Precancerous lesion
Suspicious for cervical Cancer</td></tr>
<tr><td>Source</td><td colspan="7">Cervical Cancer Screening and Treatment Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

C1.3.3.2 Percentage of women tested positive with acetic acid (VIA) and treated for cervical lesions

Definition	Percentage of treated cervical lesions						
Formula	Number of women 30 - 49 years with cervical lesion treated / Number of women 30 - 49 years with identified cervical lesion						X 100
Interpretation	This indicator permits treatment of Early detection and treatment of precancerous lesions with cryotherapy. This can result in massive improvements of survival, and are especially important in developing countries where access to expensive cancer treatment is limited.						
Disaggregation	**Outcome:** Precancerous lesion treated						
Source	Cervical Cancer Screening and Treatment Register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

C1.3.3.3 Cataract surgical rate

Definition	Annual number of cataract operations performed per million population						
Formula	Number of Cataract surgeries performed / Total population in the catchment area						X1,000,000
Interpretation	The CSR is a performance indicator: it indicates the extent of the effort to control cataract blindness and allows easy comparison between countries and regions. It is also an indicator for the availability, accessibility and affordability of cataract services. The CSR does not address the quality of surgery nor the proportion of the cataract problem covered. This Indicator helps to scale up of the service based on performance.						
Disaggregation	None						
Source	OR register						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

C2. Community Ownership

There are three indicators in this category: 1 is analyzed monthly and 2 are analyzed quarterly.

C2.1 Proportion of Model households

Definition	Proportion of households that are currently model						
Formula	Number of currently model households in the catchment / Total number of households in the catchment area						X100
Interpretation	This indicator measures the extent to which households are producing their health by implementing the health extension program components. Households graduate after completion of HEP training and implementing all the HEP components in a given catchments area. Currently Model House Holds = (Previously graduated + Newly graduated) – Drop out						
Disaggregation	Previously graduated Newly graduated Drop out						
Sources	Family Folder/Administration record						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Quarterly	Quarterly*		Quarterly	Quarterly	Quarterly	Quarterly

*N.B.HC aggregates reports received from HPs & sends to WorHO

C2.2 Proportion of functional 1 to 5 networks

<table>
<tr><td>Definition</td><td colspan="7">Proportion of functional 1 to 5 networks in the kebele</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6"># of functional 1 to 5 networks</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">Total expected number of 1to 5 networks</td></tr>
<tr><td></td><td colspan="7">This indicator measures the number of functional 1 to 5 network out of expected number of 1 to 5 networks in the catchment area. A 1 to 5 network is said to be functional if the following minimum criteria are fulfilled: Received training from HEWs based on the family health guide, has individual and team plan, meets regularly as per the guideline (at least once a week), Reports regularly to development team, actively discuss the health issues.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">Administration record</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly*</td><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

*N.B.HC aggregates reports received from HPs & sends to WorHO

C2.3 Proportion of graduated Model Kebeles

<table>
<tr><td>Definition</td><td colspan="7">Proportion of kebeles graduated as model kebele among existing total kebeles</td></tr>
<tr><td>Formula</td><td colspan="6">Number of graduated Model Kebeles
Total number of Kebeles</td><td>X100</td></tr>
<tr><td>Interpretation</td><td colspan="7">A Kebele is labeled as model based on preset criteria and which is further verified by woreda verification team.
The criteria’s are
• 85% and above households in the kebelle should be model by health extension packages
• The kebele should open defecation free
• The kebele should be home delivery free
• Full (100%) implementation of community based health insurance.
• All schools in the kebele should be model based on the services provided at schools with consideration of the level of school.
• Deworming & other immunization services coverage should be greater than 90%.
• As per the standard separate latrine facility for male and female with proper hand washing facility and the school compound should be free of deifications.
• As per the standard safe water supply in school compound.
• Proper solid and liquid waste management system and the compound should be clean
• Availability of fully equipped first aid kit for primary care of emergency cases.
• Availability of active club activities in school like, HIV, Malaria, hygiene and sanitation, reproductive clubs in school.
With collaboration of health extension workers, the school should have active role in health activities like, reproductive health, HIV Prevention and control, hygiene and sanitation activities, distribution of health learning materials and in the process of health screening.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">Administrative record</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Quarter</td><td></td><td>Quarter</td><td>Quarter</td><td>Quarter</td><td>Quarter</td></tr>
</table>

F1. Resource Mobilization and Utilization

There are 4 indicators for Resource Mobilization and Utilization, all of which are analyzed annually.

