Services Availability and Readiness Assessment (SARA)

Ethiopian Public Health Institute

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2018

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2018 Final Report

Ethiopian Public Health Institute
Addis Ababa, Ethiopia

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This report presents findings of the 2018 Ethiopia Service Availability and Readiness Assessment (SARA), which was implemented by the Ethiopian Public Health Institute.

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Preface

The Ethiopia Service Availability Readiness Assessment (SARA) report provides information on a set of tracer indicators of service availability and readiness. It provides reliable information on service delivery (such as the availability of key human and infrastructural resources), on the availability of basic equipment, basic amenities, essential medicines and diagnostic capacities, and on the readiness of health facilities to provide basic health-care interventions relating to family planning, child health services, basic and comprehensive emergency obstetric care, HIV, TB, malaria, and non-communicable diseases.

This reports will contribute favourably to monitoring service availability and readiness of the health sector and to generating evidence to support planning in the health system of the country.

It is my hope that the conclusions of the assessment will encourage our stakeholders and partners to continue with their support as we also improve on our contributions to come up with better interventions on how best to deliver health services.

We therefore implore all to use the information in this document for planning, monitoring and evaluation of our health programmes. Since no situation is static, the figures shown here are expected to change with time. Therefore, we intend to conduct similar surveys on an annual basis to determine the level of progress in these indicators.

Finally, on behalf of the Ethiopian Public Health Institute (EPHI), I express our appreciation to the Health System and reproductive health research directorate of EPHI for providing guidance in the process of design, execution and analysis of the survey. I would like to pass our gratitude to all stakeholders specifically the World Bank for the financial support and individuals who have contributed to the success of the survey including MOH staff, data collectors, regional coordinators, data managers, IT unit, procurement and store staff, and EPHI drivers for their dedicated and tireless effort for the accomplishment of the survey.

Dr. Ebba Abate

Director General (EPHI)

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Abbreviation

ACT	Artemisinin-based combination therapy
ART-LUM)	Artemether-lumefantrine
AIDS	Acquired Immuno Deficiency Syndrome
ART	Anti-Retroviral Therapy
ARV	Anti-Retroviral
CBC	Complete blood count
DBS	Dry Blood Sample
DOTS	Directly Observed Treatment Short course
EDHS	Ethiopia Demographic and Health Survey
ESPA+	Ethiopian Service provision Assessment plus
HCT	HIV Counselling and Testing
HIV	Human Immuno Virus
HIV/AIDS	Human Immuno Virus/ Acquired Immuno Deficiency Syndrome
ITNs	insecticide treated nets
IPT	Intermittent Preventive Therapy
IV	Intravenous therapy
MAC-E	Millennium AIDS Campaign-Ethiopia
MDR-TB	Multiple drug resistant tuberculosis
PMTCT	Prevention of mother to child transmission
RDT	Rapid Diagnostic Test
SARA	Service Availability and Readiness Assessment
SNNP	Region of Southern People Nations and Nationalities
SPM	Strategic Plan Management
ssg	Sodium Stibo Gluconate
TB	Tuberculosis
UNAIDS	United Nations Programme on HIV/AIDS

EXECUTIVE SUMMARY

Basic amenities

- Two third of facilities had access to emergency transport and consultation room
- The least available tracer indicator of basic amenities is computer with internet
- Among all facilities, only 1percent of facilities had all 7 basic amenities tracer items.
- Referral hospitals were found to be better equipped than other facility types in terms of power source, improved water source, communication equipment, computer with internet, emergency transport and computer with internet.
- Availability of basic amenities items were higher among facilities managed by others authority than government facilities for all items except for emergency.

Basic equipment

- The most commonly available tracer items of basic amenities were thermometer (93 percent) and stethoscope (79 percent).
- From the total, only 8 percent of facilities were fully equipped with all six basic equipment items.
- Health facilities managed by others authorities are more likely to be equipped with all basic equipment's compared with public facilities except child scale
- Urban facilities are more likely to have all basic equipment compared with rural
- On average, higher clinics had all basic equipment with an overall readiness score of 95 percent, while, health post had 3 basic equipment out of the six, for an overall readiness score of 52 percent.

Standard precaution

- Among all facilities, only 3 percent of them had all 9 tracer items for standard precaution for infection prevention
- On average, facilities had 4 of the 9 items with an overall standard precaution readiness score of 42 percent.
- Sixteen percent of facilities had appropriate storage of infectious waste
- Out of 9 standard precaution tracer items, on average facilities in Benishangul-Gumuz had 3 items (33 percent) as compared with facilities in Addis Ababa which had 8 items (90 percent) out of nine.
- Facilities managed by other than public had the highest percentage of mean availability of standard precautions for infection prevention items compared with facilities managed by public
- Eleven percent of facilities in urban setting had all items for infection prevention and less than one percent of facilities in rural had all items for infection prevention

Diagnostics

- On average facilities had 3 diagnostic test items out of 8 (40 percent).
- Only 4 percent of facilities excluding health post had all tracer items to conduct all 8 types of diagnostic tests.
- Eighteen percent of facilities in Dire Dawa had all selected diagnostic test items. While only 1 percent of facilities in Oromiya, SNNP and Gambella had all the items.
- Seven and one percent of urban and rural facilities had all 8 tracer items for diagnostic respectively.

Essential medicines

- Oral Rehydration Salt (ORS) (59 percent) is the most available essential medicine whereas the least available essential medicine was Beclomethasone inhaler and Simvastatin tablet/other statin (4 percent)
- Fifty-five percent health posts have Zinc sulphate tablet or syrup, which was the most available essential medicine.

- Twenty-eight percent of health facilities excluding health posts have essential medicines, which ranges from 15 percent to 53 percent across regions.
- Only ORS, Amoxicillin tablet/capsule/ and Zinc sulphate tablet or syrup were available above 50 percent of the health facilities excluding health posts.
- Among facilities excluding health posts, none has all essential medicines tracer items.
- The average number of essential medicines tracer items was more likely to be available in facilities managed by government (12 out of 24) than facilities managed by others (2 out of 24).

General Service Readiness Summary

- Nationally, only 55 percent of all health facilities excluding health posts were ready to provide the general health services
- Dire Dawa City administration had the highest general health service readiness index of 73 percent and the lowest was in Gambella (48%)
- Health facilities excluding health posts which were managed by government had the highest general service readiness index (61 percent) compare with others (50 percent).

Family planning

- Ninety-five percent of the facilities offered family planning service.
- Higher clinics were the least to offer family planning services (80 percent) while health centres offered the highest service (99 percent).
- Seven percent of the facilities had all the tracer items of the service.
- Family planning provided by all the facilities were 94 percent in 2016 and 95 percent in 2018.
- Only seven percent of the facilities had all the tracer items in both 2016 and 2018.

Antenatal care

- Antenatal Care service was offered in 78 percent of the facilities.
- ANC service was observed in S.N.N.P region (87 percent) and Addis Ababa city administration had the least ANC service availability (26 percent).
- Over all, none of the facilities had all the tracer items. However, on average only three tracer items out of ten was available in the facilities (32 percent).
- ANC service availability were 80 percent in 2016 and 78 percent in 2018.
- None of the facilities had all the tracer items in both of the surveys.

Basic Emergency and Essential Obstetric and New born care (BEm/EONC)

- Fifty three percent of the facilities excluding health posts offered delivery services.
- All of the regional and general hospitals offered delivery services followed by health centres (99 percent).
- Among facilities that provide delivery service excluding health posts, 4 percent of the facilities had all the 25 tracer items for Basic Emergency and Essential Obstetric and Newborn Care Service.
- Magnesium sulphate (injectable) was not available in 35 percent of the facilities.
- Availability of Magnesium sulphate increased from 36 percent in 2016 to 65 percent in 2018.

Comprehensive obstetric care Services (CEONC)

- All of the hospitals offered caesarean section and blood transfusion.
- On average, 15 out of 20 tracer items were available among facilities that provided Caesarean section (73 percent)
- Among facilities that provided caesarean section, only one percent of the facilities had all the 20 tracer item in both surveys.

Child immunization service

- Nationally, child immunization services availability in facilities is high as 81 percent.
- On average facilities had 9 items that are needed to provide child immunization service for an
- Very low percent (4%) of facilities have all tracer items necessary to provide child immunization services.

Child preventive and curative care service

- Seventy nine percent of Ethiopian facilities offer preventative and curative care services for under five children.
- None of the facilities have all tracer items necessary for the provision of preventive and curative care service for under-five children.

Adolescent health service

- Half of the facilities in Ethiopia offer adolescent health service.
- On average facilities have 2 and more tracer items that required to provide adolescent service.

HIV counselling and testing service

- Of all facilities, only 19 percent offer HIV counselling and testing service.
- Facilities in Dire Dawa were more likely to offer HIV counselling and testing services.
- Six percent of health post offer HIV counselling and testing services.
- Room with visual and auditory privacy and condom are the most available of the tracer items. (81 and 73 percent respectively).

HIV/AIDS care and support service

- Twenty eight percent of facilities excluding HP offer HIV/AIDS care and support services.
- All referral and general hospitals offer HIV /AIDS care and support services.
- Three percent of Health posts offer HIV/AIDS care and support service.
- Harari region have the highest percentage (9 percent) of health post that offer HIV/AIDS care and support services.

Anti-retroviral treatment (ART)

- Seventeen percent of facilities, excluding health posts offer ARV service.
- Facilities in Tigray region (37 percent) were more likely to offer ARV services.
- More than nine out of ten hospitals offer ARV services (>90 percent)
- Ninety two percent of facilities have ARV guidelines.
- Eighty nine and 81 percent of facilities that offer ARV services have trained staff and three first line ARV drugs respectively.

Prevention of mother to child transmission (PMTCT)

- Forty five percent of facilities excluding HP offer PMTCT services.
- Facilities in Tigray region (70 percent) were more likely to offer PMTCT services.
- Almost all hospitals offer PMTCT services (95 percent and above).
- PMTCT service equipment were the most available of the tracer items.

Sexually Transmitted Infection (STI)

- Twenty seven percent of facilities including health posts offered STI services.
- Higher percentage of hospitals (97 to 100 percent and health centres (96 percent) offered STI services.
- Four percent of health posts offered STI services.

- On average, facilities had 4 of the 7 tracer items.
- Male condoms were the most available of the tracer items.

Tuberculosis

- Fifty seven percent of facilities excluding health posts offered TB services.
- TB diagnosis by sputum smear microscopy examination was made in 50 percent of health facilities.
- TB diagnosis was made by chest X-ray and rapid test (GeneXpert MTB/RIF) in 12 and 11 percent of facilities respectively.
- Health centres and general hospitals had the highest availability of TB service (97 and 96 percent respectively).
- Ninety four percent of facilities that offered TB services had all first line medications for TB.
- Ten percent of facilities that offered TB services had all tracer items.

Malaria

- Sixty eight percent of the facilities in the country offered diagnosis or treatment of malaria.
- Health posts were the lowest (65 percent) from the public facilities to offer malaria treatment and diagnosis service.
- Facilities from regions where there are expected to be malaria endemic have a relatively high services of malaria.
- The readiness of government facilities for malaria diagnostic capacity was higher (80 percent), while the private facilities were lowest (55 percent).
- Overall, only 1 percent of facilities have all the tracer items and on average facilities have 3 out of the six tracer items, for an overall readiness score of 43 percent.

Non communicable diseases

- Nationally 36, 49, 53 and 9 percent of facilities excluding HP offered diabetes diagnosis and management, cardiovascular disease diagnosis and treatment, chronic respiratory disease diagnosis and treatment, and cervical cancer diagnosis services.
- Nationally facilities excluding HP that offered NCD services had an overall readiness score of 46 percent for diabetes diagnosis/management, 34 percent for cardiovascular disease diagnosis/management, 18 percent for chronic respiratory disease diagnosis/management, and 51 percent for cervical cancer diagnosis.

Neglected Tropical Disease (NTD)

- Overall, 45 percent of facilities offer diagnosis or management of neglected tropical diseases, such as onchocerciasis, lymphatic filariasis, schistosomiasis, soil transmitted helminths, trachoma, dracunculiasis, podoconiasis, or leishmaniosis.
- Overall at national level, out of the twenty two tracer items Albendazole or Mebendazole (74 percent), Azithromycin cap/tab or oral liquid (32 percent), and Praziquantel (32 percent) were available in facilities.

Public Health Emergency Management (PHEM) Services

- Seventy five percent of facilities offer immediately reportable diseases to the next reporting level within 30 minutes.
- Overall 34 and 36 percent of facilities that offer PHEM service have national guideline and at least one providers of PHEM services received any training in PHEM in the last two years respectively.

Surgery and blood transfusion

- Forty three percent of facilities excluding health posts provided basic surgical services.

- Five percent of the facilities excluding health posts included in the analysis had at least one person trained in IMEESC (Integrated Management for Emergency and Essential Surgical Care) while guideline for IMEESC was available in 14 percent of the facilities.
- As seen in the figure, while all hospitals offer comprehensive surgical services and laparotomy, the percentages were high for hernia repair, appendectomy, episiotomy and dilatation and curettage (97 percent).
- Overall, 4 percent of health facilities (all types of health facilities excluding health posts) offered blood transfusion services.

Emergency service

- All hospitals and health centres offer emergency services
- Eighty seven percent of facilities have emergency examination and treatment area
- All facilities in Tigray, Afar, SNNP and Gambella regions offer emergency services

Intensive Care Unit service

- Eighty seven percent of referral hospitals offer ICU services.
- Three fourth of the facilities that offer ICU service had portable patient monitor, and one third had mechanical respirator/ ventilator, and ECG machine.
- Referral hospitals have higher percentage of facilities with all tracer items.

1. Introduction

1.1 Background

Ethiopia's Growth and Transformation Plan (GTP) 2011-2015 has been designed to maintain the rapid and broad-based economic growth enjoyed by Ethiopia in the recent past and eventually to end poverty (MoFED, 2010). The Health Sector Development Program (HSDP) is a key component of the GTP and its primary objective is to improve the health of the population through the promotion of preventive, curative and rehabilitative health services by improving access to affordable health services and improving the quality of health services.

The current health policy in Ethiopia also takes into account broader issues such as population dynamics, food availability, acceptable living conditions, and other essentials of better health (TGE, 1993). The HSDP prioritizes maternal and newborn care, and child health, and aims to halt and reverse the spread of major communicable diseases such as HIV/AIDS, TB, and malaria (FMoH, 2010). The Health Extension Programme (HEP) serves as the primary vehicle for the prevention, health promotion, behavioural change communication, and basic curative care. The HEP is an innovative health service delivery programme that aims at universal coverage of primary health care. The programme is based on expanding physical health infrastructure and developing Health Extension Workers (HEWs) who provide basic preventive and curative health services in the rural community.

The major health problems of Ethiopia remains largely preventable communicable diseases, reproductive health related problems and nutritional disorders. Despite the major progresses made to improve the health status of the population in the last two decades, Ethiopia's population still face a high rate of morbidity and mortality and the health status remains relatively poor. Figures on vital health indicators from DHS 2016 show an IMR of 48/1000; yet pregnancy related mortality rate of 412/100,000 live births showed minimal improvement over the previous couple of years (CSA, 2016). There are multiple components that will influence these indicators: available infrastructure; staff deployment and presence; and quality of services provided. Although routine reporting will contribute to this understanding, at this stage of the implementation of routine reporting, national surveys are required to further complement the available routine reporting.

The Federal Ministry of Health (FMoH) included monitoring and evaluation as an invaluable component of HSDP IV. It is technically impossible to obtain all health and health related data exclusively through HMIS, conducting regular surveys is crucial to capture selected set of data and triangulate various sources in order to improve the accuracy of health interventions. The state of health in a country can be measured through indicators describing long-term program achievements and effects on the populations. Health Facility Assessments (HFA) or Health Facility Surveys (HFS) provide objective information of the preparedness of health facilities to provide the services required by the population. Thus, selected indicators need to be measured to obtain data on the facilities, supplies, and services for informed decision-making.

Sound information on the supply and quality of health services is necessary for health systems management, monitoring and evaluation. Efforts to achieve the Millennium Development Goals (MDGs) and to scale up interventions for HIV/AIDS, malaria, safe motherhood and child health through global health partnerships, have drawn attention to the need for strong country monitoring of health services, covering the public, private-for-profit and private not-for-profit sectors, and their readiness to deliver key interventions. With the increased demand for accountability and the need to demonstrate results at country and global levels, information is needed to track how health systems respond to increased inputs and improved processes over time, and the impact such inputs and processes have on improved health outcomes and better health status.

However, despite heightened investments in health systems, few countries have up-to-date information on the availability of health systems that covers both the public and private sectors. Fewer still have accurate, up-to-date information required to assess and monitor the "readiness" of health facilities to provide quality services. Ensuring access to quality health services is one of the main functions of a health system. Service access includes different components: availability, which refers to the physical presence or reach of the facilities; affordability, which refers to the ability of the client to pay for the services; and acceptability, which refers to the sociocultural dimension.

The 2018 Service Availability and Readiness Assessment (SARA) for Ethiopia was conducted to assist the health sector in assessing and monitoring service readiness and capacity at region and health facility levels on a regular basis. The SARA provides key information on the state of the health system in terms of service availability and readiness of the facilities to provide key information for measuring progress in health system strengthening over time by generating a summary index that represents "readiness to provide key MNCH and other health related services".

1.2 Objectives

The objective of the survey is to generate reliable and regular information on service delivery including service availability, such as the availability of diagnostic, essential medicines, and infrastructure resources, and on the readiness of health facilities to provide basic health-care interventions relating to maternal health, child health services, HIV/AIDS, tuberculosis, malaria and noncommunicable diseases.

The survey generates a set of tracer indicators of service availability and readiness that can be used to:

- Detect change and measure progress in health system strengthening over time;
- Plan and monitor the scale-up of interventions;
- Generate the evidence base to feed into country annual health reviews, to better inform the development of annual operational plans and to guide more effective country and partner investments;
- Support national planners in planning and managing health systems.

1.3 Institutional framework

The 2018 Ethiopia SARA was undertaken by the Ethiopian Public Health Institute (EPHI). The World Bank provided the financial support. A technical committee was established to oversee all policy and technical issues related to the survey. This information will help health programme managers and policy makers to prioritise interventions that will enhance the provision of quality health services.

1.4 Content of the Ethiopian SARA and methods for data collection

1.4.1 Content of SARA

The survey is designed to generate a set of core indicators on key inputs and outputs of the health system, which can be used to measure progress in health system strengthening over time. Tracer indicators aim to provide objective information about whether or not a facility meets the required conditions to support provision of basic or specific services with a consistent level of quality and quantity. Summary or composite indicators, also called indices, can be used to summarize and communicate information about multiple indicators and domains of indicators. Indices can be used for general and service-specific availability and readiness.

1.4.2 Data Collection Instruments

To achieve the objectives of the assessment and to capture information from the different categories, data were collected using a facility inventory questionnaire to obtain information on how the facilities are prepared to provide each of the priority services. The facility inventory questionnaire collects information on the availability of specific items (including their location and functional status), components of support systems, and facility infrastructure, including the service delivery environment.

1.4.3 Data Collection Approaches

After preparation of definitive questionnaires in English, the questionnaires were translated into Amharigna. English and Amharigna translation of the inventory questionnaire were loaded onto tablet computers, which were used during interviews to ask questions and also record responses (computer assisted personal interviewing–CAPI).

1.4.4 Sample health facility

The sampling method for SARA is a nationally representative sample stratified by health facility type and managing authority (WHO, 2013). All hospitals and selected health centres, clinics, and health posts were included. We used the same sample of facilities for 2016 and 2018. All health facilities that were included in 2016 SARA were our samples for the current study. In addition a newly established hospitals also included in this study.

Ethiopia has a skewed health facility distribution at regional level; the sample allocation for the Ethiopian SARA took the skewed health facility distribution of the country into account.

The following formula was used to calculate the sample size for SARA 2016:

$$n= [[(z2^* p * q) + ME2] / [ME2+ z2^* p * q / N]]^*d$$

Where

n= the sample to be calculated,

z= the square of the normal deviate at the required confidence level (3.84 is the square of the normal deviate (1.96) needed to provide an estimate at the 95% level of confidence)

p= the proportion of facilities with the attribute of interest (Proportion of facilities with basic amenities were 47%) (Basic Amenities= Mean availability of seven basic amenities items (%): power, improved water source, room with privacy, adequate sanitation facilities, communication equipment, access to computer with Internet, emergency transportation) (WHO, 2013, SPA+ Survey, 2014).

q = 1-p

ME = margin of error (15%)

d = the design effect (we're assuming 1.5) because of regional stratification.

N= Total number of Facilities in each stratum.

Assuming that for each of the services that will be assessed in SARA, mean availability of seven basic amenities items is 46.8%(47%) which was taken from ESPA+, the sample size required to provide a national representation that is within 95% CL and +/- 15% precision, design effect of 1.5 and adding refusals or closed facilities (20% for private clinics and 10% for health posts and health centres) is approximately 689 facilities. Which is within the ranges of WHO recommendation for SARA surveys requiring regional estimates (500 to 800 facilities). A total of 764 facilities were assessed. Of them, 164 Health Centres, 165 Clinics and 132 Health posts were assessed.

Table 1.4.4. 1 Distribution of health facilities by region, Ethiopia SARA 2018

Region	Facility Type								
	Referral Hospitals	General Hospitals	Primary Hospitals	Health Centres	Health Posts	Higher Clinics	Medium Clinics	Lower Clinics	Total
Addis Ababa	7	22	3	22	0	2	15	6	77
Afar	1	0	5	16	12	0	12	3	49
Amhara	5	10	50	17	16	1	3	12	114
Benishangul Gumuz	0	2	0	15	14	0	3	11	45
Dire Dawa	1	3	3	11	11	2	7	1	39
Gambella	0	1	2	13	12	0	5	9	42
Harari	1	4	0	8	11	3	7	1	35
Oromiya	8	38	29	16	16	0	1	17	125
S.N.N.P	4	14	40	16	16	0	6	9	105
Somali	1	6	4	16	13	7	10	0	57
Tigray	3	16	20	14	11	4	5	3	76
National	**31**	**116**	**156**	**164**	**132**	**19**	**74**	**72**	**764**

1.4.5 Training and Data Collection

The questionnaires were pretested to detect any possible problems in the flow of the questionnaires, gauge the length of time required for interviews, as well as any problems in the translations. The pretest also helped to detect any problems with the data entry programs. After the pre-test, the questionnaires and computer programmes were finalised for the main data assessment.

Eighty nine data collectors and seven regional coordinators, mostly health providers (nurses, midwives, and health officers) were trained in the application of survey instruments and computer programmes. The training included classroom lectures and discussion, practical demonstrations, mock interviews, role plays, and field practices. The participants were also given daily homework—to conduct mock interviews among themselves using the survey tools. Data were collected from October - December, 2017.

1.4.6 Data management and analysis

The information entered in the PC-tablets by each interviewer was sent regularly to EPHI central server by the interviewers, preferably when data collection was completed in a health facility. These data files were concatenated, reviewed and checked for any errors and inconsistencies.

Data cleaning included the checking of range, structure and a selected set of checks for internal consistency. All errors detected during machine editing were corrected. All data entry and editing programs were written using CSPro.

2. General Service Readiness

General Service readiness refers to the capacity of the health facility to provide general health services(WHO, 2013). It measures the availability of equipment and supplies necessary to provide services within the following five domains: basic amenities, basic equipment, standard precautions, diagnostic testing, and essential medicines.

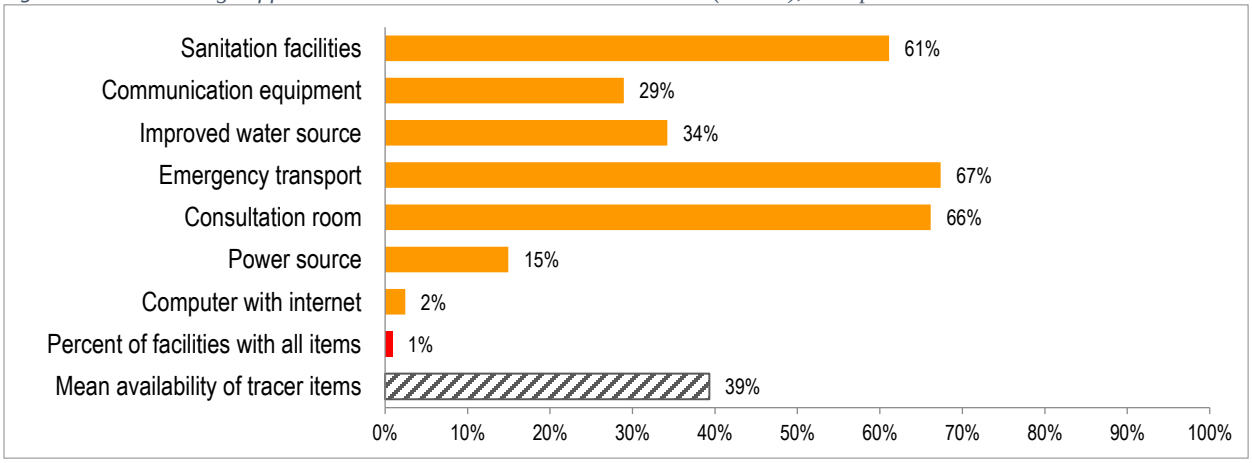
2.1 Basic amenities

Sufficient physical infrastructure and the availability of basic amenities are necessary for delivering quality services and for an effective and functional health care delivery system. Service readiness for basic amenities was assessed based on the following tracer items; sanitation facilities, communication equipment, consultation room, improved water source, power source, emergency transportation, and computer with internet access1.

Figure 2.1.1 shows the availability of basic amenities items and infrastructure available at health facilities in the country.

- At least three in ten of facilities (34 percent) have an improved water source in the facility (i.e., water is piped into the facility or onto facility grounds, or else water is from a public tap or standpipe, a tube well or borehole, a protected dug well, or protected spring, or rain water, or bottle water), and water is available from this source on facility premises.
- Nearly more than one in ten of facilities (15 percent) had a power source.
- Two third of facilities had access to emergency transport and consultation room (67 percent and 66 percent respectively).
- The least available tracer indicator of basic amenities is computer with internet (2 percent).
- Only 1percent of facilities had all 7 basic amenities tracer items.

Figure 2.1. 1 Percentage of facilities with basic amenities items available (N=764), Ethiopia 2018



[1] World Health Organization (2015) Measuring Service Availability and Readiness: An annual monitoring system for service delivery. http://www.who.int/healthinfo/systems/SARA_Reference_Manual_Chapter3.pdf

Table 2.1.1 shows the availability of basic amenities by facility type, managing authority, and residence type.

- Referral hospitals were found to be better equipped than other facility types in terms of power source, improved water source, communication equipment, computer with internet, emergency transport and computer with internet, except sanitation facilities.
- Compared to other types of facilities, health posts have the least access to all tracer items of basic amenities except in the case of availability of emergency transport.
- Availability of basic amenities items was greater among facilities managed by others authority than government facilities for all items except for emergency transport (50 percent compared with 71 percent of public facilities).
- Availability of all basic amenities items was greater among urban health facilities than rural health facilities for all items except for emergency transport (62percent compared with 69percent of rural facilities).

Table 2.1. 1 Percentage availability of basic amenities by facility type, managing authority, and urban/rural (N=764), Ethiopia 2018

	Power source	Improved water source	Consultation room	Sanitation facilities	Communication equipment	Computer with internet	Emergency transport	Percent of facilities with all	Mean availability of tracer items	Total number of facilities
Facility Type										
Referral Hospital	87	100	97	97	100	90	94	71	95	31
General Hospital	80	99	94	98	96	75	91	52	91	116
Primary Hospital	60	96	94	96	87	46	91	24	81	156
Health Centre	28	69	93	86	38	5	76	1	56	164
Health Post	5	15	56	51	16	0	69	0	30	132
Higher Clinic	42	99	97	99	98	14	37	0	69	19
Medium Clinic	69	98	96	98	79	17	66	5	75	74
Lower Clinic	30	67	76	69	64	0	43	0	50	72
Managing Authority										
Public	10	26	63	58	21	1	71	1	36	542
Others	42	77	84	78	70	8	50	2	58	222
Urban/Rural										
Urban	33	67	87	75	50	9	62	3	55	504
Rural	9	23	59	56	22	0	69	0	34	260
Total	**15**	**34**	**66**	**61**	**29**	**2**	**67**	**1**	**39**	**764**

Figure 2.1.2 below shows the mean variation in the availability of basic amenities by region while Table 2.1.2 shows the availability of basic amenities tracer items by region.

- Among the regions, Addis Ababa was the region with the highest mean availability of basic amenities items, on average health facility in Addis Ababa had six basic amenities tracer items out of seven.
- The region with the lowest mean availability of basic amenities items was found to be SNNP, on average health facilities in SNNP had at least 2 tracer items out of seven basic amenities.
- Addis Ababa was the region with the highest basic amenities items of improved water source (100 percent), communication equipment (89 percent), and computer with internet (33 percent).
- Health facilities in Addis Ababa that had all of the 7 basic amenities items were 15 percent.

Figure 2.1. 2 Mean availability of basic amenities tracer items, by region (N=764), Ethiopia 2018

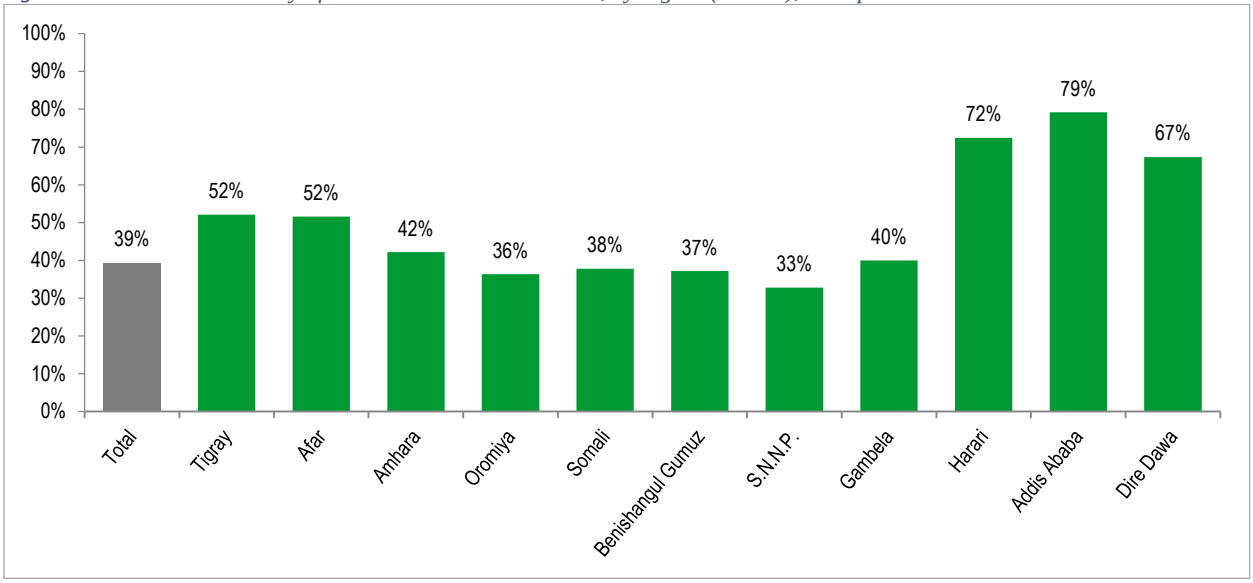


Table 2.1. 2 Availability of basic amenities tracer items by region (N=764), Ethiopia 2018

	Power source	Improved water source	Consultation room	Sanitation facilities	Communication equipment	Computer with internet	Emergency transport	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions										
Tigray	48	39	83	69	60	3	63	1	52	76
Afar	31	34	87	85	26	3	94	2	52	49
Amhara	14	47	91	44	28	4	67	0	42	114
Oromiya	6	29	55	63	27	1	74	0	36	125
Somali	19	12	54	73	22	1	83	0	38	57
Benishangul Gumuz	13	25	67	76	19	2	58	0	37	45
S.N.N.P.	11	26	54	63	20	1	56	0	33	105
Gambella	33	37	86	40	40	0	43	0	40	42
Harari	84	74	95	100	65	11	78	11	72	35
Addis Ababa	79	100	89	97	89	33	67	15	79	77
Dire Dawa	51	76	74	100	56	24	90	14	67	39
Total	**15**	**34**	**66**	**61**	**29**	**2**	**67**	**1**	**39**	**764**

Comparison of 2016 and 2018 results on basic amenities

- Emergency transport was available in 84 percent of the facilities in 2016 compared with 67 percent in 2018.
- Percentage of facilities which had computer with internet were only 2 percent in 2016 SARA which is similar to 2018 (2 percent).
- Of all the facilities, only 1 percent of health facilities had all tracer items in 2016, which is similar to 2018 (1 percent).

2.2 Basic equipment

Delivery of quality health services requires availability of functioning basic equipment. The World Health Organization (WHO) has proposed a list of basic pieces of equipment that should be available at a health facility to guarantee its readiness to deliver basic health services. Service readiness for basic equipment was assessed based on the availability of adult weighing scale, child weighing scale, thermometer, stethoscope, blood pressure apparatus and light source.

Figure 2.2.1 shows the percentages of the availability of basic equipment tracer items at the national level.

- On average, facilities had 4 of the 6 tracer items of basic equipment.
- The most commonly available items were thermometer (93 percent) and stethoscope (79 percent). The lowest available was light source (25 percent).
- Eight percent of facilities were fully equipped with all six basic equipment items.

Figure 2.2. 1 Percentage of facilities with basic equipment items available (N=764), Ethiopia 2018

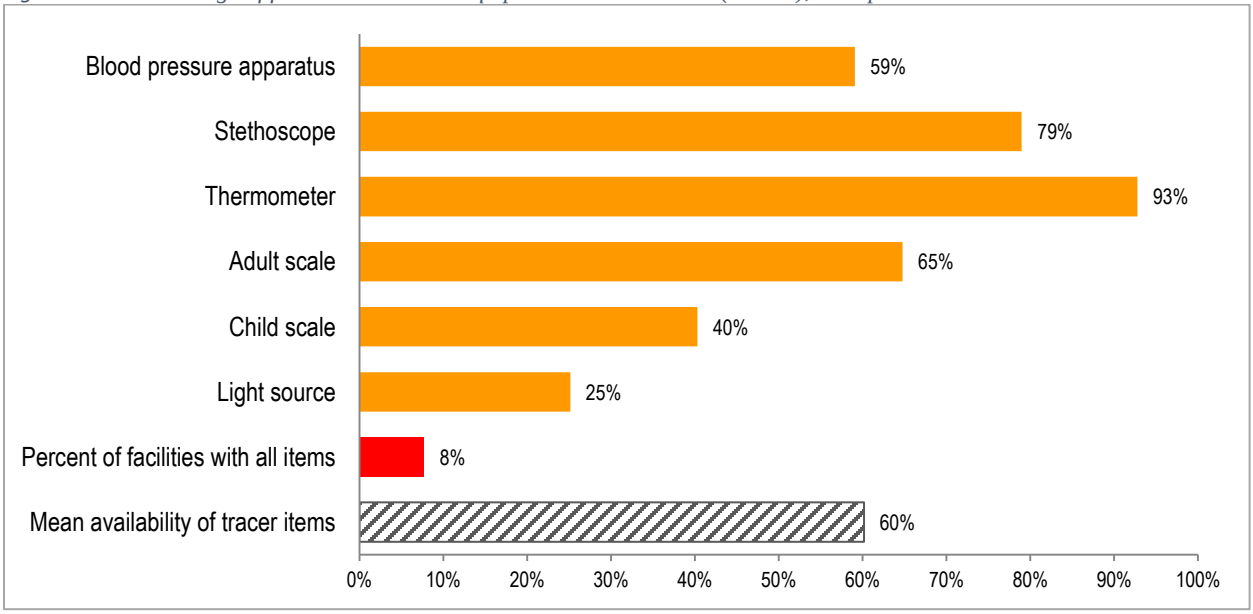


Table 2.2.1 shows the availability of basic equipment tracer items by facility type, managing authority (public vs. others), and by residence type.

- On average, higher clinics had nearly all basic equipment which is the highest among the facility types while health post had on average 3 basic equipment out of the six which is the lowest.
- Seventy seven percent of higher clinics had all basic equipment at the time of the survey which is the highest among facility types.
- Facilities managed by other authorities have on average nearly 5 out of six tracer items (compared with facilities managed by public which have on average 3 out of six items.
- Health facilities managed by others authorities are more likely to be equipped with all other basic equipment except child scale compared with public facilities.
- Urban facilities are more likely to have all basic equipment compared with rural facilities except child scale.

Table 2.2. 1 Availability of basic equipment tracer items by facility type, managing authority and residence type (N=764), Ethiopia 2018

	Adult scale	Child scale	Thermometer	Stethoscope	Blood pressure apparatus	Light source	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Facility type									
Referral Hospital	100	71	90	100	100	90	65	92	31
General Hospital	94	61	97	99	99	84	48	89	116
Primary Hospital	96	63	97	99	98	65	46	87	156
Health Centre	89	43	92	96	93	34	13	74	164
Health Post	54	44	92	70	42	10	3	52	132
Higher Clinic	100	77	93	100	100	100	77	95	19
Medium Clinic	91	35	99	100	100	97	34	87	74
Lower Clinic	86	11	99	100	97	66	7	77	72
Managing authority									
Public	60	44	92	75	52	15	5	56	542

Others	88	23	98	100	98	77	20	81	222
Urban/Rural									
Urban	75	28	98	99	80	53	18	72	504
Rural	61	44	91	72	52	16	4	56	260
Total	**65**	**40**	**93**	**79**	**59**	**25**	**8**	**60**	**764**

Figure 2.2.2 shows variation in the mean availability of basic equipment by region, while Table 2.2.2 shows the availability of basic equipment tracer items by region.

- On average health facilities in Addis Ababa had 5 basic equipment out of six, followed by facilities in Harari and Dire Dawa which had 4 basic equipment out of six.
- Stethoscope (100 percent), blood pressure apparatus (100 percent), and light source (95 percent) are more likely to be available in Addis Ababa facilities than other regions.
- Half of health facilities in Addis Ababa (49 percent) had all seven basic equipment compared with facilities in Benishangul Gumuz Region (2 percent).