F1.1 Proportion of Government budget allocation on health

Definition	Total government budget on health as a percentage of total government budget						
Formula	*Total government Budget allocated to health* / *Total Government budget* *X100*						
Interpretation	This indicates the share of health budget as a proportion of total government budget as it is indicated in the annual government's budget proclamation (note that in the calculation it is important to take the adjusted budget figure as that is the final figure known by finance offices at all levels of administration).This indicator shows the relative share of health sector budget to the total budget. It illustrates the commitment of the government to the health sector.						
Disaggregation	Government , Internal revenue and Aid						
Sources	The financial data from MOFED/BOFED/WoFED						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
				Annually	Annually	Annually	Annually

F1.2 Health budget utilization

Definition	Proportion of Health budget utilization to allocation.						
Formula	*Total Health budget utilized* / *Total Health Budget allocated*						*X100*
Interpretation	It indicates the capacity to utilize the budget allocated (including government allocation, Aid and internal revenue) in a fiscal year.						
Disaggregation	Government, Aid , Internal Revenue						
Sources	*Health institution financial data and Administrative reports*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Annually	Annually	Annually	Annually	Annually	Annually

F1.3 Share of internal revenue generated of total health budget

<table>
<tr><td>Definition</td><td colspan="7">Proportion of the total revenue generated by health facility to the total allocated health budget</td></tr>
<tr><td>Formula</td><td colspan="6">Total internal revenue generated
Total health budget allocated for the health facility</td><td>X 100</td></tr>
<tr><td>Interpretation</td><td colspan="7">This indicator shows the availability of locally generated revenue that can be used to supplement government resources for quality improvement. Locally generated revenue is not intended to replace government funds, but to supplement them. (Note that in the interpretation of the ratio one should look into the trend of government budget allocation by way of block grants.)</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Sources</td><td colspan="7">Administrative and financial Records (The revenue generated in the respective health facilities are collected monthly from financial records at Health Centers and hospitals. Information on health budget can also be found at each level)</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>Health post</td><td>Health Center</td><td>Hospital</td><td>WoHO</td><td>ZHD</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Annual</td><td>Annual</td><td>Annual</td><td>Annual</td><td>Annual</td><td>Annual</td><td>Annual</td></tr>
</table>

F1.4 Proportion of Reimbursed amount out of total fee waiver and exemption

Definition	Proportion of patient fees waived and exempted that were reimbursed						
Formula	Amount of fee waiver and exemptions reimbursed / Amount of fee waiver and exemption reimbursement requested *X100*						
Interpretation	This indicator measures whether local authorities reimburse health facilities for services provided to poor and vulnerable people. The total fee waiver or exemption reimbursement requested and reimbursed amount are collected quarterly from financial records at Health Centers and hospitals. It is reviewed quarterly at these facilities and at woreda, region, and federal levels. (Note that in the reporting of this indicator there will be a time lag of a quarter, *i.e*. results reported in quarter 2 will reflect quarter 1).						
Disaggregation	Requested: Exemption cost and fee waived cost and health insurance cost Reimbursed: Exemption cost and fee waived cost and health insurance cost						
Sources	*Financial records at health centers and hospitals and Administrative reports*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

F2. Health Insurance

There are three indicators related to health insurance services. One of the indicators is analysed monthly and 2 of them are analyzed quarterly

F2.1 Membership Enrollment rate for CBHI

Definition	Proportion of HHs enrolled in CBHI woreda from those eligible					
Formula	Number of HHs enrolled in CBHI woreada Total number of eligible households for membership in the woreda					*X 100*
Interpretation	This indicator deals with the proportion of households enrolled as CBHI members in a woreda for a given year from the eligible ones. CBHI membership in Ethiopia is on voluntary basis and households who reside in the woreda and engaged in the informal sector are eligible for membership. Formal sector employees who reside in the woreda are not eligible for membership. Currently CBHI is mainly implemented in rural areas with few startups in urban settings. Higher enrollment rate is always desired as it means more members in the CBHI scheme and larger risk pooling. Larger risk pooling is very important for the financial sustainability of the insurance scheme.					
Disaggregation	By type of member: • Indigent member • Paying member					
Sources	Woreda CBHI scheme					
Frequency of Reporting	HHC	Hospital	WoHO	ZHD	RHB	FMOH
			Quarterly	Quarterly	Quarterly	Quarterly

F2.2 Revenue to Expenditure Ratio (for CBHI)

<table>
<tr><td>Definition</td><td colspan="6">The ratio of total revenue of the CBHI to total payment made to health facilities</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Total revenue of the CBHI</td></tr>
<tr><td colspan="6">Total payments made to health facilities</td></tr>
<tr><td>Interpretation</td><td colspan="6">This indicator refers to the amount of total revenue of the CBHI scheme in a given year divided by the total payment made to health facilities for service provided to members. Total revenue here refers to the contribution fee collected from paying members, targeted subsidy for indigents, and general subsidy allocated for woreda CBHI scheme by the federal government. The EHIA through MoH allocates 10% general subsidy (a kind of matching fund) for CBHI schemes based on the premium they collect in a given year. If the ratio is below one it shows that there is a deficit.

Health Institutions should get the regular Insurance related reports from their respective CBHI offices.

Note: If the ratio is less than 1, it shows that the agency is going to be under financial deficiet and further investigation</td></tr>
<tr><td>Disaggregation</td><td colspan="6">None</td></tr>
<tr><td>Sources</td><td colspan="6">Woreda CBHI scheme</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>WorHO /WoAdmin</td><td>ZHD</td><td>EHIA Branch</td><td>RHB</td><td>EHIA HO</td><td>FMOH</td></tr>
<tr><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td><td>Quarterly</td></tr>
</table>

F2.3 Per capita health service utilization (for CBHI beneficiaries)

Definition	The number of visits CBHI beneficiaries made to health facilities within a year						
Formula	Total number of CBHI Members visit made to HF within a year / Total number of beneficiaries with in a catchment area						X100
Interpretation	This indicator refers to the number of visit CBHI beneficiaries made to health facilities in a given year divided by the number of beneficiaries in that particular year. It indicates the health seeking behavior of the CBHI beneficiaries. It is known that health insurance provides protection against financial risk while seeking health services by reducing out of pocket payment. This financial risk protection is believed to improve health service utilization rate by the insured, which otherwise would be left without any option. Higher rate of health service utilization rate is a desired outcome. The WHO recommendation per capita visit of 2.5 to 3 in a year. Health Institutions should get the regular Insurance related reports from their respective CBHI offices.						
Disaggregation	None						
Sources	Woreda CBHI scheme						
Frequency of Reporting	HP	HC	Hospital	WoHO	ZHD	RHB	FMOH
			Monthly	Monthly	Monthly	Monthly	Monthly

P1.Quality of health Services

There are eight indicators for quality of health services. All the indicators related to quality of health services are analyzed on a monthly basis.

P1.1 Outpatient attendance per capita

Definition	Total number of outpatient attendances at all types of health facilities						
Formula	*Number of outpatient visits* Population of the catchment area						
Interpretation	Health service utilization reflects the interaction between demand and supply of outpatient care. The use of outpatient services is inversely related to certain barriers that may be physical (distance), economic (cost to patient), cultural (low awareness and health care seeking behavior) or technical (poor quality of health care). Every patient or client who visited the health facility should be included in OPD attendance report. Patients who attend the following services should be INCLUDED in the outpatient count: • General outpatient clinics • Specialty outpatient clinics (including Dental, Ophthalmic and Psychiatry) • TB clinics • ART clinics • VCT clinics • MCH clinics (EPI, IMCI, well baby clinics, ANC, PNC, family planning etc) • Private wing clinics • Patients attending the emergency department • Patients who attended services at dressing and injection room						
Disaggregation	Age; Sex						
Source	Service delivery tally (for HP)/Central Card Room Register and OPD attendance tally						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

P1.2 Admission rate

<table>
<tr><td>Definition</td><td colspan="7">The number of patients admitted (including those transferred from another health facility) during the reporting period per 1,000 population.</td></tr>
<tr><td>Formula</td><td colspan="6">Number of inpatient admissions
Population in the catchment area</td><td>X1,000</td></tr>
<tr><td>Interpretation</td><td colspan="7">Admission rate reflects the interaction between demand and supply of inpatient care. Like outpatient service utilization, admission rate is inversely related to certain barriers that may be physical (distance), economic (cost to patient), cultural (low awareness and health care seeking behavior) or technical (poor quality of health care).
INCLUDE all patients admitted to:
• Wards (all patients under the care of the inpatient case team should be included, even if they are admitted to a trolley or stretcher, i.e. do not have a bed)
• Clinical facilities (e.g. intensive care units, ophthalmic units)
• Neonatal units
• Private wing beds
The following should be EXCLUDED:
• Patients who are seen at emergency department will not be counted. These patients will be counted as admission if they are admitted at any of the wards.
• Patients in day units/day surgery
• Laboring and delivering mothers who are discharged directly from the delivery room (i.e. who are NOT admitted to an inpatient bed)
• Healthy babies who are born in the hospital or who accompany their mother
Note: If the patient is admitted from any ward to ICU should not be counted</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Source</td><td colspan="7">IPD register, ICU register

Private wing registration/admission and discharge book</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

P1.3 Bed occupancy rate

<table>
<tr><td>Definition</td><td colspan="7">Percentage of occupied beds during the period under review</td></tr>
<tr><td>Formula</td><td colspan="6">Total length of stay (in days)
(Number of beds available) x (Number of days in period)</td><td>X100</td></tr>
<tr><td>Interpretation</td><td colspan="7">Bed occupancy rate (BOR) is a measure of the efficiency of inpatient services. Hospitals are most efficient at a BOR of 80 – 90%. If the BOR is lower, resources may be wasted. If the BOR is higher than 90% there is a danger of staff burnout and of over-crowding during sudden increases in demand for services. Knowledge of the BOR helps hospitals to identify inefficiencies in service delivery in order to investigate and take action to address this, and also to plan for future staff or other resource requirements. An operational (inpatient) beds EXCLUDED: Beds in emergency room or emergency gynecology departments Beds in day units/day surgery Temporary beds, e.g. stretchers or trolleys Observation or recovery beds in the emergency department, operating room or outpatient department, Labour suite beds, e.g. delivery beds/couches, examination beds Beds for non-patients (e.g. beds for mothers accompanying children), Beds/cots for healthy babies who are born in the hospital or accompany. The length of stay should ONLY be counted for the actual reporting period. If a patient was admitted during a previous reporting period their length of stay during that previous reporting period should not be counted. INCLUDE: Patients admitted to public facility , private wing</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Source</td><td colspan="7">Inpatient admission / discharge register.</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

P1.4 Average length of stay

Definition	The average length of stay (in days) of patients in an inpatient facility during a given period of time						
Formula	*Total length of stay (in days)* *Number of inpatient discharges*						
Interpretation	ALOS reflects the appropriate utilization of inpatient services. By monitoring length of stay, hospitals can assess if patients remain in hospital for longer than is necessary, perhaps due to non-clinical reasons, and investigate further if required. NB: If the patient is directly discharged / transferred to home or other facility from ICU the length stay should be counted.						
Disaggregation	None						
Source	Inpatient admission / discharge register.						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