Figure 2.2. 2 Mean availability of basic equipment by zone and region (N=764), Ethiopia 2018

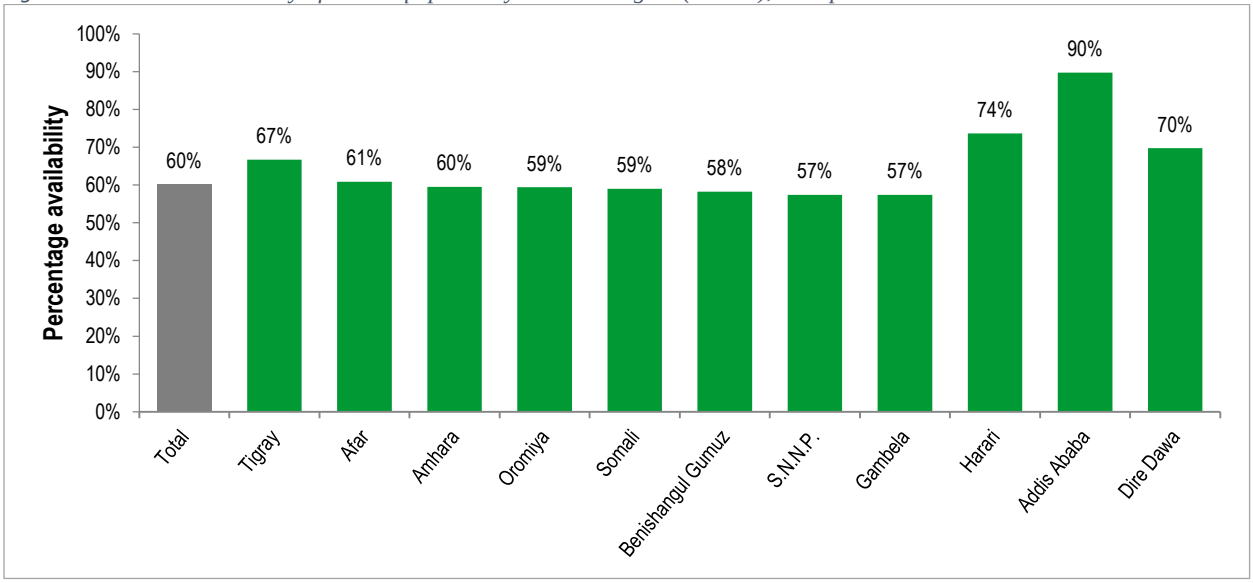


Table 2.2. 2 Availability of basic equipment tracer items by region (N=764), Ethiopia 2018

	Adult scale	Child scale	Thermometer	Stethoscope	Blood pressure apparatus	Light source	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions									
Tigray	78	42	99	83	71	27	11	67	76
Afar	60	14	91	94	89	18	8	61	49
Amhara	62	34	91	83	63	24	4	60	114
Oromiya	69	41	99	73	52	21	10	59	125
Somali	52	48	80	80	66	28	9	59	57
Benishangul Gumuz	72	52	77	77	47	23	2	58	45
S.N.N.P.	56	44	89	80	55	22	3	57	105
Gambella	69	19	74	65	69	48	9	57	42
Harari	90	35	83	93	82	59	19	74	35
Addis Ababa	96	51	96	100	100	95	49	90	77
Dire Dawa	97	8	83	97	93	42	8	70	39
Total	**65**	**40**	**93**	**79**	**59**	**25**	**8**	**60**	**764**

Comparison of 2016 and 2018 results on basic equipment

- Of all health facilities, 10 percent of them have all of the basic equipment in 2016 and 8 percent in 2018.

- Mean availability of tracer items is 63 percent in 2016 compared with 60 percent in 2018 which is on average nearly 4 of 6 six items in both years
- The percentage of facilities with thermometer was 86 percent and only 29 percent of facilities have light source in 2016 and in 2018, the availability of both tracer items was 93 and 25 percent respectively.
- The mean availability of basic equipment in Urban was 79 percent in 2016 compared with 72 percent in 2018 which is on average 4 and 5 out of six tracer items respectively.

2.3. Standard Precautions

Safety is an essential part of the health service delivery system. Health workers must be able to work in a safe environment and must be provided with all the safety training and equipment they need to carry out their duties. They must also be able to render services to their patients in the safest manner, which means using the best standards for safety precautions. Disposing of needles and medical products properly, sterilizing medical equipment appropriately and disinfecting toilets and work areas are among the basic safety standard precautions expected in health facilities. Service readiness for standard precautions for infection prevention was assessed based on the availability of the following tracer items:

- Disposable or auto-disable syringes
- Disinfectant,
- Appropriate storage of sharps waste
- Safe final disposable of infectious waste
- Latex gloves,
- Safe final disposal of sharps
- Soap and water OR alcohol based hand rub
- Appropriate storage of infectious waste
- Guidelines for standard precautions.

Figure 2.3.1 shows the availability of standard precautions for infection prevention at health facilities in the country.

- On average each facility had 4 out of 9 standard precaution tracer items
- Only 3 percent of facilities had all 9 standard precaution items.
- All facilities had disposable or auto disable syringe as standard precaution for infection prevention.
- More than half of facilities reported disinfectant and safe final disposal of sharps (57% each).
- Only 16 percent of facilities had appropriate storage of infectious waste (Figure 2.3.1).

Figure 2.3. 1 Percentage of facilities with standard precautions for infection prevention items available (N=764), in Ethiopia, 2018

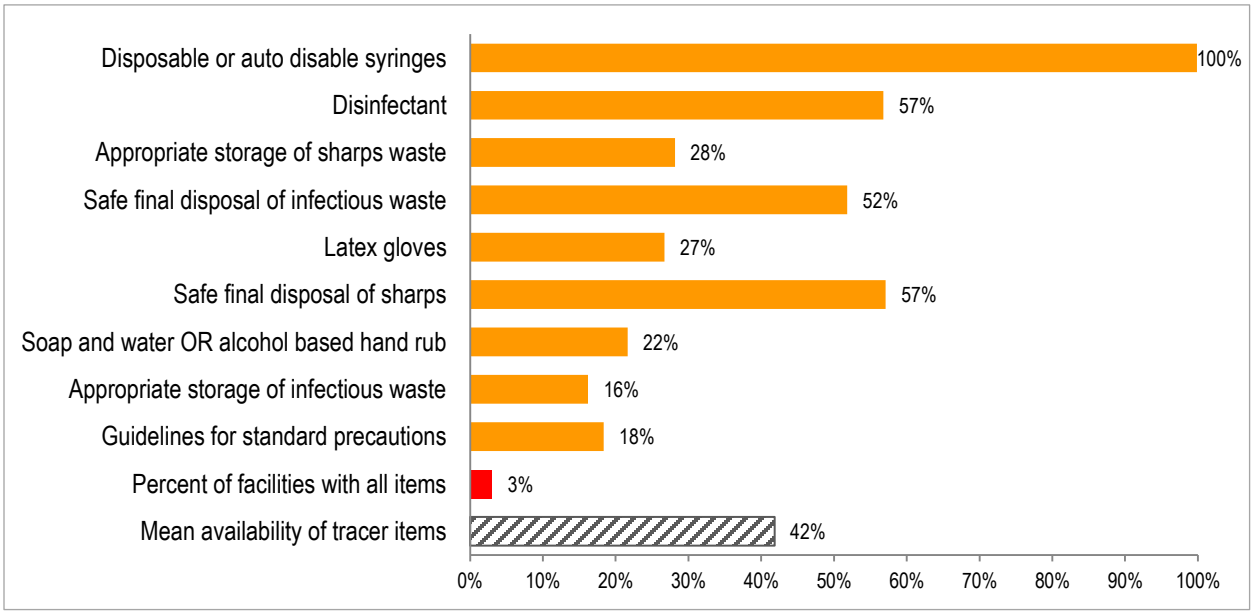


Table 2.3.1 shows the availability of standard precautions for infection prevention by region, facility type, managing authority, and residence type.

The results showed that there were variations in mean availability of standard precaution for infection prevention and availability of all items by region, facility type, managing authority, and residence type.

- Out of 9 standard precaution tracer items, availability of tracer items on average on each facility ranged from 3 items in Benishangul-Gumuz to 8 items in Addis Ababa city administration out of the 9 items.
- Percent of facilities with all items varied from none of the facilities of Oromiya, Benishangul-Gumuz, and Somalia regions to 40 percent of the health facilities in Addis Ababa which is the highest.
- Percent of facilities with availability of safe final disposable of sharp for infection prevention item ranged from the highest 96 percent in Harari to the lowest 43 percent of both in Benishangul-Gumuz and SNNP regions.
- On average availability of standard precaution for infection prevention items at each facility varied from 2 items (27 percent) in health post to 8 items (91 percent) in higher clinic out of 9 tracer items.
- Facilities managed by other than public, on average had 7 items (78 percent) of standard precautions for infection prevention compared with facilities managed by public 3 items (35 percent) out of 9 tracer items.
- Fifteen percent of facilities managed by other than public had all 9 tracer items. But only 1 percent of facilities managed by public had all these items.
- On average out of 9 items, each facility in rural and urban settings had 3 (34 percent) and 6 (64 percent) standards precaution for infection prevention items respectively
- Thirty-nine percent of referral hospitals but less than one percent of health post had all items for standard precaution for infection prevention.
- Eleven percent of facilities found in urban while less than one percent in rural setting had all items for infection prevention (Table 2.3.1)

Table 2.3. 1 Percentage of facilities with standard precautions for infection prevention items available (N=764), by region, facility type, managing authority and residence type, Ethiopia, 2018

	Safe final disposal of sharps	Safe final disposal of infectious waste	Appropriate storage of sharps waste	Appropriate storage of infectious waste	Disinfectant	Disposable or auto disable syringes	Soap and water OR alcohol based hand rub	Latex gloves	Guidelines for standard precautions	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions												
Tigray	61	60	36	22	93	100	31	32	37	12	52	76
Afar	50	66	28	9	49	94	20	26	7	1	39	49
Amhara	53	44	32	15	61	100	22	30	28	2	43	114
Oromiya	66	47	23	14	59	100	18	21	11	0	40	125
Somali	63	89	17	7	34	100	10	15	13	0	39	57
Benishangul Gumuz	43	43	15	1	53	100	12	15	12	0	33	45
S.N.N.P.	43	53	25	14	42	100	18	24	12	3	37	105
Gambella	58	57	32	29	55	96	37	52	13	5	48	42
Harari	96	62	58	49	90	100	55	61	48	24	69	35
Addis Ababa	88	91	96	82	96	100	93	95	72	40	90	77
Dire Dawa	50	64	60	40	93	97	58	62	33	20	62	39
Facility type												
Referral Hospital	90	87	90	58	100	100	74	81	77	39	84	31
General Hospital	95	88	86	53	100	100	81	89	73	28	85	116
Primary Hospital	88	73	96	37	99	100	67	74	74	15	79	156
Health Centre	75	62	91	43	84	100	37	67	42	3	67	164
Health Post	49	46	0	0	42	100	0	0	9	0	27	132
Higher Clinic	96	96	66	76	100	100	100	100	86	35	91	19
Medium Clinic	91	79	89	79	92	100	94	96	64	40	87	74
Lower Clinic	64	58	85	47	90	100	94	100	13	1	72	72
Managing authority												
Public	54	49	18	8	50	100	8	13	16	1	35	542
Others	74	66	85	60	91	100	94	98	31	15	78	222
Urban/Rural												
Urban	74	53	67	45	79	100	59	66	33	11	64	504
Rural	51	52	15	6	49	100	9	13	13	0	34	260
Total	**57**	**52**	**28**	**16**	**57**	**100**	**22**	**27**	**18**	**3**	**42**	**764**

Comparison of 2016 and 2018 results on standard precaution for infection prevention

- Percentage of facilities with safe final disposable infectious waste item was 58 percent in 2016 and 52 percent in 2018which is on average 5 and nearly 5 items out 9 respectively..
- Percent of facilities having guideline for standard precaution was 20 percent in 2016 and 18 percent in 2018.

2.4. Diagnostics

Service delivery would not be completed without diagnostic capacities in the health facilities.

Health facilities do not necessarily require the availability of a specific or designated laboratory building, but the mere presence of tests in the facility including the availability of reagents and equipment needed for each test depending on the level of the facility type.

Facilities were assessed on the capacity to conduct the following 8 diagnostic tests on-site at the facility:

- HIV test,
- Blood glucose test,
- Malaria diagnostic capacity,
- Syphilis rapid test,
- Haemoglobin test,
- Urine pregnancy test,

- Urine dipstick for protein, and
- Urine dipstick for glucose.

Figure 2.4.1 shows the percentage of facilities with diagnostic capacity

- Only 4 percent facilities excluding health post had all 8 diagnostic capacity items to conduct all types of diagnostic tests assessed in this survey.
- The percent of facilities having the diagnostic capacity items to test varied from the 56 percent of facilities for malaria diagnostic to the 20 percent for haemoglobin at national level.
- On average each facility excluding health post had 3 diagnostic capacity tracer items out of 8 (Figure 2.4.1).

Figure 2.4. 1 Percentage of facilities with diagnostic capacity items available (N=632), Ethiopia, 2018

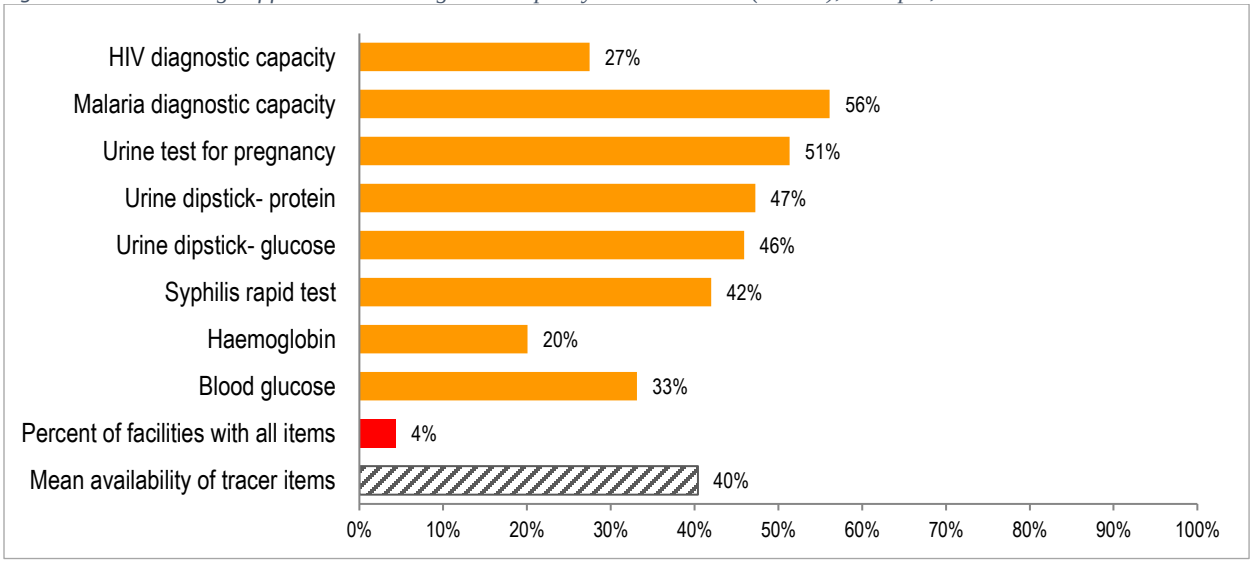


Figure 2.4.2 shows the mean availability of diagnostic capacity **tracer items by region**

- In all health facilities excluding health post, out of 8 diagnostic capacity tests, on average the availability of tests ranged from 2 in Oromiya to 6 in Harari region (Figure 2.4.2).

Figure 2.4. 2 Mean availability of diagnostic capacity tracer items, by region (N=632), Ethiopia, 2018

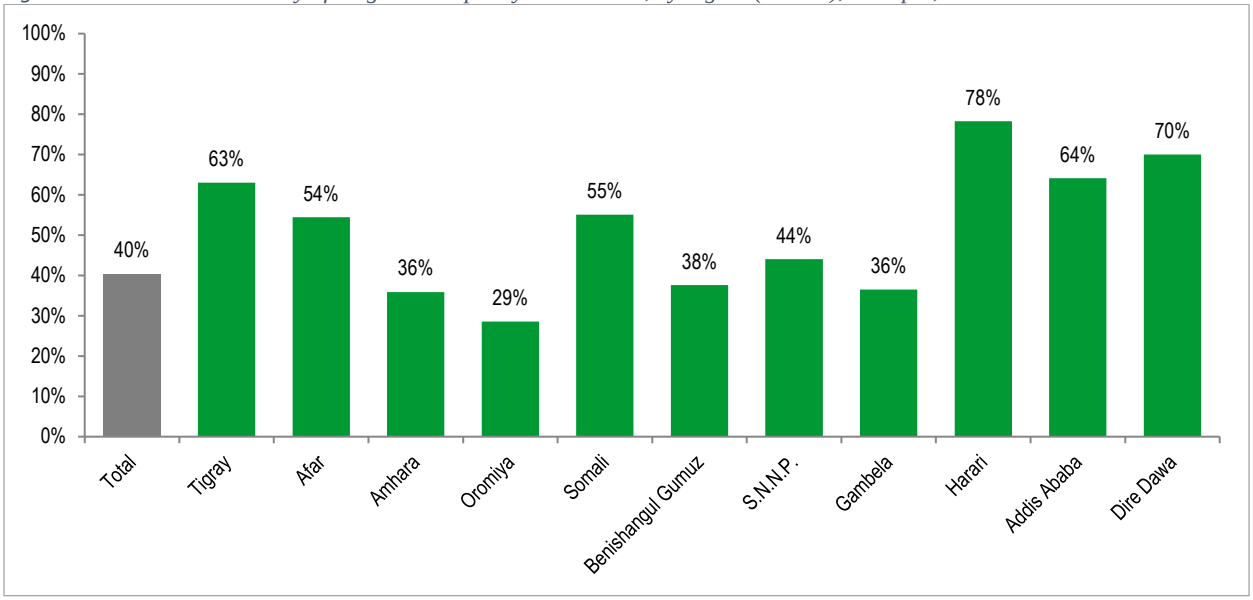


Table 2.4.1 shows availability of diagnostic capacities showed difference by region, facility type, managing authority and residence type. Availability of diagnostic capacities showed variation by region, facility type, managing authority and location.