P1.5 Mortality rate in Intensive Care Unit (ICU)

<table>
<tr><td>Definition</td><td colspan="7">Percentage of patients who died in the ICU</td></tr>
<tr><td>Formula</td><td colspan="5">Number of deaths in ICU
Total number of patients admitted to ICU</td><td colspan="2">X100</td></tr>
<tr><td>Interpretation</td><td colspan="7">Intensive Care Unit (ICU) service is a new initiative in the Ethiopian health care delivery system. The ICU has to have at least 4-6 bed, along with cardiac monitors for each of the beds, and mechanical ventilators. The indicator helps to monitor the quality of care in ICU. Even though the ICU number of beds in hospitals is few, it consumes 8% to 20%of the hospital’s budget. The mechanical ventilator machine has its own side effects including machine related baro- trauma, infections, machine failure which is associated with serious effect to the patient if not getting appropriate monitoring and evaluation.
Though there is no known data about specific death related to mechanical ventilator, according to WHO recommendation, total mortality rate in ICU for developing countries is between 30% up to 35 percent. If it is more than 35 %, it needs investigation. N.B it doesn’t include Neonatal ICU death.
Death with mechanical ventilation means death of a patient after mechanical ventilation was provided with endotracheal intubation.
Death without mechanical ventilation is death of a patient without being provided with a mechanical ventilation using endo tracheal intubation.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Death With Mechanical ventilator
Death Without Mechanical ventilator</td></tr>
<tr><td>Source</td><td colspan="7">ICU register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td></td><td></td><td>Hospital</td><td>Woreda</td><td>Zonal HO</td><td>RHB</td><td>MOH</td></tr>
<tr><td></td><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

P1.6 Emergency unit/department mortality

<table>
<tr><td>Definition</td><td colspan="7">The proportion of deaths in emergency unit/department from patients who were alive on arrival</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="5">Total number of deaths in emergency unit</td><td colspan="2" rowspan="2">X100</td></tr>
<tr><td colspan="5">Total number of emergency room attendances</td></tr>
<tr><td>Interpretation</td><td colspan="7">The emergency unit /department mortality is a measure of the quality of care provided by the emergency unit/department of the health facility. A high mortality could indicate that the facility is providing poor quality emergency care with unnecessary patient deaths against national target. Nationally emergency room mortality should be less than 0.6 %.

N.B A Patient who already dead on arrival should be excluded in the indicator. Dead on arrival means when the patient arrives to the triage area and confirmed dead by the physician</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Sex: Male/Female
Age: <15 years, 15+ years</td></tr>
<tr><td>Sources</td><td colspan="7">Emergency Register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td></td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

P1.7 Ambulance service response rate

<table>
<tr><td>Definition</td><td colspan="7">Percentage of community Ambulance requests for whom ambulance was dispatched</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of ambulance requests for whom ambulance was dispatched</td><td rowspan="2">X100</td></tr>
<tr><td colspan="6">Total number of community requests made for ambulance service</td></tr>
<tr><td>Interpretation</td><td colspan="7">Pre-facility emergency care and ambulances service is an emergency care outside of a health facility or at the scene and continuing care during transportation with ambulance and ends with proper hand over of patient or victim to respective health facility. When it is accessible to the community, it contributes for reduction of deaths and disability due to acute illness and severe injuries. A high response rate indicates the services availability, and adequacy of the number of ambulances. Low response shows demand and capacity gap. The target is more than 90%of actual emergency call has to get ambulance dispatch for the service</td></tr>
<tr><td>Disaggregation</td><td colspan="7">This indicator is disaggregated by:
Number of Ambulance dispatched (With EMT, Without EMT)
With case (labor and delivery , Road Traffic Accident and other)</td></tr>
<tr><td>Source</td><td colspan="7">Ambulance service register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC</td><td>Hospital</td><td>WoHO</td><td>ZHD</td><td>RHB</td><td>MOH</td></tr>
<tr><td></td><td></td><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

P1.8 Referral rate

<table>
<tr><td>Definition</td><td colspan="7">Proportion of patients who are referred to another health facility</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of referred patients (emergency + non- emergency)</td><td rowspan="2">X 100</td></tr>
<tr><td colspan="6">Total number of patients/clients seen in the health facility</td></tr>
<tr><td>Interpretation</td><td colspan="7">A referral is the process in which a health worker at one level of the health system, having insufficient resources (drugs, equipment, skills) to manage a clinical condition, seeks the assistance of a better or differently resourced facility at the same or higher level to assist in, or take over the management of, the client's case. An effective referral system ensures a close relationship between all levels of the health system and helps to ensure people receive the best possible care closest to home.