- Ninety-four percent of facilities in Afar region had malaria diagnostic capacity while only 43 percent of facilities had the capacity in Oromiya.
- In Dire Dawa region, 18 percent of facilities had all 8 diagnostic capacity, which was the highest. But, only one percent of facilities in Oromiya, SNNP and Gambella had all diagnostic capacity to conduct the tests.
- The percent of facilities to conduct haemoglobin test was less than or equal to 41 percent for all regions except for Harari (68 percent) and Dire Dawa (53 percent).
- On average, each referral hospital had 7 diagnostic tracer items of 8 for while each lower clinic on average had no item for diagnostic) out of 8 diagnostic capacity tracer items.
- Percent of facilities with all diagnostic items varied from 42 percent for referral hospital to less than 1 percent for lower clinic.
- On average, each public facility had 4 tracer items for diagnostic capacitywhile other than public facility had 2 on average out of 8 diagnostic capacity tracer items.
- On average, each facility had 4 and 3 tracer items for diagnostic capacity in urban and rural settings respectively.
- Seven and one percent of urban and rural facilities had all tracer items for diagnostic respectively (Table 2.4.1)

Table 2.4. 1 Availability of diagnostic capacities showed difference by region, facility type, managing authority and urban/rural, Ethiopia, 2018

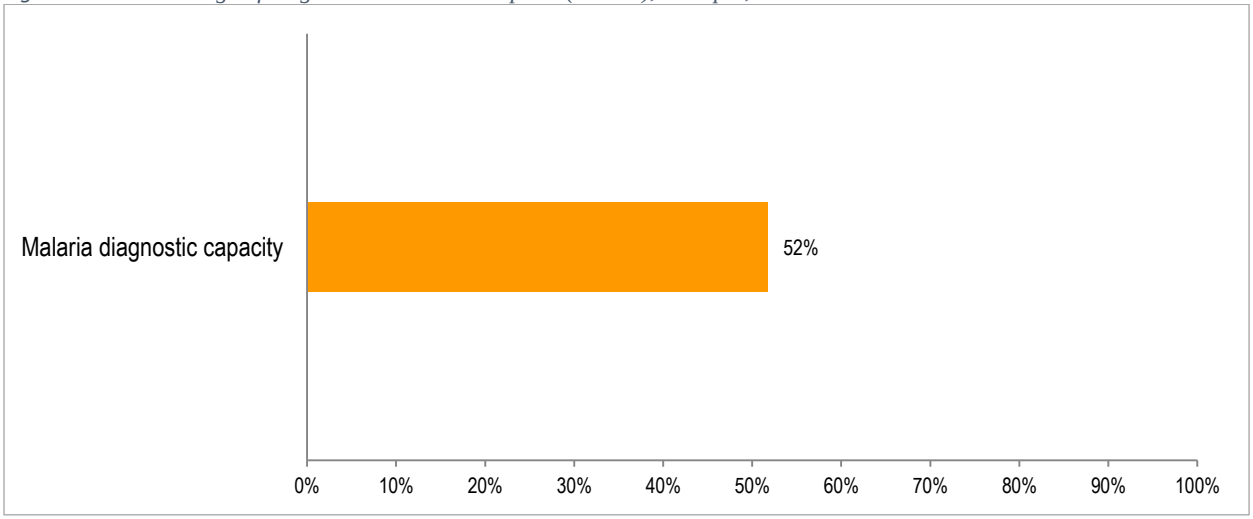
	Haemoglobin	Blood glucose	Malaria diagnostic capacity	Urine dipstick-protein	Urine dipstick-glucose	HIV diagnostic capacity	Syphilis rapid test	Urine test for pregnancy	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions											
Tigray	41	68	77	71	68	44	64	72	9	63	65
Afar	29	55	94	56	52	43	32	74	3	54	37
Amhara	14	34	51	36	36	31	36	48	7	36	98
Oromiya	19	6	43	36	33	23	36	33	1	29	109

Somali	38	44	83	60	60	31	54	69	10	55	44
Benishangul Gumuz	15	25	56	49	46	28	36	46	4	38	31
S.N.N.P.	11	41	61	55	55	26	42	61	1	44	89
Gambella	19	40	66	33	33	14	25	60	1	36	30
Harari	68	77	91	94	94	20	88	94	15	78	24
Addis Ababa	37	75	75	78	78	27	66	78	13	64	77
Dire Dawa	53	84	59	89	89	35	67	85	18	70	28
Facility type											
Referral Hospital	58	94	87	100	100	84	90	100	42	89	31
General Hospital	65	97	91	96	96	76	85	97	41	88	116
Primary Hospital	50	91	90	96	96	65	77	97	24	83	156
Health Centre	21	29	79	60	57	46	55	64	3	51	164
Higher Clinic	75	100	71	100	100	20	99	99	1	83	19
Medium Clinic	43	87	89	87	87	21	74	94	10	73	74
Lower Clinic	0	3	5	2	2	0	0	6	0	2	72
Managing authority											
Public	24	33	78	61	58	46	55	65	5	52	410
Others	16	33	34	33	33	9	29	38	4	28	222
Urban/Rural											
Urban	27	43	56	55	55	30	49	59	7	47	494
Rural	10	18	56	35	32	24	31	40	1	31	138
Total	**20**	**33**	**56**	**47**	**46**	**27**	**42**	**51**	**4**	**40**	**632**

Among health posts diagnostic tests for malaria were only assessed.

- Fifty-two percent of health post had malaria diagnostic capacity (Figure 2.4.3).

Figure 2.4. 3 Percentage of diagnostic test at Health posts (N=132), Ethiopia, 2018



Comparison of 2016 and 2018 results on Diagnostic Capacity

- Percent of facilities having all tracer items to conduct all types of diagnostic test remained the same 4 percent both in 2016 and 2018
- Percent of facilities with HIV diagnostic capacity was increased from 20 percent in 2016 to 27 percent in 2018 at national level
- Percent of facilities with Haemoglobin diagnostic capacity to conduct the test onsite was decreased from 25 percent in 2016 compared with 20 percent in 2018.

2.5 Essential Medicines

The provision of promotive, preventive, curative and rehabilitative health services is depending on regular availability of relevant medicines of proven safety, efficacy and quality at affordable price and their proper use; including proper diagnosis of health problems, prescribing, and dispensing to patients.

Essential medicines are those that satisfy the priority health care needs of the population. They are selected with due regards to public health relevance, evidence on safety, efficacy, quality and comparative cost-effectiveness. They are intended to be available within the context of functioning health systems at all times in adequate amount, appropriate dosage forms with assured quality [FMHACA, 2014]

The essential medicines assessed in this Service Availability and Readiness Assessment consists of 24 tracer medicines.

Availability of essential medicines in health facilities excluding health posts

Figure 2.5.1 shows percentage of facilities with essential medicine items avaialble

- From the total 24 essential medicines, Oral Rehydration Solution was available in 59 percent of health facilities excluding health post, while only 4 percent of these health facilities have Beclomethasone inhaler and Simvastatin tablet/other statin.
- None of the health facilities excluding health posts, have all the 24 essential medicines
- At national level, on average health facilities excluding health posts have 7 essential medicines out of 24 essential medicines.

Figure 2.5. 1 Percentage of facilities with essential medicine items available (N=632), Ethiopia, 2018

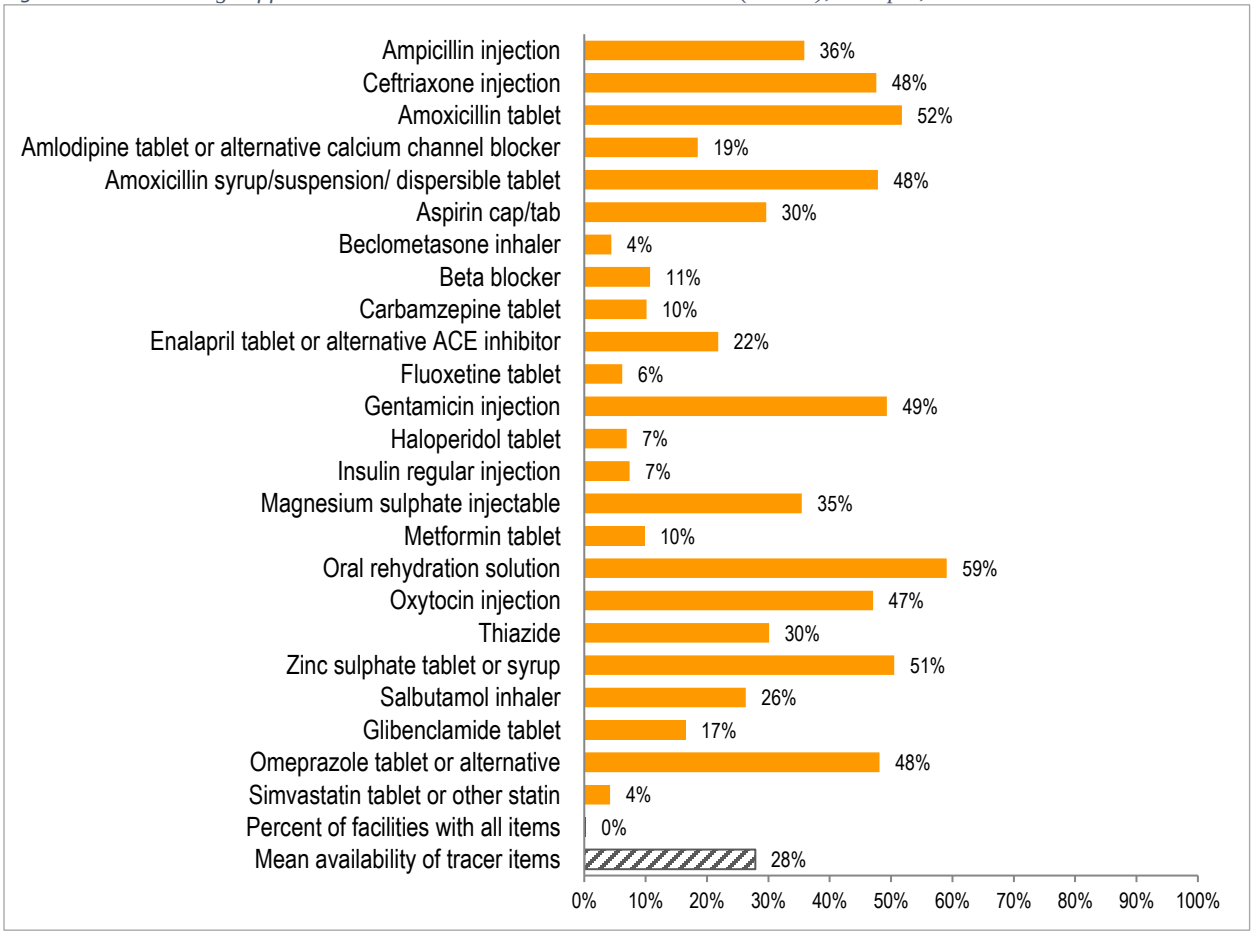


Figure 2.5. 2 Shows mean availability of essential medicine tracer items by region

- In health facilities excluding health posts, out of the 24 essential medicines on average the availability of essential medicines items across regions ranges from 4 (15 percent) in Gambella to 13 in Dire Dawa. (Figure 2.5.2)

Figure 2.5. 3 Mean availability of essential medicine tracer items, by region (N=632), Ethiopia, 2018

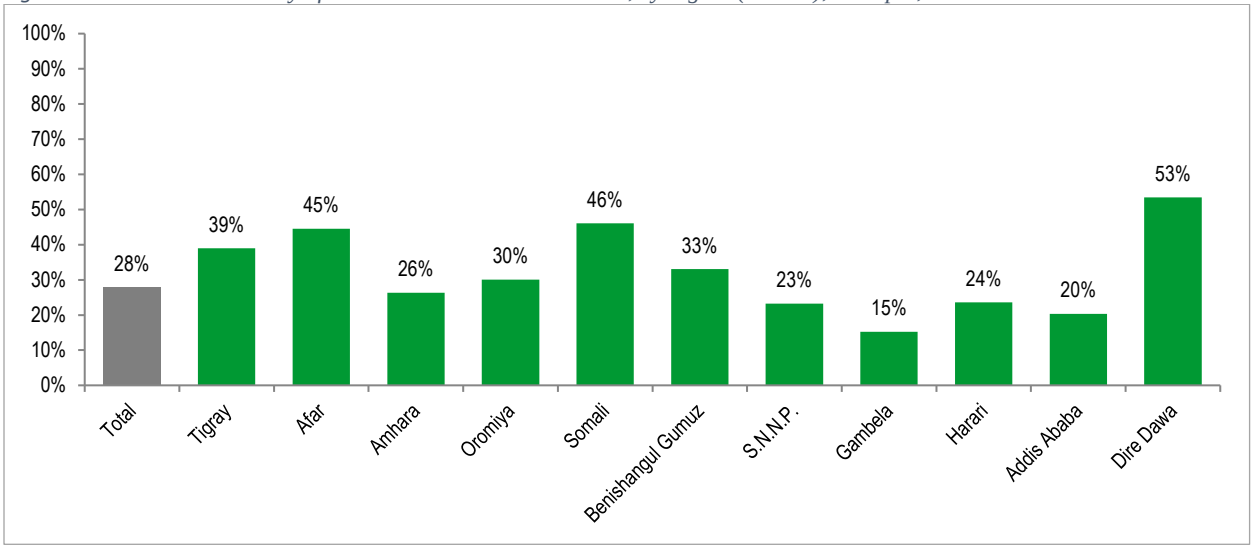


Table 2.5.1 shows percentage of facilities having the 24 essential medicines available by region, facility type, and managing authority and residence type

- The average number of essential medicines tracer items were more likely to be available in facilities managed by government which was 12 out of 24 than facilities managed by others, only 2 from 24 essential medicine tracer items.
- Concerning facility type, on average the facilities which have the highest number of essential medicine tracer items from the total of 24 was observed in referral hospitals (21), followed by general hospital (19), primary hospital (19), health centre (12), higher clinic (5), medium clinic (2) and lower clinic (1)
- On average the availability of essential medicines tracer items in facilities excluding health posts from rural settings was higher (8 out of 24) than facilities in urban settings (6 out of 24).

Table 2.5. 1 Percentage of facilities having the 24 essential medicines available by region, facility type, and managing authority and urban/rural, Ethiopia SARA, 2018

	Amlodipine tablet or alternative calcium channel blocker	Amoxicillin syrup/suspension/dispersible tablet	Amoxicillin tablet	Ampicillin injection	Aspirin cap/tab	Beclometasone inhaler	Beta blocker	Carbamzepine tablet	Ceftriaxone injection	Enalapril tablet or alternative ACE inhibitor	Fluoxetine tablet	Gentamicin injection	Glibenclamide tablet	Haloperidol tablet	Insulin regular injection	Magnesium sulphate injectable	Metformin tablet	Omeprazole tablet or alternative	Oral rehydration solution	Oxytocin injection	Salbutamol inhaler	Simvastatin tablet or other statin	Thiazide	Zinc sulphate tablet or syrup	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions																											
Tigray	16	67	67	63	36	6	15	16	70	25	10	70	16	13	6	60	12	67	73	67	49	6	52	59	0	39	65
Afar	30	58	84	52	47	10	36	12	72	48	9	77	55	13	29	44	49	67	64	65	63	9	42	52	1	45	37
Amhara	20	44	47	38	26	1	13	10	42	16	2	47	25	8	3	38	3	47	58	39	20	7	33	48	0	26	98
Oromiya	16	54	58	40	43	7	9	10	51	27	8	48	13	6	9	37	6	50	60	54	26	1	34	59	0	30	109
Somali	29	76	78	53	40	8	22	14	79	31	4	87	34	5	12	52	56	57	91	82	43	9	46	87	0	46	44
Benishangul Gumuz	24	66	69	41	50	7	6	14	62	19	9	69	18	8	2	25	14	66	57	46	32	6	46	43	0	33	31
S.N.N.P.	20	41	47	26	12	1	3	6	48	15	2	54	6	3	6	30	6	47	60	50	23	1	15	47	0	23	89
Gambella	2	39	41	8	14	2	4	2	25	2	1	30	3	2	3	10	4	39	65	17	14	1	7	31	1	15	30
Harari	28	30	37	20	28	5	20	10	37	28	8	37	29	13	20	20	26	37	30	37	10	8	24	28	3	24	24
Addis Ababa	17	25	29	19	21	6	16	17	25	28	16	25	18	12	11	20	24	28	36	19	26	9	25	23	0	20	77
Dire Dawa	51	84	84	31	64	22	51	31	75	67	31	73	56	29	30	43	61	76	84	45	60	32	32	71	2	53	28
Facility type																											
Referral hospital	84	100	100	81	94	39	87	97	100	100	74	97	71	94	90	94	97	100	94	100	65	90	97	87	10	86	31
General hospital	72	92	97	75	91	28	82	78	97	92	53	95	70	72	82	83	92	96	92	99	70	50	85	77	6	79	116
Primary hospital	69	96	99	79	90	25	73	70	97	89	48	99	75	71	72	90	84	94	92	99	77	35	91	90	4	78	156
Health centre	30	89	96	70	51	6	13	14	87	35	7	90	26	7	7	69	10	87	90	93	45	3	54	89	0	48	164
Higher Clinic	26	27	28	16	27	15	27	15	36	26	16	28	26	14	14	13	28	29	20	9	27	16	15	19	0	21	19
Medium Clinic	7	14	17	3	7	1	5	1	14	9	3	15	7	2	3	1	7	17	25	2	12	3	9	7	0	8	74
Lower Clinic	0	2	2	0	3	0	0	0	3	0	0	3	0	0	0	0	0	4	30	0	0	0	0	14	0	3	72
Managing authority																											
Public	32	86	93	67	52	7	17	18	84	37	10	88	28	11	12	68	14	84	89	90	45	6	54	86	0	49	410
Others	5	9	10	4	7	2	4	2	10	6	3	10	5	2	3	3	5	11	29	3	7	3	5	14	0	7	222
Urban/Rural																											
Urban	18	35	39	28	27	3	11	12	36	25	6	36	17	8	8	26	13	38	50	32	26	6	29	39	0	23	494
Rural	20	68	72	47	33	7	10	7	66	17	7	71	16	5	6	51	5	64	73	71	26	2	32	69	0	35	138
Total	**19**	**48**	**52**	**36**	**30**	**4**	**11**	**10**	**48**	**22**	**6**	**49**	**17**	**7**	**7**	**35**	**10**	**48**	**59**	**47**	**26**	**4**	**30**	**51**	**0**	**28**	**632**

Availability of essential medicines in health posts

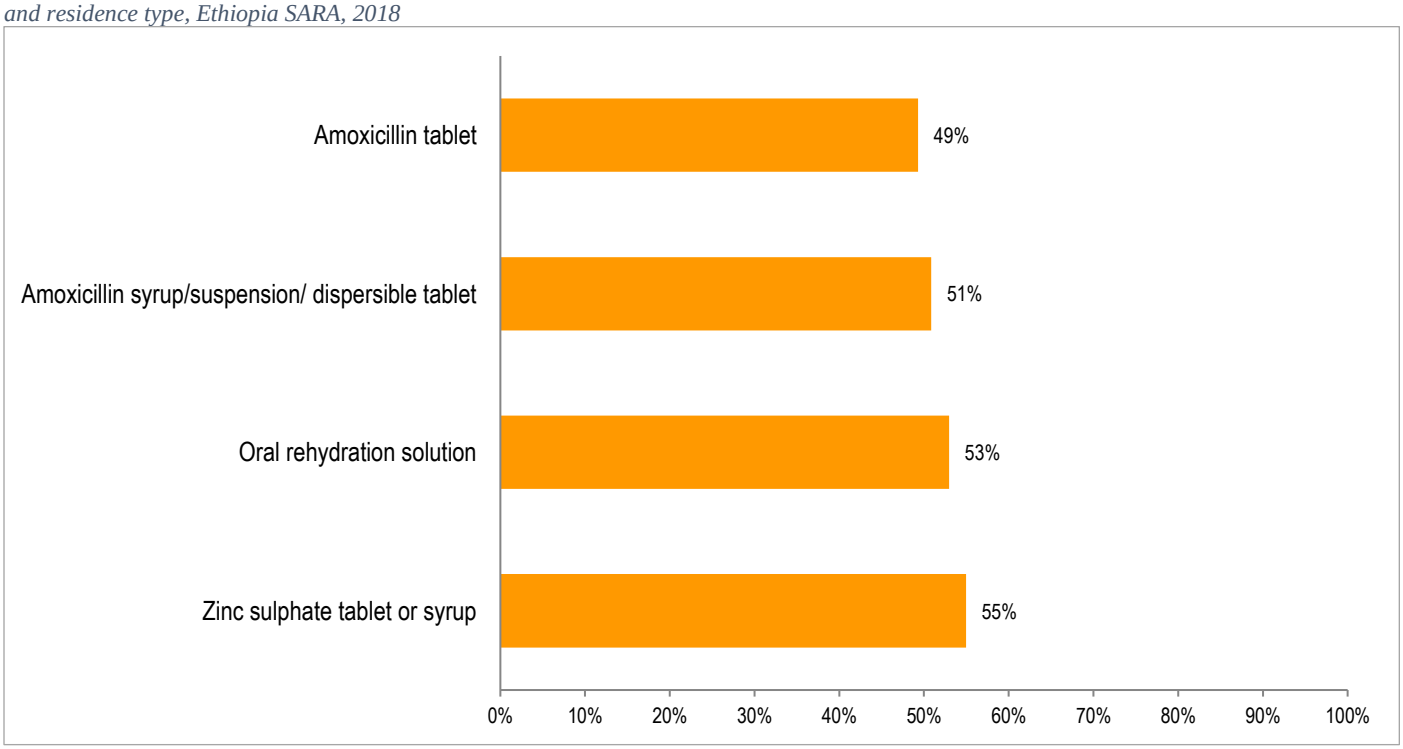
The health post shall not maintain medicines, medical supplies or equipment, which is not included in the health post medicines list. Only a number of essential medicines needed by Health Extension Workers (HEWs) in their endeavour to serve the community [FMHACA. 2011]. Hence, only a few of the essential medicines tracer items should be expected to be found at health post level. Therefore, health posts were assessed for the availability the following four essential medicines namely:

Amoxicillin syrup/suspension/dispersible tablet, Amoxicillin tablet, Oral rehydration solution, and Zinc sulphate tablet/syrup to identify general service readiness at health post level.

Table 2.5.2 shows Percentage of health posts having the 4 of the essential medicines available by region, facility type, and managing authority and residence type, Ethiopia

- Zinc sulphate tablet or syrup was the most available essential medicine at health post level which was found to be 55 percent followed by Oral rehydration solution (ORS) (53 percent), Amoxicillin syrup/suspension/dispersible tablet (51 percent) and Amoxicillin tablet (49 percent).
- ORS was most frequently available at Harari regional state (82 percent) but it is least available at health posts located in SNNPR (44 percent).
- Oral rehydration solution was more frequently available essential medicines at health posts from urban setting (66 percent) than health posts in rural setting (52 percent) respectively

Figure 2.5. 4 Percentage of health posts having the 4 of the essential medicines available by region, facility type, and managing authority and residence type, Ethiopia SARA, 2018



2.6 General Service Readiness Summary Score

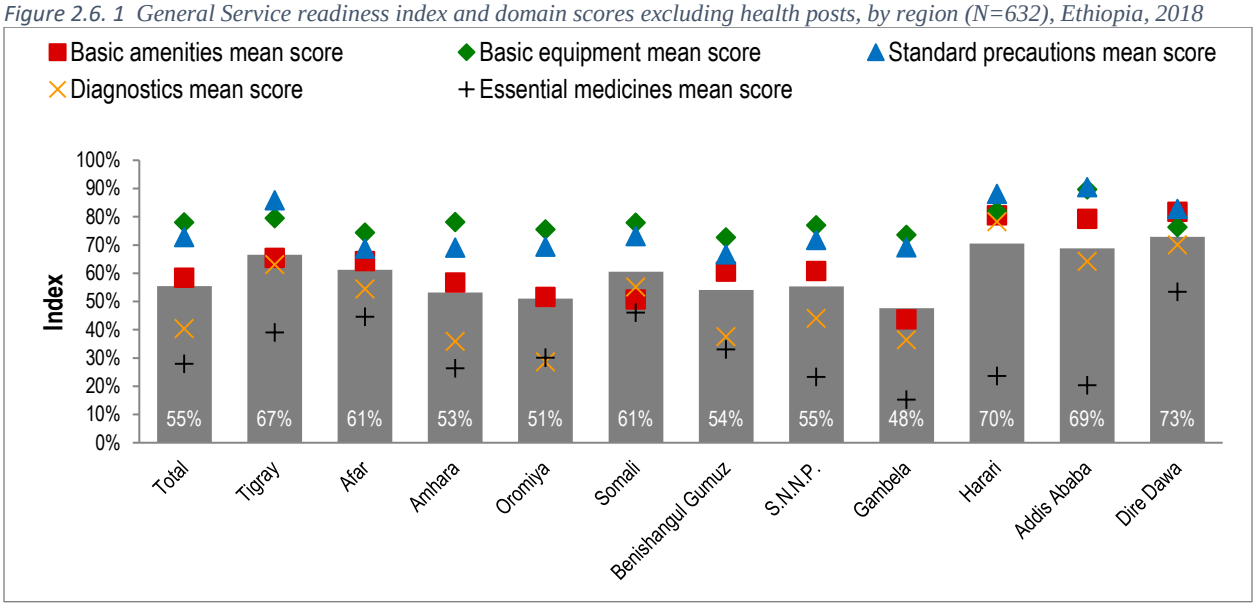
The general health service readiness score is a composite summary measure designed through combining information from the five general service readiness domains namely: basic amenities, standard precautions for infection prevention, basic equipment, diagnostics and essential medicines. For each domain, the average availability of tracer items was revealed as the domain score.

Figure 2.6.1 shows general service readiness index and domain scores.

- At national level the general service readiness index was 55 percent, implying that 55 percent of all health facilities excluding health posts were ready to provide the general health services.

- Of the 55 percent general service readiness index of these facilities at national level, 58 percent have the basic amenities to provide services, 73 percent have standard precautions for infection prevention, 78 percent have the basic equipment required, 40 percent have diagnostic capacity and 28 percent have essential medicines
- Across the five domains, the basic equipment mean score index was the highest (78 percent) and the essential medicines mean score index was the lowest (28 percent)
- Health facilities excluding health posts from Dire Dawa City administration had the highest general health service readiness index of 73 percent followed by Harari with 70 percent. Gambella scored lowest at 48%.
- Regarding by facility type, referral hospitals had the highest general health service readiness index of 89 percent followed by general hospital with 86 percent and primary hospital with 81 percent.
- The government owned health facilities excluding health posts have the highest general service readiness index (61 percent) compare with the facilities under other managing authority (50 percent).
- General Service readiness index at health facilities excluding health posts from urban setting was 58 percent while it was 51 percent in rural setting.

Figure 2.6. 1 General Service readiness index and domain scores excluding health posts, by region (N=632), Ethiopia, 2018



Comparison between SARA 2016 and 2018 results

- The availability of Oral Rehydration Solution percent was increased for facilities excluding health posts from 55 percent in 2016 to 59 percent in 2018
- At national level, on average essential medicines tracer items among health facilities excluding health posts were 6 out of 24 (26 percent) in 2016 while it was 7 out of 24 (28 percent) in 2018
- An increment of average number of essential medicines tracer items from the total of 24 (10 to 12) were observed in health facilities excluding health posts which were managed by government
- In health posts, the availability of Oral Rehydration Solution was increased from 40 percent to 53 percent
- Generally in 2016, 54 percent of all health facilities excluding health posts were ready to provide the general health services, while it was 55 percent in 2018

3. Service Specific Availability and Readiness

3.1 Maternal health

3.1.1 Family Planning

Service availability

Figure 3.1.1.1 shows the availability of family planning service and its components in all facilities

- Nationally, ninety-five percent of the facilities offered family planning service.
- Progestin-only contraceptive pills (44 percent), combined oral contraceptive pills (91 percent), and male condoms (84 percent) were more likely to be offered in health facilities. However, Cycle beads for standard day's method and Female condoms were less likely to be available in health facilities (2 percent each).
- Family planning services are available universally in Health Centres (99 percent), Health Posts (97 percent), and primary hospitals (96 percent).
- Higher clinics and lower clinics were less likely to offer family planning services (80 percent) compared with other facilities.
- Facilities managed by the government are more likely to offer the service compared with facilities managed by other authorities (97 percent versus 82 percent).
- Facilities in Tigray, Amhara, Benishangul Gumuz, S.N.N.P, and Gambella were more likely to provide family planning service (99 percent) and facilities in Somali region were less likely to provide the service (53 percent).
- Ninety seven percent of the facilities in rural area offered family planning service compared with 90 percent of the facilities in urban area.

Table 3.1.1. 1 percentage of facilities offering family planning services by facility type, managing authority (public and others), and by urban vs. rural, Ethiopia, 2018

	Offers family planning services	Combined oral contraceptives	Progestin-only contraceptives	Combined injectable contraceptives	Progestin-only injectable contraceptives	Male condoms	Female condoms	IUCD	Implant	Cycle beads for standard days method	Emergency contraceptive pills	Male sterilization	Female sterilization	Total number of facilities
Regions														
Tigray	99	92	66	9	65	92	1	32	33	5	45	2	5	76
Afar	91	90	42	20	69	67	2	16	19	5	38	1	1	49
Amhara	99	99	50	9	58	97	6	16	21	7	56	1	3	114
Oromiya	97	95	30	20	38	81	1	12	18	0	21	0	2	125
Somali	53	45	19	4	15	31	0	5	10	0	15	0	1	57
Benishangul Gumuz	99	99	36	2	74	97	1	8	9	0	23	0	1	45
S.N.N.P.	99	88	62	35	38	87	1	15	17	0	37	1	2	105
Gambella	99	99	25	12	54	92	6	10	13	0	47	0	0	42
Harari	74	69	59	7	70	59	0	28	28	3	30	5	6	35
Addis Ababa	60	60	42	12	48	42	1	39	42	6	44	5	6	77
Dire Dawa	79	79	67	10	6	68	0	37	40	3	49	5	5	39
Facility type														
Referral Hospital	94	90	74	23	65	84	10	94	94	19	81	65	81	31
General Hospital	93	92	76	22	71	83	4	88	89	9	78	51	69	116
Primary Hospital	96	92	79	28	59	89	6	92	96	10	85	31	63	156
Health Centre	99	93	77	24	53	90	7	70	95	5	71	2	5	164
Health Post	97	93	37	17	43	84	1	0	0	1	20	0	0	132
Higher Clinic	80	80	45	11	55	59	0	65	65	8	36	0	42	19
Medium Clinic	86	81	50	21	62	76	0	48	47	2	65	5	5	74
Lower Clinic	81	79	38	23	32	76	1	9	16	1	59	0	0	72
Managing authority														
Public	97	93	45	18	45	85	2	14	18	2	30	1	2	542
Others	82	81	42	22	41	75	1	24	26	2	60	2	4	222
Urban/Rural														
Urban	90	85	52	29	49	82	4	35	39	3	57	4	8	504
Rural	97	93	42	15	43	84	2	8	13	2	27	0	0	260
Total	**95**	**91**	**44**	**19**	**44**	**84**	**2**	**15**	**19**	**2**	**35**	**1**	**2**	**764**

Service readiness

Readiness of health facilities to provide family planning service was assessed based on the availability of the 8 tracer items under the category of trained staff and guidelines, equipment and, medicines and commodities (Table 3.1.1.2.).

Table 3.1.1. 2 tracer items for family planning service readiness, Ethiopia, SARA 2018

Domains	Tracer items (% of facilities with item)
Trained staff and guidelines	• Guidelines on family planning • Staff trained in family planning in the past two years
Equipment	• Blood pressure apparatus • Family panning check-lists
Medicines and commodities	• Combined estrogen progesterone oral contraceptive pills • Progestin-only contraceptive pills • Injectable contraceptives • Condoms

Table 3.1.1. 3 shows readiness of facilities based on the above tracer items

- Although, all health facilities were expected to be ready to provide family planning service only seven percent of the facilities had fulfilled all the tracer items for readiness and on average 5 tracer items out of eight were availability in the facilities (63 percent).
- On average facilities in Harari and Addis Ababa had six out of the eight trace items (76 percent each) and facilities in Somali region had only three out of the eight tracer items (43 percent).
- The most available family planning services tracer item was condom (81 percent) and the least available item was progestin-only contraceptive pills (35 percent).
- Thirty eight percent of the referral hospitals had all the tracer items compared to health posts where only 4 percent had all items.
- On average seven out of eight tracer items were available in the referral hospitals (86 percent). However only five tracer items out of eight were available in lower clinics (59 percent).
- Facilities managed by the government had approximately the same availability of tracer items compared with facilities managed by other than the government (63 percent versus 61 percent).
- On average, facilities located in both urban and rural areas had five out of eight tracer items of family planning (66 percent and 61 percent respectively) (See table 3.1.1.3).

Table 3.1.1. 3 The percentage distribution of family planning service readiness tracer items availability by region, facility type, managing authority and Urban/Rural Setting, Ethiopia SARA 2018.

	Guidelines available family planning	Family planning check-lists and/or job-aids	At least one trained staff family planning	Blood pressure apparatus	Combined estrogen progesterone oral contraceptive pills	Progestin-only contraceptive pills	Injectable contraceptives	Condoms	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions											
Tigray	61	88	67	71	63	69	72	93	13	73	75
Afar	10	29	29	88	80	33	86	72	5	53	44
Amhara	51	87	56	63	67	42	73	80	13	65	111
Oromiya	45	66	65	51	76	26	80	79	2	61	116
Somali	32	39	26	73	74	29	21	49	3	43	40
Benishangul Gumuz	40	49	27	47	69	16	93	81	4	53	44
S.N.N.P.	49	77	76	54	71	34	62	85	7	64	102
Gambella	25	37	47	69	88	20	68	84	3	55	41
Harari	56	95	58	81	76	75	90	75	28	76	28
Addis Ababa	66	75	58	100	74	62	89	81	28	76	61
Dire Dawa	49	85	58	96	91	70	20	78	11	68	32
Facility type											

Referral Hospital	59	76	79	100	100	90	83	100	38	86	29
General Hospital	66	81	67	99	88	74	87	93	29	82	108
Primary Hospital	56	72	75	98	90	83	83	97	31	82	150
Health Centre	43	74	63	93	87	76	73	97	14	76	160
Health Post	51	74	68	41	69	24	73	76	4	60	124
Higher Clinic	47	98	14	100	48	22	80	99	10	63	11
Medium Clinic	52	57	54	100	54	40	73	84	14	64	54
Lower Clinic	21	69	27	97	75	36	66	82	7	59	58
Managing authority											
Public	50	74	68	51	73	34	73	80	6	63	525
Others	34	67	34	98	66	37	68	83	10	61	169
Urban/Rural											
Urban	43	76	52	78	74	53	75	78	13	66	450
Rural	49	72	66	51	71	29	71	82	5	61	244
Total	**47**	**73**	**63**	**58**	**72**	**35**	**72**	**81**	**7**	**63**	**694**

Comparison of 2016 and 2018 SARA results on Family Planning

- Family planning provided by all the facilities were 94 percent in 2016 and 95 percent in 2018.
- Health centres (99 percent in both surveys) and higher clinics were the leading and least provider of family planning in both surveys (77 in 2016 and 80 in 2018 respectively).
- Only seven percent of the facilities had all the tracer items in both 2016 and 2018.

3.1.2 Antenatal Care service

Service availability

Antenatal care (ANC) is essential to identify and treat problems during pregnancy such as anaemia and hypertension, as well as for preventive care such as folic acid and iron supplementation, and tetanus toxoid vaccination. The newly revised guideline of World Health Organization (WHO)[2] recommends in the absence of complication women should have at least eight ANC contacts, the first during the first trimester.

As shown in table 3.1.2.1.below the availability of ANC provision was assessed using four components of the service: iron supplementation, folic acid supplementation, tetanus toxoid vaccination, and monitoring for hypertensive disorder of pregnancy.

- ANC was offered in 78 percent of the facilities.
- Tetanus toxoid vaccination was available in 65 percent of the facilities followed by iron supplementation (61 percent). However, monitoring for hypertensive disorder of pregnancy and folic acid supplementation were given by 53 percent of the facilities each.
- Facilities in Afar and S.N.N.P regions were more likely to provide ANC service (86 and 87 percent respectively). On the other hand, facilities in Addis Ababa were less likely to provide ANC service (26 percent).
- ANC services were universally available in general hospitals, health centres, and primary hospitals. However, 20 percent and 23 percent of the medium and lower clinics respectively were providing the service. In addition, tetanus toxoid vaccination was available in only 1 percent and 3 percent of the medium and lower clinics respectively.
- Eighty seven percent of the facilities managed by the government offered ANC service compared with facilities manged by other managing authority (27 percent).
- ANC service was more likely to be available in rural areas (84 percent) than in urban areas (59 percent).
- Eighty six percent of the facilities in Afar offered iron supplementation and monitoring for hypertension disorder of pregnancy while 15 percent and 16 percent of the facilities in Addis Ababa offered iron and folic acid supplementations respectively.

[2] WHO, 2016. WHO recommendations on antenatal care for a positive pregnancy experience.

Table 3.1.2. 1 The percentage distribution of Antenatal care service availability by region, facility type, managing authority and Urban/Rural Setting, Ethiopia SARA 2018

	Offers antenatal care	Iron supplementation	Folic acid supplementation	Tetanus toxoid vaccination	Monitoring for hypertensive disorder of pregnancy	Total number of facilities
Regions						
Tigray	82	70	71	42	60	76
Afar	86	86	78	76	86	49
Amhara	73	61	54	62	45	114
Oromiya	81	64	60	69	53	125
Somali	59	40	40	40	40	57
Benishangul Gumuz	83	67	67	73	59	45
S.N.N.P.	87	64	42	77	65	105
Gambella	38	27	26	29	33	42
Harari	71	60	60	52	69	35
Addis Ababa	26	15	16	18	25	77
Dire Dawa	68	50	46	60	68	39
Facility type						
Referral Hospital	94	87	87	90	94	31
General Hospital	100	89	86	83	99	116
Primary Hospital	99	89	85	86	97	156
Health Centre	100	86	80	96	97	164
Health Post	85	67	55	72	50	132
Higher Clinic	59	51	51	51	59	19
Medium Clinic	20	14	14	1	20	74
Lower Clinic	23	9	11	3	23	72
Managing authority						
Public	87	70	60	76	58	542
Others	27	15	16	7	27	222
Urban/Rural						
Urban	59	42	40	46	51	504
Rural	84	68	57	71	54	260
Total	**78**	**61**	**53**	**65**	**53**	**764**

Service Readiness

Table 3.1.2. 2 List of ANC service readiness tracer items, Ethiopia, SARA 2018

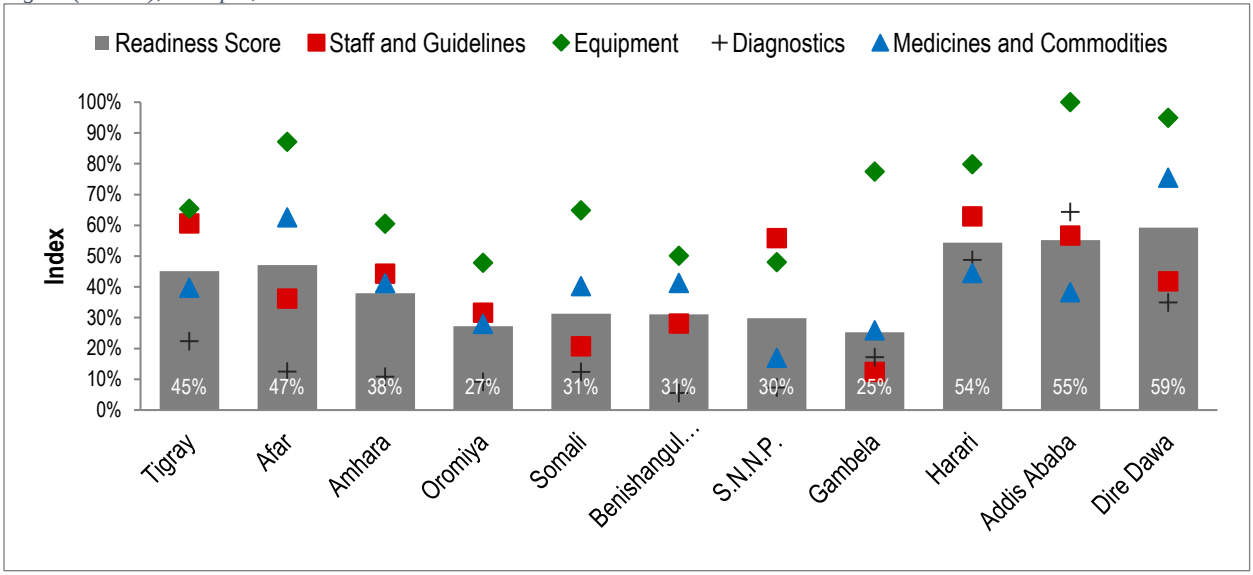
Domains	Tracer items (% of facilities with item)
Trained staff and guidelines	• Guidelines on antenatal care service s (ANC) • Staff trained in ANC in the past two years • ANC check-list and/or job-aids
Equipment	• Blood pressure apparatus
Diagnostics	• Haemoglobin • Urine-dipstick-protein
Medicines and commodities	• Iron tablets • Folic acid tablets • Tetanus toxoid vaccine • ITNs

The ANC service readiness of health facilities was assessed using ten tracer items categorized in four domains: Trained Staff & guidelines, Equipment, Diagnostics, and Medicines & commodities.