Referral rate is an indicator of quality of health care. Referrals are systems that are important for clients to receive the proper care they need in another health facility. A high number and proportion of referrals made from a health facility to another health facility may indicate that the health facility is not providing all services required, whereas a low number and proportion of referrals might indicate that the health facility is not following referral guidelines and is treating patients beyond their capacity. Knowing the rate of referrals helps to plan for future service provision.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Emergency and non- emergency</td></tr>
<tr><td>Sources</td><td colspan="7">Referral register</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

P2. Pharmaceutical Supply and Services

There are four indicators related to pharmaceutical supply and services. Two of them are analyzed monthly and two analyzed quarterly

P2.1 Essential drugs availability

Definition	The number of months in which a tracer drug was available averaged over all tracer drugs during the month	
Formula	$\frac{\sum (\text{tracer drugs x months available})}{\sum \text{tracer drugs} \times \sum \text{total number of months in time period}}$	X100
Interpretation	Essential drugs should always be available. Essential drug availability is the proportion of months in the time period under consideration for which a given tracer drug was available when needed. The availability can be averaged over several tracer drugs to give a general picture of availability. The type of essential drug that needs to be available differs by type of health facility. The following drugs are those essential drugs that are selected as tracers for essential drug availability: For Health Posts: • Amoxicillin dispersable tablet • Oral Rehydration Salts • Zinc dispersible tablet • Gentamycin Sulphate injection • Medroxyprogesterone Injection • Arthmeter + Lumfanthrine (Coartem) tablet (any packing) • Ferrous sulphate + folic acid • Implanon NXT For health centers and hospitals: • Amoxicillin dispersable tablet • Oral Rehydration Salts • Zinc dispersible tablet • Gentamycin Sulphate injection • Co-trimoxazole • Magnesium Sulphate injection • Oxytocin injection • Enalapril tablets • Medroxyprogesterone Injection • Glibenclamide tablet • Adrenaline injection • Pentavalent vaccine • Glucose 40%	

<table>
<tr><td></td><td colspan="7">

Dextrose in normal saline
Ferrous sulphate + folic acid
Ciprofloxacin tablet
Ceftriaxone injection
Hydralazine injection
TDF/3TC/EFV adult
RHZE/RH
Tetanus Anti toxin (TAT)
Tetracycline eye ointment
Arthmeter + Lumfanthrine (Coartem) tablet (any packing)
Artesuante injection
Implanon NXT

Any month in which a drug unavailability is experienced, even for only 1 day, is reported as a month in which the drug was unavailable when needed.
</td></tr>
<tr><td>Disaggregation</td><td colspan="7">None</td></tr>
<tr><td>Source</td><td colspan="7">This information is available from records kept at the facility drug dispensary</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospitals</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

P2.2 Supplier fill rate

Definition	The percentage of all items ordered by health facility from a distribution source (PFSA , or private supplier) over a period that are filled correctly up to 80% in terms of quantities requested of those items						
Formula	Number of line items delivered in full / Total no. of line items requested *X 100*						
Interpretation	This indicator measures supplier's ability to fill orders completely in terms of items and quantity during a definite period of time. This indicator measures the percentage of items ordered that are received to determine whether an order is filled in the correct quantities with the correct products at least 80%. For suppliers, it may be necessary to identify which items are causing the most problems and find another mechanism for obtaining those items. An item is considered as fully supplied if at least 80% of the requested amounted is supplied.						
Disaggregation	Supplier: PFSA, others Category of supply: Programs and RDF						
Sources	RRF report, Receiving voucher of HF, approved procurement request by DTC or HF head						
Frequency of Reporting	HP	HC	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

P2.3 Percentage of stock wasted due to expiration or damage in monetary value

Definition	Percentage of stock wasted due to expiration or damage in monetary value						
Formula	Unusable stock of products in terms of monetary value during the reporting period / Beginning stock plus quantity received during the quarter in terms of monetary value						*X 100*
Interpretation	This indicator can be calculated for any facility that manages pharmaceutical of interest. It can be measured over any period but it is preferable to be calculated for unusable stock every quarter. It is usually calculated whenever a physical inventory is taken. Unusable stock that has been accumulated for long period and were not disposed previously (expired and damaged items that were transferred from previous quarter) should not be included during the calculation of this indicator. Items that were unusable during the quarter reviewed but were disposed with in the quarter should be taken in to consideration during calculation. This indicator is one of the performance indicator to have efficiency gain and one of the HSTP indicators to measure reduction of wastage from 8% to 2%.						
Disaggregation	Category of supply: Programs and RDF						
Sources	Bin cards/stock cards						
Frequency of Reporting	HP	HC	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Quarterly	quarterly	quarterly	quarterly	quarterly	quarterly

P2.4 Percentage of Clients with 100% prescribed drugs filled

Definition	Percentage of clients who get all of the prescribed drugs (100%) from dispensary among all the clients who received prescriptions in a given time period						
Formula	*Number of clients who received 100% of prescribed drugs* / *Total number of clients who received prescriptions* *X 100*						
Interpretation	Percentage of clients who get all of the prescribed drugs (100%) from dispensary is an indicator of access to quality and affordable medicines. Proportion of clients who get all the prescribed drugs is one of the indicators that tell about the continuous availability of drugs and quality pharmaceutical care in country. Getting prescribed drugs within the facility pharmacy improves patient satisfaction and overall trust and confidence in the health sector. Percentages of clients who get all the prescribed drugs (100%) from dispensary is expected to be 100 percent. The denominator includes those patients or clients who came to the dispensary unit for drugs. Exclude those for whom prescription is ordered but did not go to the dispensary unit.						
Disaggregation	None						
Sources	Prescription register						
Frequency of Reporting	HP	HC	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
		Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

P3. Evidence Based Decision Making

There are three indicators in this category, all of which are analyzed on a monthly basis.

P3.1 Reporting completeness

<table>
<tr><td>Definition</td><td colspan="7">Proportion of routine health and administrative reports that were received by the health institution & health administrative level</td></tr>
<tr><td>Formula</td><td colspan="6">Total number of reports received during a given time period
Total number of reports expected</td><td>X100</td></tr>
<tr><td>Interpretation</td><td colspan="7">The more complete the data, the better it reflects the services provided in the catchment area. Ideally, 100% completeness is the standard. This standard is not impossible and has been achieved by several regions. The minimum acceptable level of report completeness is 90%. A lower level of completeness compromises the reliability of data. This indicator shows representative completeness (reports received from the total number of reports expected), it does not show content completeness.

Reporting completeness should be done for each type of report that includes Service report (monthly, quarterly and annually), OPD morbidity report (monthly) and IPD morbidity and mortality report (Monthly).</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Type of report: Service report, OPD morbidity report, IPD morbidity and mortality report</td></tr>
<tr><td>Sources</td><td colspan="7">Data quality and performance monitoring log book</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

P3.2. Reporting timeliness

<table>
<tr><td>Definition</td><td colspan="7">Proportion of routine health and administrative reports that were received within the specified time.</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of reports received according to schedule</td><td>X100</td></tr>
<tr><td colspan="6">The number of reports expected</td><td></td></tr>
<tr><td>Interpretation</td><td colspan="7">Timeliness refers to the reports received within a defined schedule of a given reporting period. As with completeness, 90% is a minimum level of acceptable timeliness. Late data is of little value in making prompt decisions that really affect performance.

Reporting timeliness should be done for each type of report that includes Service report (monthly, quarterly and annually), OPD morbidity report (monthly) and IPD morbidity and mortality report (Monthly).</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Type of report: Service report, OPD morbidity report, IPD morbidity and mortality report</td></tr>
<tr><td>Sources</td><td colspan="7">HMIS minute book / e-HMIS Report tracker, routine reports submission check sheet</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td>Monthly</td><td></td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>Monthly</td></tr>
</table>

P3.3 Proportion of health facilities that conduct LQAS

Definition	Proportion of health facilities that conduct data quality checks using LQAS						
Formula	*Number of health facilities that conducted LQAS* / *Total number of health facilities* *X 100*						
Interpretation	Discrepancies between data compiled, reported and events recorded in patient / client records are a major source of error and poor quality data. LQAS provide a quick and reliable method for comparing compiled, recorded and reported data. Methodology of tacking LQAS is a standard methodology of 12 samples from registers/records for comparison with reports. Compiled, recorded and reported data should correspond with LQAS results above 85%. LQAS is relevant to facilities only, where it is used for self-assessment. IT is repeated by supervising institution to corporate the results. The quality HMIS data can be estimated using a sample of 12 data elements and comparing the results with a standard LQAS table. Selected data elements from the report to be submitted to the next reporting level is compared with the record on registers and tally sheets. Health facilities are expected to conduct LQAS before submitting their report to the next level. If the LQAS score is completed in the reporting format, the receiving administrative health unit can consider that the health facility has conducted the LQAS in that reporting period. Based on this, the administrative health unit can identify the number and proportion of health facilities that are performing data quality checks. However, we need to check this during supervisions in order to verify whether the health facilities are doing the right way of doing LQAS and whether they are taking actions accordingly.						
Disaggregation	Type of report: Service report, OPD morbidity report, IPD morbidity and mortality report						
Sources	*LQAS Minute log book*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
LQAS	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly

CB1. Health Infrastructure

There are four indicators in this category and all of them are analyzed annually

CB1.1 Functional facility to population ratio

Definition	The ratio of functional facility to total population						
Formula	$\text{Functional facility to population ratio} = 1:\left(\frac{\text{Population}}{\text{Total number of functional facilities (by type)}}\right)$						
Interpretation	Functional facility to population ratio is calculated as the total population in the catchment area divided by the total number of facilities (by type during a given time period) (usually one year). Functional facility to population ratio is an important indicator of equity; it can highlight priority areas.						
Disaggregation	Facility type: health post, health center, hospital Ownership: Public, Private						
Sources	*Administrative report*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
				Annually	Annually	Annually	Annually

CB1.2 Health institutions newly constructed and upgraded

Definition	Number of facilities newly constructed and upgraded/renovated.						
Formula	*Number of facilities newly constructed and upgraded*						
Interpretation	Number of facilities newly constructed considers new construction of health facilities within the respective woreda or higher level at a given period of time. Upgrading refers to some level of expanding existing health facility to upgrade the level of service. It indicates upgrading previously existing clinics to health center status and health centers to hospital level by adding required number of blocks etc. Both new construction and upgrading indicates the level of investment in health physical infrastructure.						
Disaggregation	Facility type: health post, health center, hospital Newly constructed, upgraded/renovated						
Sources	*Administrative report*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
				Annually	Annually	Annually	Annually