As shown in Figure 3.1.2.1

- Over all, none of the facilities had all the tracer items. However, on average only three tracer items out of ten were available in the facilities (32 percent).
- Three percent of the facilities in Dire Dawa had all tracer items.
- On average, 6 out of 10 tracer items (59 percent) were available in Dire Dawa facilities and the tracer items were least available in Gambella (three out of ten)

Figure 3.1.2. 1 Percentage of facilities that have tracer items for antenatal care services among facilities that provide this service, by region (N=615), Ethiopia, 2018



As shown in table 3.1.2.3

- Two percent of the general and primary hospital each had all the tracer items.
- On average, availability of ANC service tracer items ranged seven out of ten tracer items (70 percent) in Referral hospitals to the lowest two out of ten tracer items in lower clinics (19 percent).
- On average, three out of ten tracer items were available in facilities manged by the government and other than the government (32 percent and 31 percent respectively). In addition, four out of the ten tracer items (38 percent) were available in facilities located in urban areas compared with 3 out of ten facilities located in rural areas (31 percent).

Table 3.1.2. 3 The percentage distribution of Antenatal care service availability by region, facility type, managing authority and Urban/Rural Setting, Ethiopia SARA 2018

	Guidelines available antenatal care	ANC check-lists and/or job-aids	At least one trained staff antenatal care	Blood pressure apparatus	Haemoglobin test	Urine dipstick protein test	Iron tablets	Folic acid tablets	Tetanus toxoid vaccine	ITNs	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions													
Tigray	49	92	40	65	17	28	58	56	34	11	0	45	69
Afar	15	42	52	87	9	16	93	81	51	24	0	47	38
Amhara	37	60	36	60	5	16	53	57	34	20	0	38	101
Oromiya	17	54	24	48	7	12	42	42	18	10	0	27	106
Somali	18	38	6	65	10	14	41	44	39	37	0	31	39
Benishangul Gumuz	35	36	14	50	2	9	40	42	36	47	0	31	35
S.N.N.P.	57	71	39	48	2	12	12	12	20	23	0	30	91
Gambella	10	15	11	77	11	23	35	28	28	13	0	25	24
Harari	37	85	67	80	43	55	67	67	41	2	0	54	27
Addis Ababa	55	82	33	100	47	81	46	45	61	0	0	55	56
Dire Dawa	28	55	43	95	31	39	86	79	67	71	3	59	29
Facility type													
Referral Hospital	48	79	45	100	62	100	90	90	76	7	0	70	29
General Hospital	47	81	36	99	65	96	86	88	59	12	2	67	116
Primary Hospital	44	77	42	98	50	95	77	80	74	16	2	65	154
Health Centre	36	81	20	93	21	60	69	68	68	22	0	54	162
Health Post	35	56	35	39	0	0	31	32	15	18	0	26	104
Higher Clinic	86	97	4	100	85	100	17	17	15	0	0	52	8
Medium Clinic	11	65	8	100	82	94	11	5	3	0	0	38	21

Lower clinic	14	36	13	99	0	0	15	13	0	0	0	19	21
Managing authority													
Public	35	61	32	51	5	13	39	40	26	19	0	32	503
Others	25	51	12	100	32	41	21	19	7	1	0	31	112
Urban/Rural													
Urban	39	68	20	69	25	47	35	35	31	6	0	38	404
Rural	33	59	34	50	2	7	39	40	24	21	0	31	211
Total	**35**	**61**	**31**	**54**	**6**	**15**	**38**	**39**	**25**	**18**	**0**	**32**	**615**

Comparison of 2016 and 2018 SARA results on ANC

- ANC service availability decreased from 80 percent in 2016 to 78 percent in 2018.
- ANC service availability in Addis Ababa city administration decreased from 41 percent in 2016 to 26 percent in 2018.
- None of the facilities had all the tracer items in both of the surveys.

3.1.3 Basic Emergency and Essential Obstetric and New born care (BEm/EONC)

Service availability

The availability of BEmONC service in health facilities excluding health posts was assessed using the seven signal functions: parenteral administration of antibiotics, parenteral administration of oxytocics, parenteral administration of anticonvulsants, manual removal of placenta, manual removal of retained products, assisted vaginal delivery, and neonatal resuscitation.

- Generally, 53 percent of the facilities excluding health posts offered delivery services.
- Of the 7 BEmOC signal functions which were offered in health facilities excluding health posts, assisted vaginal delivery and manual removal of placenta were the most commonly available services (52 percent and 53 percent respectively), whereas parenteral administration of anticonvulsants was the least available (36 percent).
- On average, health facilities excluding health post had 3 out of the 7 BEmONC signal functions.

Emergency Newborn care (EmNeC) services were assessed using five signal functions: Neonatal resuscitation, KMC for premature or very small babies, antibiotics for preterm or prolonged PROM, injectable antibiotics for neonatal sepsis, and corticosteroids in preterm labour.

- On average, health facilities excluding health posts offered 2 out of 5 EmNeC signal functions (38 percent).
- More than half of the health facilities excluding health post offered administration of oxytocin for the prevention of post-partum haemorrhage, hygienic cord care, immediate and exclusive breast-feeding and thermal protection (51, 52, 53, and 52 percent respectively). However only 48 percent of the facilities monitor and manage labour using partograph.

Figure 3.1.3. 1 Percentage of facilities that offer basic obstetric care services (N=632), Ethiopia, 2018

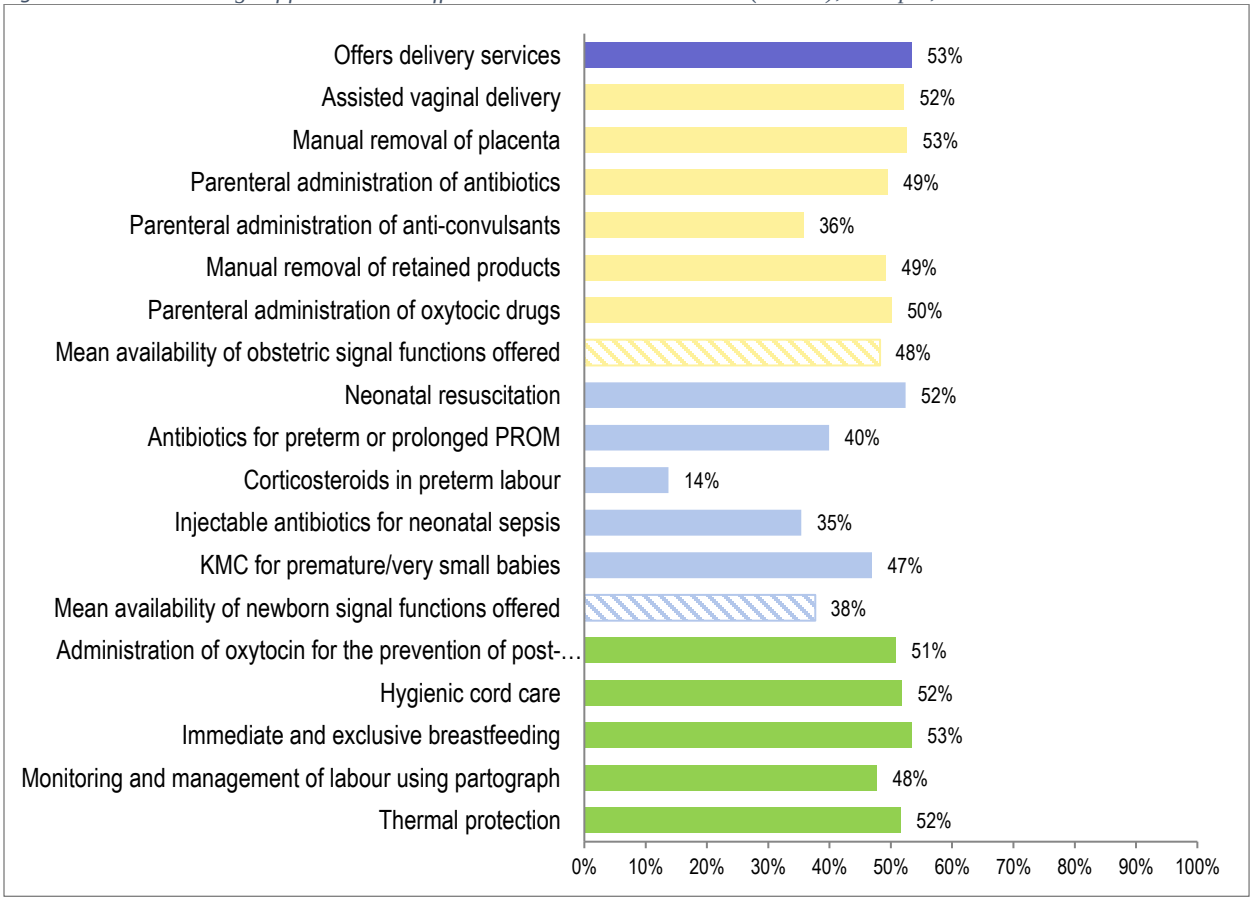


Table 3.1.3.1 shows percentage distribution of Basic Emergency and Essential Obstetric and Newborn Care services availability by region, facility type, managing authority and Urban/Rural Setting

- All of the referral and general hospitals offered delivery services followed by health centres (99 percent). In addition, 76 percent of the facilities in Somali region offered delivery services. However only 22 percent of the facilities in Addis Ababa offered the service.
- There was visible discrepancy in offering delivery services between health facilities excluding health posts that were manged by the government and other than the government (96 percent vs.10 percent respectively).
- Seventy four percent of the facilities located in rural areas offered delivery services compared with facilities in urban areas (40 percent).

Table 3.1.3. 1 Percentage distribution of Basic Emergency and Essential Obstetric and Newborn Care services availability by region, facility type, managing authority and Urban/Rural Setting, Ethiopia SARA 2018

	Offers delivery services	Parenteral administration of antibiotics	Parenteral administration of oxytocic drugs	Parenteral administration of anti-convulsants	Assisted vaginal delivery	Manual removal of placenta	Manual removal of retained products	Mean availability of obstetric signal functions offered	Antibiotics for preterm or prolonged PROM	Neonatal resuscitation	Corticosteroids in preterm labour	KMC for premature/very small babies	Injectable antibiotics for neonatal sepsis	Mean availability of newborn signal functions offered	Administration of oxytocin for the prevention of post-partum	Monitoring and management of labour using partograph	Immediate and exclusive breastfeeding	Hygienic cord care	Thermal protection	Total number of facilities
Regions																				

Tigray	67	64	67	60	67	67	67	65	56	67	33	66	56	56	67	67	67	67	67	65
Afar	61	60	61	47	42	61	61	55	51	57	28	61	53	50	61	51	61	61	61	37
Amhara	53	44	47	42	50	53	50	48	42	53	23	48	33	40	47	50	53	50	50	98
Oromiya	58	55	58	37	58	58	55	53	41	58	10	51	37	39	58	51	58	58	58	109
Somali	76	76	76	55	76	75	76	72	76	66	11	75	66	59	76	66	76	76	61	44
Benishangul Gumuz	50	47	50	28	46	50	50	45	47	50	20	44	22	36	50	40	50	50	50	31
S.N.N.P.	57	57	50	27	57	53	45	48	38	54	6	45	39	36	53	47	57	53	54	89
Gambella	27	20	20	9	27	27	27	22	13	20	6	21	17	15	20	20	27	27	27	30
Harari	33	33	33	23	33	33	30	31	23	33	20	30	25	26	33	33	33	33	33	24
Addis Ababa	22	19	19	18	22	22	22	20	18	22	6	20	10	15	19	22	22	22	22	77
Dire Dawa	43	40	43	43	40	36	38	40	43	43	12	43	32	35	43	43	43	43	43	28
Facility type																				
Referral hospital	100	100	100	97	100	100	100	99	100	100	97	97	97	98	100	100	97	97	100	31
General hospital	100	100	99	92	99	98	98	98	100	100	90	91	93	95	100	97	100	97	100	116
Primary hospital	98	96	97	91	97	97	97	96	96	97	82	88	90	91	97	97	98	96	97	156
Health centre	99	94	98	68	99	99	90	91	76	97	22	86	67	70	98	92	99	99	97	164
Higher Clinic	43	43	43	35	43	43	43	41	43	43	8	42	9	29	43	43	43	43	43	19
Medium Clinic	7	0	1	0	1	7	7	3	0	7	0	7	0	3	1	1	7	1	1	74
Lower Clinic	5	4	0	0	5	3	5	3	0	5	0	5	2	2	2	1	5	3	5	72
Managing authority																				
Public	96	91	94	67	95	95	87	88	74	94	25	83	66	68	94	89	96	95	94	410
Others	10	7	5	4	8	9	10	7	5	10	2	10	4	6	6	5	10	7	9	222
Urban/Rural																				
Urban	40	35	36	28	39	40	39	36	32	39	13	38	28	30	36	36	40	38	38	494
Rural	74	72	72	48	74	72	65	67	53	74	15	60	48	50	74	67	74	74	73	138
Total	**53**	**49**	**50**	**36**	**52**	**53**	**49**	**48**	**40**	**52**	**14**	**47**	**35**	**38**	**51**	**48**	**53**	**52**	**52**	**632**

Service readiness

Facilities excluding health posts were also assessed on the readiness to provide Basic Emergency and Essential Obstetric and Newborn Care Services based on the availability of the 25 tracer items outlined in table 3.1.3.1 below.

Table 3.1.3. 2 SARA tracer items for Basic Emergency and Essential Obstetric and Newborn Care service readiness, Ethiopia, SARA 2018

Domains	Tracer items (% of facilities with item)
Trained staff and guidelines	• Guidelines for essential childbirth care • Guidelines for essential newborn care • Staff trained in essential childbirth care in the past two years • Staff trained in essential childbirth care in the past two years • Staff trained in newborn resuscitation in the past two years • Check-lists and/or job-aids for essential childbirth care
Equipment	• Emergency transport • Sterilization equipment • Examination light • Delivery pack • Suction apparatus (mucus extractor) • Manual vacuum extractor • Vacuum aspirator or D&C kit • Neonatal bag and mask • Delivery bed • Partograph • Gloves • Infant weighing scale

	• Blood pressure apparatus • Soap and running water OR alcohol based hand rub
Medicines and commodities	• Antibiotic eye ointment for newborn • Injectable uterotonic • Injectable antibiotic • Magnesium sulphate (injectable) • Skin disinfectant • Intravenous solution with infusion set

As shown in table 3.1.3.3

- Among facilities that provided delivery service excluding health posts, 4 percent of the facilities had all the 25 tracer items for Basic Emergency and Essential Obstetric and Newborn Care Service.
- Within the staff and guidelines domain, approximately two third of the facilities had check-lists and/or job-aids for essential childbirth care (64 percent), and 50 percent had Guidelines for essential new born care (52 percent).
- In terms of equipment, 99 percent of facilities had delivery bed followed by delivery pack (96 percent). However only 44 percent of the facilities had vacuum aspiration or D&C kit.
- In addition, magnesium sulphate (injectable) was not available in 35 percent of the facilities.

Comparison of 2016 and 2018 SARA results on BEm/EONC

- Delivery service in BEmONC facilities excluding health posts were 55 percent in 2016 and 53 percent in 2018.
- Availability of Magnesium sulphate increased from 36 percent in 2016 to 65 percent in 2018.

	Guidelines for essential childbirth care	Check-lists and/or job-aids for essential childbirth care	Guidelines for essential newborn care	At least one staff trained in essential childbirth care	Staff trained in newborn resuscitation	Emergency transport	Sterilization equipment	Examination light	Delivery pack	Suction apparatus	Manual vacuum extractor	Vacuum aspirator or D&C kit	Neonatal bag and mask	Delivery bed	Partograph	Gloves	Infant weighting scale	Blood pressure apparatus	Soap and running water OR alcohol based hand rub	Antibiotic eye ointment	Injectable uterotonic	Injectable antibiotic	Magnesium sulphate (injectable)	Skin disinfectant	Intravenous solution with infusion set	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions																												
Tigray	81	94	88	64	65	87	78	66	100	90	84	70	82	100	88	94	100	94	83	100	100	95	90	100	95	15	88	55
Afar	39	82	44	41	61	95	69	48	94	81	74	44	69	100	77	81	84	75	72	81	96	100	69	94	62	0	73	21
Amhara	42	62	52	47	62	69	81	47	100	90	74	65	84	95	84	95	93	95	52	77	73	87	72	89	77	6	75	84
Oromiya	49	57	50	27	39	70	65	39	94	70	75	28	45	100	82	93	94	76	69	82	94	100	64	88	88	0	70	91
Somali	23	25	23	17	37	85	54	60	94	73	73	58	52	100	74	94	99	100	60	81	94	81	60	81	87	1	67	26
Benishangul Gumuz	61	57	67	63	69	88	77	59	100	86	86	80	75	100	72	92	86	94	82	94	92	92	51	92	82	0	80	18
S.N.N.P.	40	72	45	35	46	77	90	46	94	94	47	31	78	100	83	94	83	85	53	73	88	83	52	84	52	1	69	75
Gambella	49	35	44	46	68	49	60	22	95	79	46	33	35	79	74	100	74	95	41	89	63	73	35	84	78	5	62	17
Harari	85	85	85	77	85	100	100	77	100	77	77	92	92	100	100	100	100	100	85	100	92	92	62	100	77	15	90	13
Addis Ababa	56	71	71	57	71	79	94	88	99	79	89	62	74	100	82	97	100	100	91	79	84	84	75	100	84	16	83	55
Dire Dawa	76	71	71	60	91	100	87	82	100	87	82	54	100	100	100	100	100	100	100	100	100	100	95	93	100	5	90	17
Facility type																												
Referral hospital	42	77	71	55	81	94	100	61	94	97	90	81	94	97	94	84	90	97	84	94	100	100	94	100	97	10	87	31
General hospital	52	84	59	63	70	91	97	81	99	97	85	86	83	99	93	93	100	97	91	98	99	98	83	100	97	16	88	116
Primary hospital	59	75	60	62	73	92	97	78	99	96	85	77	90	100	95	93	97	96	81	93	99	100	91	99	98	20	87	153
Health centre	51	67	56	39	53	76	72	42	97	83	71	40	68	99	86	94	96	84	58	83	93	98	69	90	81	3	74	160
Higher Clinic	2	19	2	2	2	17	100	83	100	100	100	83	100	98	100	83	100	100	83	100	21	21	21	2	21	21	0	55	4
Medium Clinic	0	3	0	20	20	97	100	100	100	83	3	100	3	100	0	100	17	100	100	20	17	3	3	100	20	0	48	3
Lower Clinic	0	0	0	0	0	3	94	57	63	37	17	0	0	94	37	100	17	100	94	46	0	6	0	60	8	0	33	5
Managing authority																												
Public	51	68	56	41	55	77	74	44	97	84	72	43	70	99	86	93	96	85	59	84	93	98	70	91	82	4	75	398
Others	12	22	14	11	13	46	98	80	87	70	44	57	34	98	50	100	53	96	95	47	30	30	18	69	34	1	52	74
Urban/Rural																												
Urban	48	75	48	38	52	76	86	67	96	88	70	60	67	99	83	91	86	84	74	82	78	85	62	85	77	8	74	366
Rural	46	54	55	39	50	73	67	31	96	78	69	31	67	98	82	97	97	88	53	79	95	97	68	92	78	0	71	106
Total	**47**	**64**	**52**	**38**	**51**	**74**	**76**	**47**	**96**	**83**	**70**	**44**	**67**	**99**	**83**	**94**	**92**	**86**	**63**	**80**	**87**	**91**	**65**	**89**	**77**	**4**	**73**	**472**