CB1.3 Health institutions with functional infrastructure

<table>
<tr><td>Definition</td><td colspan="7">Proportion of health institutions with electricity, water supply and functional sanitation facilities.</td></tr>
<tr><td rowspan="2">Formula</td><td colspan="6">Number of health facilities with electricity, water and sanitation facilities</td><td rowspan="2"></td></tr>
<tr><td colspan="6">Total number of health facilities
A. <u>Number of health facilities with electricity</u>
Total number of health facilities
B. <u>Number of health facilities with water supply</u>
Total number of health facilities
C. <u>Number of health facilities with sanitation facilities</u>
Total number of health facilities
D. <u>Number of health institutions full functional Network infrastructure</u>
Total number of health facilities</td></tr>
<tr><td>Interpretation</td><td colspan="7">Health institutions need electricity, water supply and functional sanitation facilities to optimally carry out service. Absence of any of electricity, water and sanitation limits the facility's scope for diagnosis and treatment. Functional sanitation facilities = placenta pit, incinerator, drainage, latrine.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Facility type: health post, health center, hospital</td></tr>
<tr><td>Sources</td><td colspan="7">Administrative report</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Annually</td><td>Annually</td><td>Annually</td><td>Annually</td><td>Annually</td><td>Annually</td><td>Annually</td></tr>
</table>

CB1.4 Primary health care coverage

Definition	Proportion of population who have access to primary health care						
Formula	*(∑HC with 5 satellite HP*25,000) + (additional HP*5000)*						
	Total population						*X100*
Interpretation	In the past, primary health coverage has been estimated through facilities' expected catchment populations. This is a bit theoretical and does not take account of geographic barriers. In addition, care must be taken not to double count the catchment areas of HC and HP. However, taking account of geographical factors to estimate the proximity of villages to the facility requires a complex investigation. It will likely take some time before these geographic considerations can be taken into account. It is a proxy indicator of equity in service access, it provides primary health care coverage estimates: geographical access within 2 hours walking distance and population based, as primary coverage may also be estimated by the theoretical formula that has been used in the past. This formula assumes that a HP covers 5,000 persons and HC 25,000 persons, minus the population covered by HP. One PHCU is for 25,000 people. This helps health coverage planning in both rural and urban contexts. In terms of time needed to reach the health facility, 10 km can be equated to two hours of traveling time.						
Disaggregation	None						
Sources	*Administrative report*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
				Annually	Annually	Annually	Annually

CB2. Human Capital and leadership

There are 4 indicators in the Human Resources category; all are analyzed annually.

CB2.1 Health staff to population ratio by category

<table>
<tr><td>Definition</td><td colspan="7">Health Staff to population ratio by category (doctor, health officer, nurse, midwife, pharmacist, laboratory, ESO, anesthesia and health extension worker).</td></tr>
<tr><td rowspan="2">Formula</td><td rowspan="2">1:</td><td colspan="6">Total population</td></tr>
<tr><td colspan="6">Total number of health workers at the end of the year (by category)</td></tr>
<tr><td>Interpretation</td><td colspan="7">Adequate staffing indicates appropriateness and regularity in service provision and also suggests access to services. It can suggest priority areas for increasing staff according to equity standards. However, care should be used in its interpretation; population densities and geographic conditions are also powerful influences on staffing needs. Staffs who left for training should be counted.</td></tr>
<tr><td>Disaggregation</td><td colspan="7">Health worker: Emergency Medical technician (EMT), Anesthesia professional, Biomedical engineering, Medical Doctor(GP), Specialist Physician, sub specialists, Health Officer, Nurse, Midwife, Pharmacist, medical Laboratory , ESO, Dental Profession, radiology, Ophthalmic nurse, optometry, physiotherapy, massage therapy, environmental health, prosthetic/ orthotic professional, mental health(Psychiatry professional), Health information technology (HIT), anesthesia and health extension worker

Sex: Male/Female</td></tr>
<tr><td>Sources</td><td colspan="7">Facility personnel records, Administrative records, HRIS</td></tr>
<tr><td rowspan="2">Frequency of Reporting</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td>Annually</td><td>Annually</td><td>Annually</td><td>Annually</td><td>Annually</td><td>Annually</td><td>Annually</td></tr>
</table>

CB2.2 Health staff skill mix

Definition	Distribution of HRH by occupation, specialization or other skill related characteristics						
Formula	*Number of physicians, nurses , and midwives (or other categories of health service providers)* *Total number of health workers*						
Interpretation	Adequate staffing indicates appropriateness and regularity in service provision and also suggests access to services. It can suggest priority areas for increasing staff according to equity standards. However, care should be used in its interpretation; population densities and geographic conditions are also powerful influences on staffing needs. This indicator need to be compared with a staff mix standard set by FMHACA.						
Disaggregation	Health worker: Emergency Medical technician (EMT), Anesthesia professional, Biomedical engineering, Medical Doctor(GP), Specialist Physician, sub specialists, Health Officer, Nurse, Midwife, Pharmacist, medical Laboratory , ESO, Dental Profession, radiology, Ophthalmic nurse, optometry, physiotherapy, massage therapy, environmental health, prosthetic/ orthotic professional, mental health(Psychiatry professional), Health information technology (HIT), anesthesia and health extension worker						
Sources	*Facility personnel records, Administrative reports, HRIS*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Annually	Annually	Annually	Annually	Annually	Annually	Annually

CB2.3 Health professional turnover rate

Definition	Proportion of health professional staff leaving a health institution in a given period of time						
Formula	*Number of staff leaving (by category)* / *Total number of staff at the beginning of the year* and those recruited in between						*X100*
Interpretation	Turnover rate is measured annually, by staff category *(doctor, midwife, health extension worker, etc)*. It is the difference between the staff at the beginning of the year (and those who were recruited and stayed for more 6 months in the year) and at the end of the year. This indicator suggests potential priority locations for staff deployment and strengthening. High attrition rate affects smooth flow of service provision and it can also affect the quality of service delivery. Attrition rate is calculated as the total number of staff leaving divided by the total number of staff at the beginning of the period in the catchment area during a given time period (usually one year). **Note**: The denominator should include the total number of staff at the beginning of the fiscal year and those who were recruited and stayed for more than 6 months in the year. When staff turnover occurs, the institution seeks someone to replace the employee.						
Disaggregation	Health workers: Emergency Medical technician (EMT), Anesthesia professional, Biomedical engineering, Medical Doctor(GP), Specialist Physician, sub specialists, Health Officer, Nurse, Midwife, Pharmacist, medical Laboratory , ESO, Dental Profession, radiology, Ophthalmic nurse, optometry, physiotherapy, massage therapy, environmental health, prosthetic/ orthotic professional, mental health (Psychiatry professional), Health information technology (HIT), anesthesia and health extension worker						
Sources	*Facility personnel records, Administrative records, HRIS*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Annually	Annually	annually	Annually	Annually	Annually	Annually

CB2.4 Facilities staffed as per the standard

Definition	Proportion of health facilities (Hospital, Health Center & Health post) staffed as per the standards						
Formula	*Number of health institutions meeting staffing standard for particular category* / *Total number of Facilities*						*X100*
Interpretation	Monitoring the recruitment of newly trained health workers into the national health labor market is critical in order to reduce inefficiencies in the hiring system, identify potential gaps between supply and demand for health workers, and monitor achievements in health workforce planning. FMHACA has set the number of staff required for each level of the health system. The standard includes the number of each type of professional.						
Disaggregation	Health workers: doctor, ESO, health officer, nurse, midwife, HEWs						
Sources	*Administrative report*						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ ScHO	RHB	FMOH
	Annually	Annually	Annually	Annually	Annually	Annually	Annually

CB3. Regulatory system

There is only one indicator and it is analyzed annually.

CB3.1 Percentage of health facilities that fulfill at least 75% of the FMHACA standard

<table>
<tr><td>Definition</td><td colspan="2">Percentage of health facilities that meet 75% FMHACA requirements. It is the percentage of healthcare facilities available in the country that fulfill the Health requirement.</td></tr>
<tr><td rowspan="2"></td><td>Number of licensed healthcare facilities that meet at least 75% of the FMHACA standard</td><td rowspan="2">X100</td></tr>
<tr><td>Total number of operational with required standards of the healthcare facilities available in the country/catchment area</td></tr>
<tr><td>Interpretation</td><td colspan="2">The government of Ethiopia has made a remarkable progress to improve access to health service to the public. However, with respect to quality health service it still requires more efforts. Therefore, to improve quality health service, emphasis will be made for improving standards of health facilities and enforce the implementation of the national quality requirements by health facilities. And, the purpose of this indicator is to track the provision of quality health service to the public in standardized health facilities.

Enforcing health facilities to implement internal quality assurance system is mandatory to ensure quality health service delivery or provision as a mechanism used to ensure quality standards of health service to be delivered to the public by the health facilities. Therefore, in order to enable health facilities to deliver quality health services, it will be applied strong regulation to fully implement the national health standards to ensure their competence so that the public will receive quality health service.

This is very important to assess the capacity of the Health facilities on the quality and safety of healthcare services provided at each level of care. It is an effective tool to ensure that the safety, quality and effective healthcare services are reaching the patients or clients all over the country.

Since the indicator be applied equally to the governmental healthcare facilities, it will provide valuable information about the number of healthcare facilities in the country that fulfill the minimum standards that ensure the quality and safety of service delivery. This again helps the government in order to plan for the expansion of the Standardized healthcare services to meet the access and quality targets in the country.</td></tr>
</table>

<table>
<tr><td>Disaggregation</td><td colspan="7">

Ownership (Governmental, Nongovernmental and private)
Federal &/or Cross regional, Region ,Woreda
New h/ facilities , Existing h/facilities
Type of health care facilities includes the followings:

Comprehensive specialized hospitals
General hospitals
Primary hospitals
Health centers
Health posts
Specialty centers (this also can be disaggregated by type. Example pediatric specialty centers, MCH specialty centers etc.)
Specialty clinics (this also can be disaggregated by type. Example pediatric specialty clinics, MCH specialty clinics, dental specialty clinics etc.)

Medium clinics
Primary clinics
Basic diagnostic medical laboratories
Advanced diagnostic medical laboratories
Basic diagnostic imaging centers
Advanced diagnostic imaging centers
Specific diagnostic imaging centers
Nursing homes
Mobile clinics

</td></tr>
<tr><td>Data source</td><td colspan="7">Admin records</td></tr>
<tr><td rowspan="2">Frequency</td><td>HP</td><td>HC/Clinic</td><td>Hospital</td><td>WorHO</td><td>ZHD/ ScHO</td><td>RHB</td><td>FMOH</td></tr>
<tr><td></td><td></td><td></td><td>Annually</td><td>Annually</td><td>Annually</td><td>Annually</td></tr>
</table>