Table 3.1.3. 3 Percentage of facilities excluding health posts that have tracer items for BEm/EONC, Ethiopia, 2018

3.1.4 Comprehensive obstetric care Services

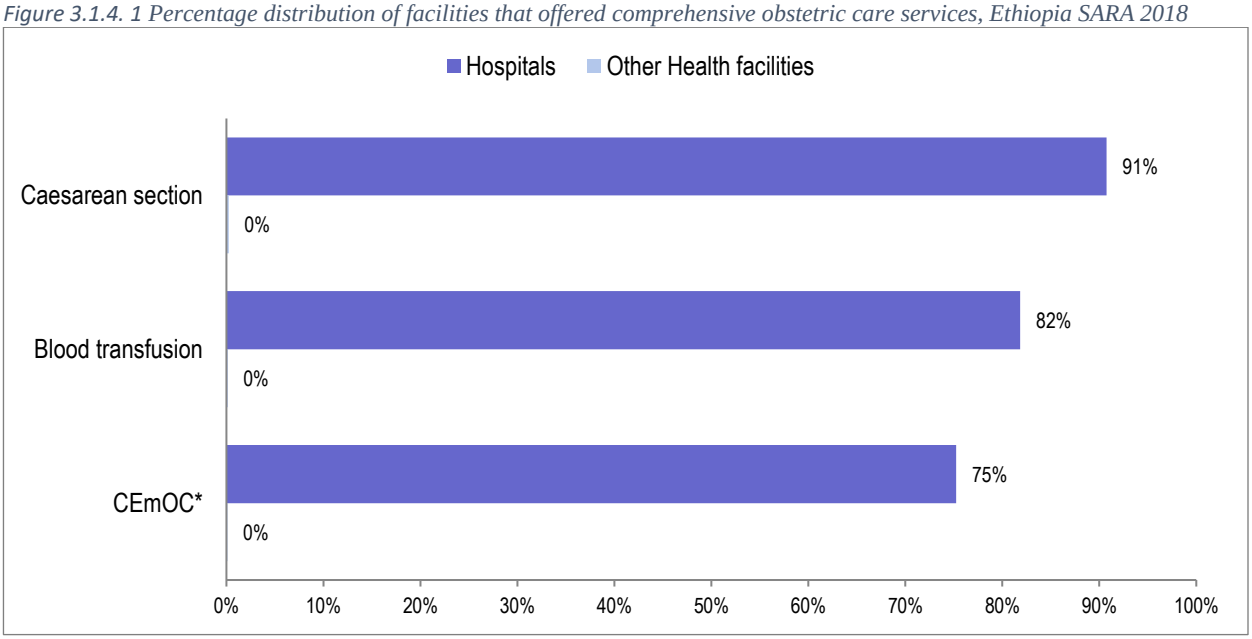
Service availability

Comprehensive emergency obstetric care (CEmOC) consist of the seven obstetric signal functions and the availability of blood transfusion services and caesarean section. Guideline jointly issued by WHO, UNICEF, and UNFPA recommend four facilities offering basic obstetric care and one facility offering comprehensive obstetric care for every 500,000 people.[3]

As shown in figure 3.1.4.1

- Ninety one percent and 82 percent of hospitals offered caesarean section and blood transfusion respectively.
- All hospitals are expected to provide Comprehensive obstetric and newborn care that include the nine signal functions. However only 75 percent of the hospitals provided the service and none of the other facilities offered the service.

Figure 3.1.4. 1 Percentage distribution of facilities that offered comprehensive obstetric care services, Ethiopia SARA 2018



As shown in table 3.1.4.1

- The availability of CEmOC in referral hospitals and higher clinics was 97 percent and 3 percent respectively.
- Ten percent of the facilities in Dire Dawa offered CEmOC followed by Harari (8 percent). However only one percent of the facilities in Gambella provided the service.
- In addition, only 5 percent of the facilities, which were manged by the government and located in urban areas each offered the service compared to one percent facilities manged by other than the government and located in rural areas each.

Table 3.1.4. 1 The percentage distribution of Comprehensive Emergency and Essential Obstetric and New born Care services availability by region, facility type, managing authority and Urban/Rural Setting, Ethiopia SARA 2018

	Caesarean section	Blood transfusion	CEmOC*	Total number of facilities
Regions				
Tigray	8	7	7	65
Afar	5	3	3	37
Amhara	3	3	3	98
Oromiya	3	3	3	109
Somali	6	6	4	44

[3] WHO, UNCEF, UNFPA and the World Bank, and the United Nations Population Division, 2014. Trends in maternal mortality: 1990 to 2013 Report.

Benishangul Gumuz	5	5	5	31
S.N.N.P.	3	2	2	89
Gambella	1	1	1	30
Harari	13	13	8	24
Addis Ababa	7	5	4	77
Dire Dawa	12	12	10	28
Facility type				
Referral Hospital	100	100	97	31
General Hospital	98	98	87	116
Primary Hospital	83	66	62	156
Health Centre	0	0	0	164
Higher Clinic	2	2	1	19
Medium Clinic	0	0	0	74
Lower Clinic	0	0	0	72
Managing authority				
Public	6	5	5	410
Others	2	2	1	222
Urban/Rural				
Urban	6	5	5	494
Rural	1	1	1	138
Total	**4**	**3**	**3**	**632**

*Comprehensive emergency obstetric care (CEmOC) consist of the seven obstetric signal functions and the availability of blood transfusion services and caesarean section.

Service readiness

Readiness to provide Comprehensive obstetric care service assessed based on the presence of the twenty tracer items in Table 3.1.4.2 below

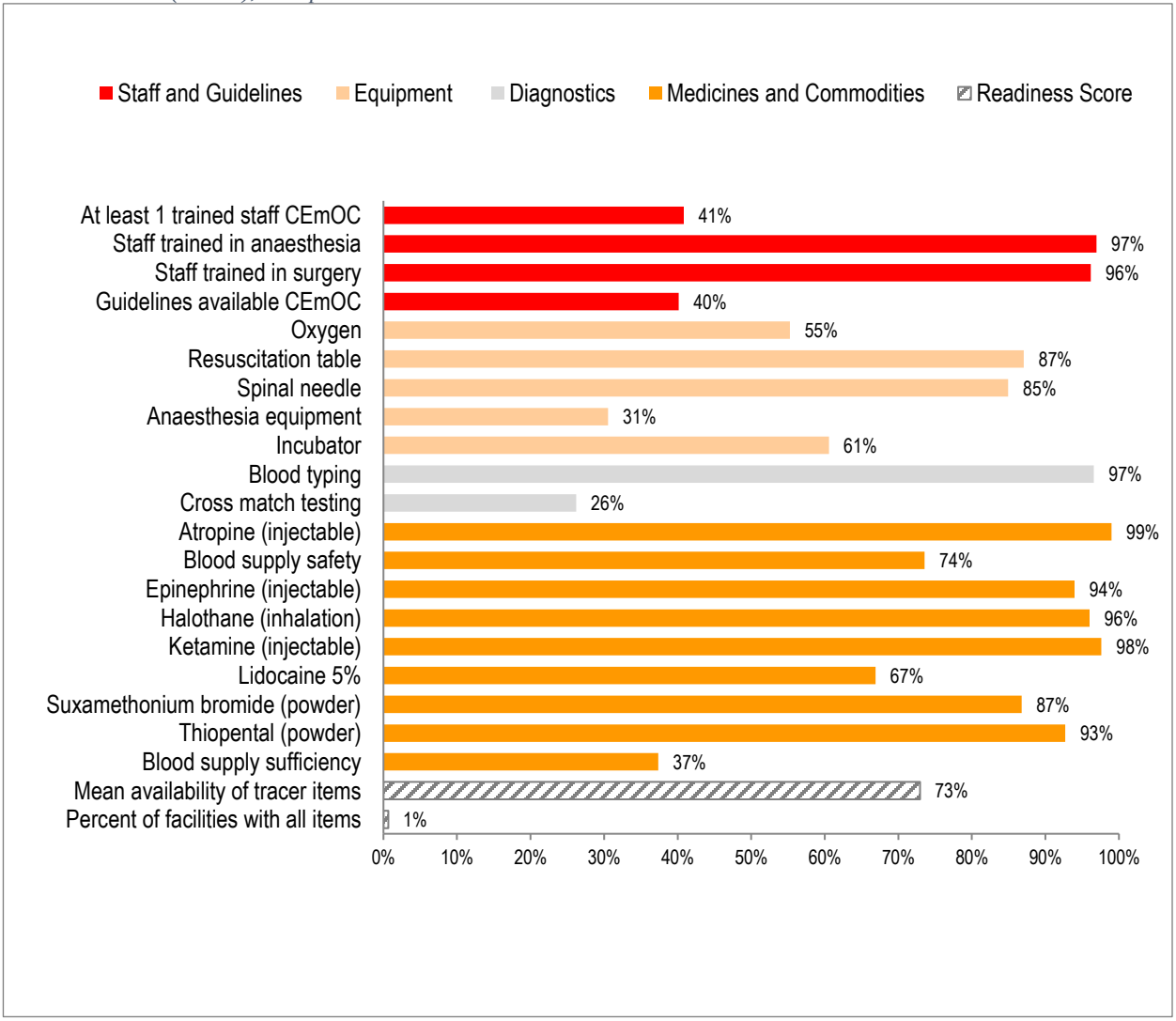
Table 3.1.4. 2 SARA tracer items for family planning service readiness, Ethiopia, SARA 2018

Domains	Tracer items (% of facilities with item)
Trained staff and guidelines	• Guidelines for CEmOC • Staff trained in CEmOC • Staff trained in surgery • Staff trained in anaesthesia
Equipment	• Anaesthesia equipment • Incubator • Oxygen • Resuscitation table • Spinal needle
Diagnostics	• Blood typing • Cross match testing
Medicines and commodities	• Blood supply sufficiency • Blood supply safety • Lidocaine 5% • Epinephrine (injectable) • Halothane (inhalation) • Atropine (injectable) • Thiopental (powder) • Suxamethonium bromide (powder) • Ketamine (injectable)

Figure 3.1.4.2 shows percentage of facilities with tracer items for CEmOC

- Among facilities that provided caesarean section, only one percent of them had all the 20 tracer items for Comprehensive Emergency and Essential Obstetric and newborn Care Service.
- On average, 15 out of 20 tracer items were available among facilities that provided Caesarean section (73 percent) (Figure 3.1.4.2.)

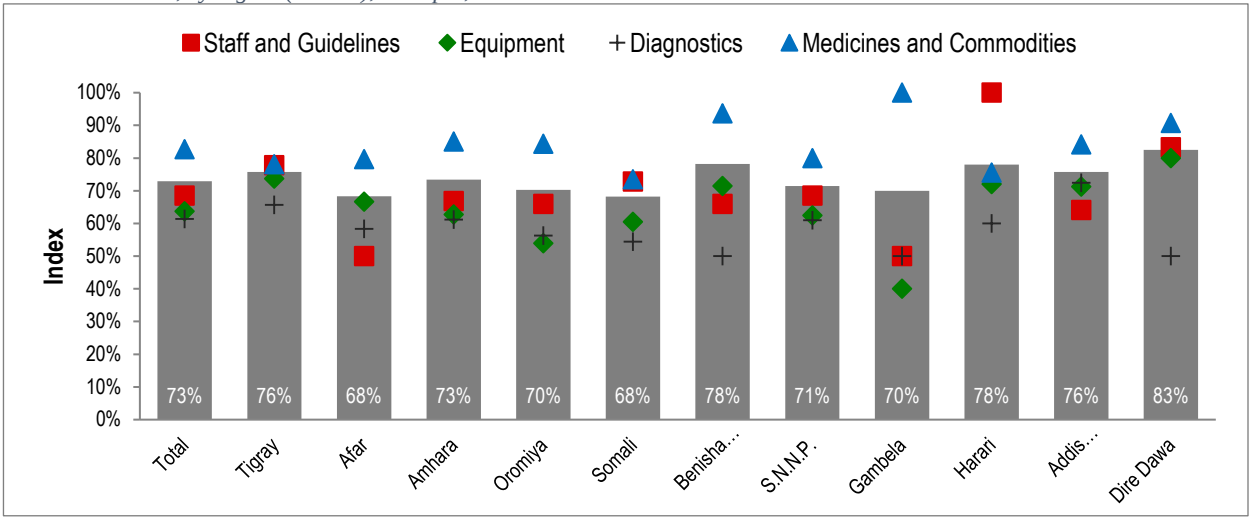
Figure 3.1.4. 2 Percentage of facilities that have tracer items for comprehensive obstetric care services among facilities that provide caesarean section (N=281), Ethiopia 2018.



As shown in Figure 3.1.4.3

- Nationally on average, facilities that provide caesarean section had 15 out of 20 tracer items (73 percent) for CEmOC services.
- Of the facilities that provide caesarean section, all the tracer items for CEmOC services were least available in Afar and Somali regions (68 percent) and highly available in Dire Dawa city administration (83 percent) (Figure 3.1.4.3).

Figure 3.1.4. 3 Percentage of facilities that have tracer items for comprehensive obstetric care services among facilities that provide caesarean section, by region (N=281), Ethiopia, 2018



Comparison of 2016 and 2018 SARA results on CEmOC

- Among facilities that provided caesarean section, only one percent of the facilities had all the 20 tracer item in both surveys.
- Considering the nine signal functions the availability of CEmOC in hospitals increased from 73 percent in 2016 to 97 percent in 2018. However, the service was decreased from 7 percent in 2016 to 3 percent in higher clinics in 2018.

3.2. Child and adolescent health

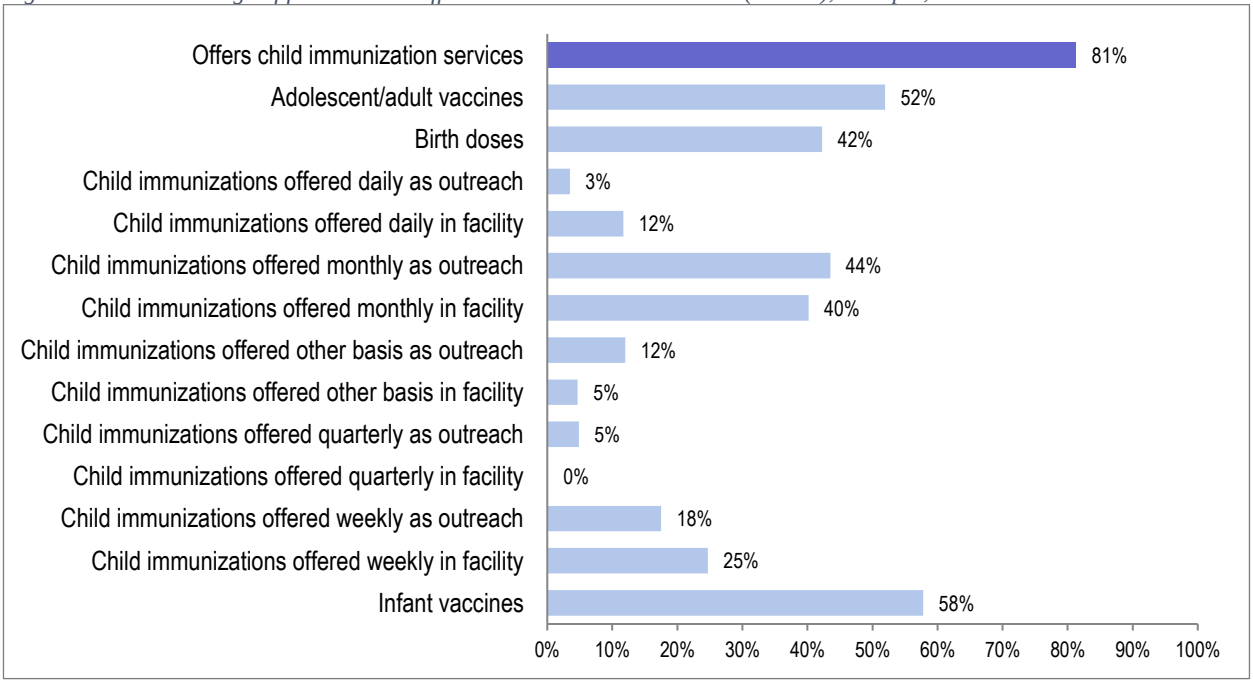
3.2.1 Child immunization service availability and readiness

Child immunization service availability

Table 3.2.1.1 and figure 3.2.1.1 shows the percentage of facilities that offer child immunization services.

- Availability of child immunization services was generally high (81 percent) except facilities in Addis Ababa (17 percent), ranging from 50 percent of facilities in Gambella region to 88 percent of facilities in Oromia region.
- Twelve percent of facilities offered immunization services in daily basis at the facility.
- Child immunization as an outreach service was not commonly offered, with only 3% of facilities providing this type of service.

Figure 3.2.1.1 Percentage of facilities that offer child immunization services (N=764), Ethiopia, 2018



- Higher (93 percent) proportion of Rural facilities and public managing authority (96 percent) offered child immunization service.
- The vast majority of health centres and health posts offered child immunization services (97%).
- Governmental facilities were more likely to provide child immunization services daily in the facility (14 percent compared with non-governmental facilities (2 percent) (Table 3.2.2)

Table 3.2.1. 1 Percentage of facilities that offer child immunization services by facility type, managing authority, and urban/rural, Ethiopia 2018.

	Offers child immunization services	Birth doses	Infant vaccines	Adolescent/adult vaccines	Child immunizations offered daily in facility	Child immunizations offered weekly in facility	Child immunizations offered monthly in facility	Child immunizations offered quarterly in facility	Child immunizations offered other basis in facility	Child immunizations offered daily as outreach	Child immunizations offered weekly as outreach	Child immunizations offered monthly as outreach	Child immunizations offered quarterly as outreach	Child immunizations offered other basis as outreach	Total number of facilities
Facility type															
Referral hospital	87	6	3	6	77	6	0	0	3	10	0	3	0	74	31
General hospital	78	5	3	5	66	7	2	0	3	4	2	1	3	68	116
Primary hospital	79	17	24	23	57	17	2	0	3	10	8	15	1	46	156
Health centre	97	49	61	57	49	31	15	0	2	8	20	35	8	27	164
Health post	97	51	72	64	5	29	56	0	6	3	21	56	5	11	132
Higher clinic	1	0	0	0	1	0	0	0	0	1	0	0	0	0	19
Medium clinic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74
Lower clinic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
Managing authority															
Public	96	50	69	62	14	29	48	0	6	4	21	52	6	14	542
Others	2	0	0	1	2	0	0	0	0	0	0	0	0	1	222
Urban/Rural															
Urban	48	22	25	24	15	13	19	0	0	1	8	22	6	11	504
Rural	93	49	69	61	10	29	47	0	6	4	21	51	5	12	260
Total	**81**	**42**	**58**	**52**	**12**	**25**	**40**	**0**	**5**	**3**	**18**	**44**	**5**	**12**	**764**

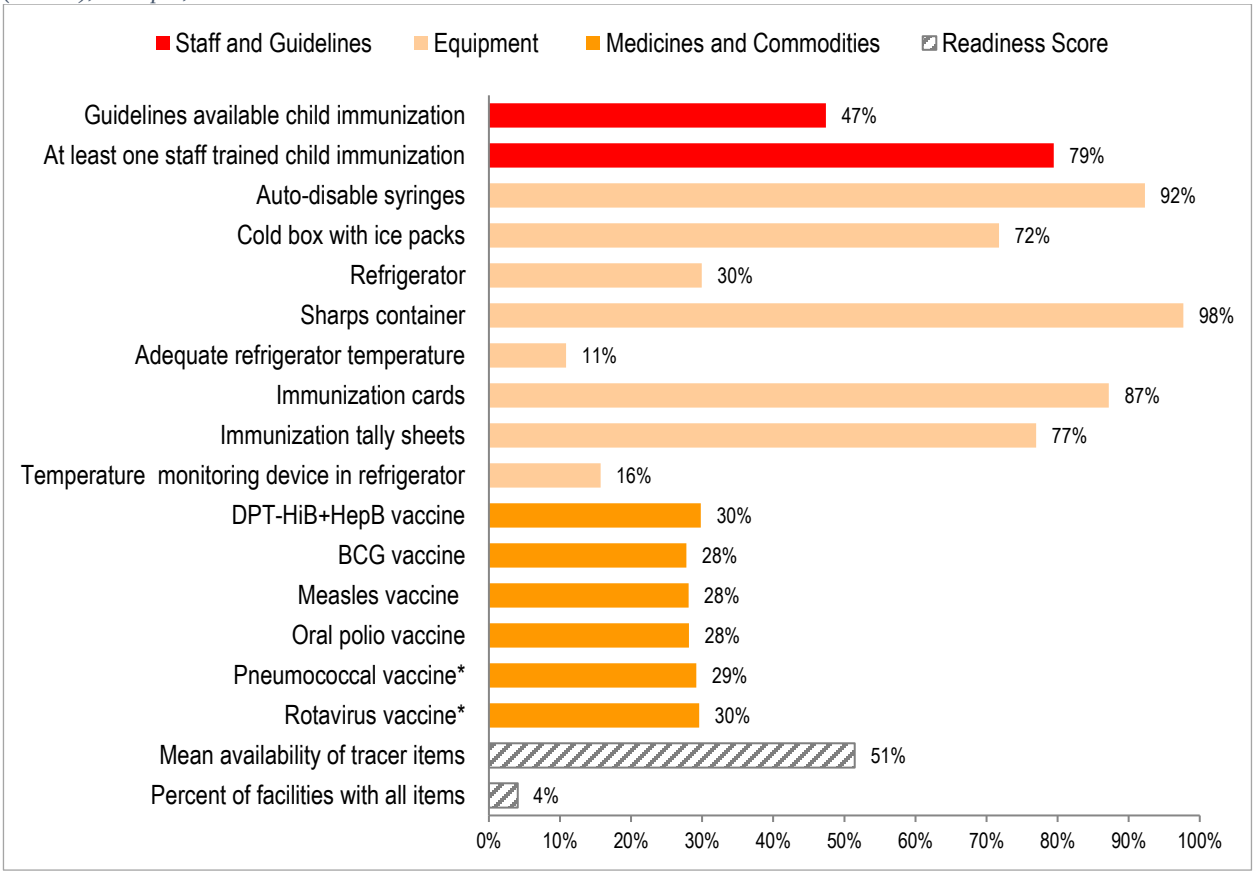
Child immunization service Readiness

Readiness to provide child immunization services were assessed based on the availability of the 18 tracer items found.

Figure 3.2.1.2 shows readiness of facilities to provide child immunization.

- On average facilities had 9 items that are needed to provide child immunization service for an overall readiness of 51%, while only 4% of facilities have all tracer items necessary to provide the service.
- Seventy-nine percent of health facility have at least one health provider who trained on child immunization and below half (47 percent) of facilities have guideline.
- Majority of facilities had disposable or auto-disable syringes (92 percent) and sharps container (98 percent), while few facilities with refrigerator (30 percent).
- Availability of vaccines ranges between 28-30 percent.

Figure 3.2.1. 1 Percentage of facilities that have tracer items for child immunization services among facilities that provide this service (N=524), Ethiopia, 2018



- Overall availability of tracer items for child immunization services among facilities that provide this service was higher in Addis Ababa Health facilities (91 percent) and lower in Oromia Region(44 percent)
- Availability of vaccine on the date of survey was similar (below 30 percent) for 6 vaccines types, whereas the highest stock out in the last three months prior to the survey was observed for BCG (25%), while it ranges (13-18 percent) for the rest.
- The availability of adequate temperature refrigerator requirement is low as to 11 percent, which is below 8 percent in Oromia, SNNP, and Afar regions and rural facilities.

- The low availability of adequate temperature refrigerators boldly observed in public (11 percent) and rural (7 percent) located facilities (Table 3.2.4).

Table 3.2.1. 2 Percentage of facilities that have tracer items for child immunization services among facilities that provide this service (N=524), Ethiopia, 2018

	Guidelines available child immunization	At least one staff trained child immunization	Cold box with ice packs	Refrigerator	Sharps container	Auto-disable syringes	Temperature monitoring device in refrigerator	Adequate refrigerator temperature[1]	Immunization cards	Immunization tally sheets	Measles vaccine	DPT-HiB+HepB vaccine	Oral polio vaccine	BCG vaccine	Rotavirus vaccine*	Pneumococcal vaccine*	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions																			
Tigray	64	69	73	33	100	93	29	27	78	73	39	39	39	32	39	32	18	56	59
Afar	35	86	83	57	93	86	24	8	79	83	50	47	57	43	57	41	5	60	30
Amhara	64	92	75	28	100	90	14	11	94	70	29	29	24	28	29	29	7	53	75
Oromiya	26	67	64	29	95	94	13	7	84	82	17	18	17	16	18	18	1	44	95
Somali	18	65	90	69	100	100	61	38	100	62	69	68	69	59	59	68	11	70	35
Benishangul Gumuz	53	93	56	56	93	78	32	13	67	84	41	41	40	33	48	32	3	54	29
S.N.N.P.	68	90	79	20	100	93	7	7	89	76	31	36	35	36	35	36	1	56	79
Gambella	33	98	61	54	92	61	37	25	92	92	54	54	54	52	54	46	4	60	26
Harari	61	79	82	94	100	94	70	47	100	61	82	82	76	82	82	82	23	79	24
Addis Ababa	88	89	99	100	100	100	92	84	100	99	77	88	79	78	88	88	47	91	45
Dire Dawa	45	100	95	73	100	92	47	45	95	85	75	75	70	70	70	75	18	77	27
Facility type																			
Referral hospital	63	70	96	100	100	100	78	63	93	96	89	89	93	89	89	93	26	87	27
General hospital	66	73	94	99	99	98	68	66	91	89	87	90	90	94	93	92	13	87	90
Primary hospital	60	77	95	95	99	98	70	48	85	93	90	95	90	91	96	90	19	86	124
Health centre	65	83	87	98	100	95	67	48	87	89	96	99	95	92	98	99	20	87	159
Health post	43	79	68	14	97	92	4	2	87	74	12	14	13	13	14	13	0	43	122
Higher clinic	0	100	100	100	100	100	100	0	100	0	0	0	0	0	0	0	0	44	1
Medium clinic	100	100	100	100	100	100	100	0	100	0	100	100	100	100	100	100	0	88	1
Lower clinic	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	DIV/0!	0
Managing authority																			
Public	47	79	72	30	98	92	15	11	87	77	28	30	28	28	29	29	4	51	485
Others	80	89	98	100	98	100	85	60	98	75	90	94	94	91	96	94	9	90	39
Urban/Rural																			
Urban	63	79	86	66	100	100	38	31	94	86	61	61	60	53	62	61	11	70	311
Rural	45	80	69	24	97	91	12	7	86	75	22	24	23	23	24	24	3	48	213
Total	**47**	**79**	**72**	**30**	**98**	**92**	**16**	**11**	**87**	**77**	**28**	**30**	**28**	**28**	**30**	**29**	**4**	**51**	**524**

[1] Adequate refrigerator temperature means 2 to 8 ºC inclusive in the last 30 days

Trend of child immunization service availability and readiness

- Child health service availability and immunization service has remained the same since 2016.
- The average health facilities to have tracer items that are required to provide child immunizations service were similar across the two surveys which was 9.

3.2.2 Child preventive and curative care service availability and readiness

Child health preventive and curative care services availability

Table 3.2.2.1 show the percentage of facilities that offer child health preventive and curative service.

- Overall, 79 percent of facilities offer preventative and curative care services for under five children.
- Treatment of pneumonia is 71 percent. Curative and preventive services like, diagnosis/treatment of malnutrition, ORS and Zinc supplementation are above 70 percent.
- Iron supplement (40 percent) is the least curative and preventive care service available in surveyed facilities than other under five children services (Figure 3.2.5).

Table 3.2.2. 1 Percentage of facilities that offer child health preventative and curative care services (N=764), Ethiopia, 2018

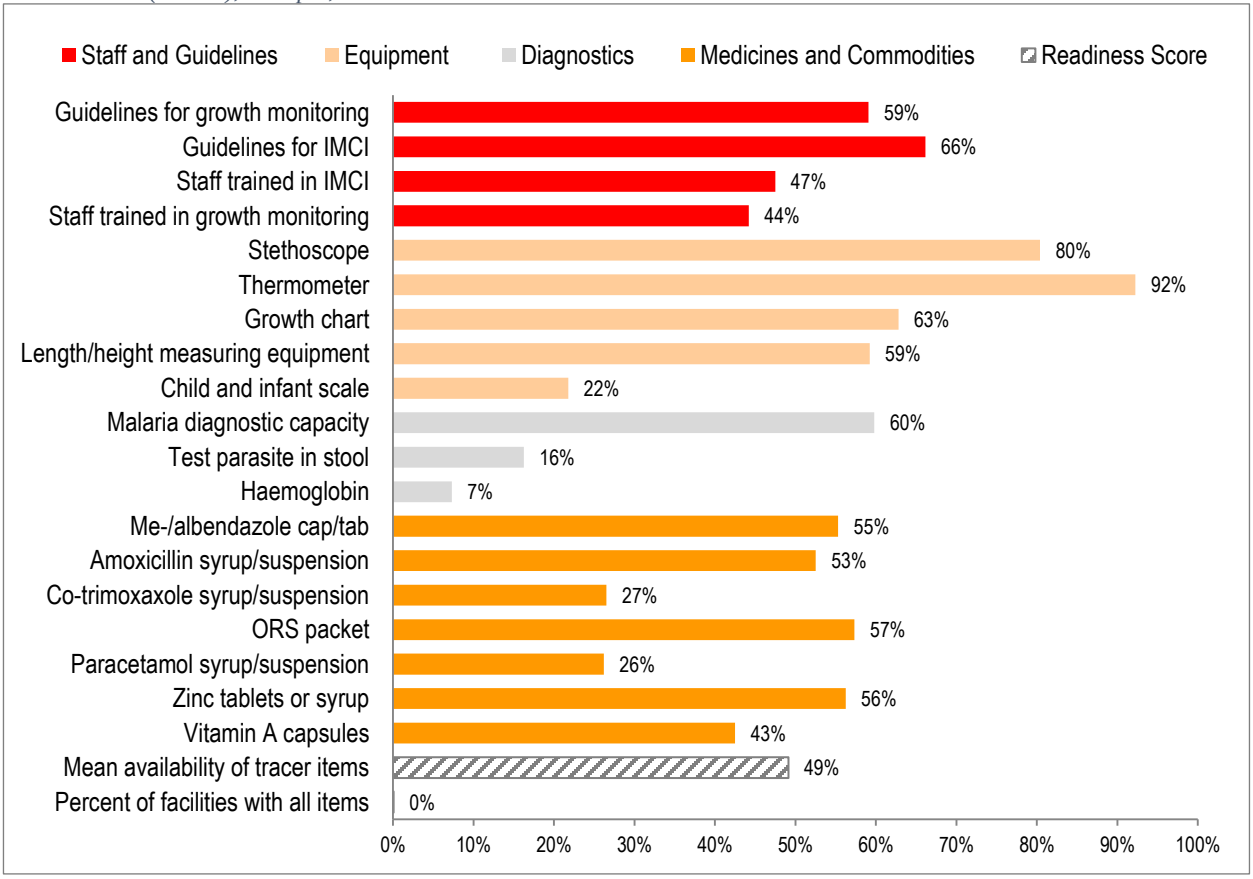
	Offers preventive and curative care for U-5s	Diagnosis/treat malnutrition	Vitamin A supplementation	Iron supplementation	ORS and zinc supplementation to children with diarrhea	Child growth monitoring	Treatment of pneumonia	Treatment of malaria in children	Total number of facilities
Facility type									
Referral hospital	94	94	71	65	90	87	94	94	31
General hospital	92	90	69	67	84	89	92	91	116
Primary hospital	96	94	76	73	88	83	96	94	156
Health centre	99	97	96	61	98	92	99	95	164
Health post	78	77	72	41	75	70	68	56	132
Higher clinic	36	36	8	10	17	36	36	36	19
Medium clinic	76	73	18	18	43	38	76	74	74
Lower clinic	64	45	10	12	42	15	51	33	72
Managing authority									
Public	82	81	76	45	78	73	74	63	542
Others	67	54	14	15	44	25	58	46	222
Urban/Rural									
Urban	82	75	54	37	68	61	80	70	504
Rural	78	77	70	41	75	67	68	57	260
Total	**79**	**76**	**66**	**40**	**73**	**66**	**71**	**61**	**764**

Child health preventive and curative care service readiness

Service readiness for Child health preventive and curative care service was assessed based on the availability of the 19 tracer items (Figure 3.2.2.2).

- In overall, on average facilities had 9 and more of the 19 tracer item that are required to provide preventive and curative service for under five children for an overall readiness of 49%, while, facilities with all tracer items necessary for the provision of preventive and curative care service for under-five children is null.
- The least available equipment is child and infant scale (22 percent), while from diagnostic service haemoglobin test (7 percent) and from medicine and commodities, paracetamol.

Figure 3.2.2. 2 Percentage of facilities that have tracer items for child health preventative and curative care services among facilities that provide this service (N=668), Ethiopia, 2018



The percentage of facilities that have specific tracer items needed for child health preventative and curative care services by region is show on Figure 3.2.2.3 and detailed results are presented on Table 3.2.2.2.

- The readiness to provide child health preventative and curative care services was assessed using 19 tracer items. In average facilities had 9 and more of the 19 tracer items need to provide child health preventive and curative care service with overall readiness of 49 percent.
- The availability of medicine and commodity is higher in Dire Dawa than other regions, and where as the availability of diagnostics and equipment is higher in Addis Ababa.
- The viability of trained staff and guideline is higher in SNNPR while lower in Gambella
- The difference in availability of tracer items needed for child health preventative and curative care services is tall between facility type and location.

Figure 3.2.2. 3 Percentage of facilities that have tracer items for child health preventative and curative care services among facilities that provide this service, by region (N=668), Ethiopia, 2018

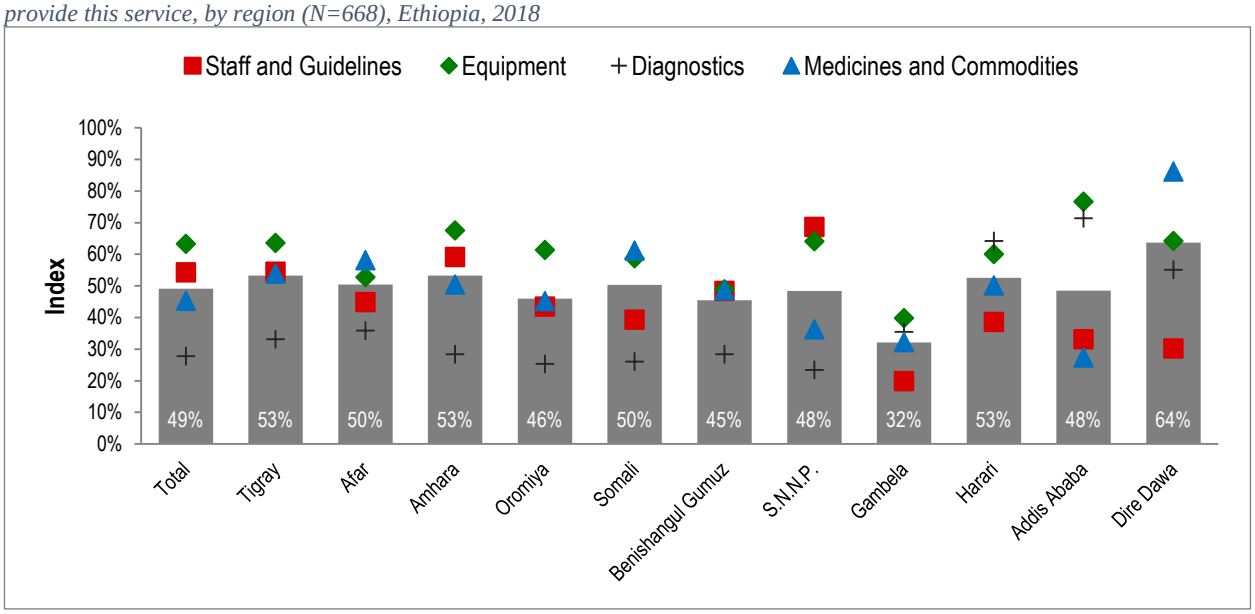


Table 3.2.2. 2 Percentage of facilities that have tracer items for child health preventative and curative care services among those that provide the service, Ethiopia, 2018

	Guidelines for IMCI	Guidelines for growth monitoring	Staff trained in IMCI	Staff trained in growth monitoring	Child and infant scale	Length/height measuring equipment	Thermometer	Stethoscope	Growth chart	Haemoglobin	Test parasite in stool	Malaria diagnostic capacity	ORS packet	Amoxicillin syrup/suspension	Co-trimoxaxole syrup/suspension	Paracetamol syrup/suspension	Vitamin A capsules	Me-/albendazole cap/tab	Zinc tablets or syrup	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions																						
Tigray	53	63	48	53	20	58	99	82	59	14	21	64	68	55	34	37	60	66	58	0	53	73
Afar	44	28	60	46	7	41	92	94	29	9	17	82	62	71	44	54	45	73	58	0	50	46
Amhara	80	67	45	45	11	69	94	90	72	4	9	72	62	57	25	20	57	69	64	0	53	110
Oromiya	55	47	39	34	24	52	98	70	63	9	19	48	53	55	37	24	30	55	62	0	46	102
Somali	35	19	60	43	31	47	77	84	55	7	11	60	76	66	38	50	61	75	61	0	50	45
Benishangul Gumuz	57	60	38	38	4	28	77	77	60	3	2	80	76	77	28	28	10	54	67	0	45	43
S.N.N.P.	80	77	60	57	30	63	87	78	61	3	15	52	50	42	12	26	41	38	44	0	48	95
Gambela	29	6	29	15	6	36	76	71	10	11	19	76	67	31	15	19	10	47	35	0	32	40
Harari	42	31	39	43	3	76	85	100	35	42	62	89	64	48	37	56	44	48	53	0	53	20
Addis Ababa	47	46	22	18	41	79	99	100	64	41	84	89	40	29	28	21	17	30	27	1	48	64
Dire Dawa	31	13	49	27	9	79	81	100	52	36	46	83	100	95	65	89	80	91	84	0	64	30
Facility type																						
Referral hospital	41	48	45	34	62	93	90	100	76	62	93	86	93	100	93	72	52	93	86	7	75	29
General hospital	54	53	35	33	51	93	97	99	79	65	91	91	92	93	89	81	38	92	79	3	74	107
Primary hospital	62	55	51	45	49	83	97	99	76	51	88	90	92	95	93	90	55	96	93	3	77	150
Health centre	77	60	69	56	28	80	92	96	77	21	57	78	90	89	79	67	73	94	90	0	72	163
Health post	72	68	51	50	22	53	91	72	68	0	0	58	54	51	14	17	42	53	55	0	47	110
Higher clinic	54	34	0	0	34	100	80	100	58	80	40	40	6	26	26	26	0	26	6	0	39	6
Medium clinic	34	28	6	5	18	66	99	100	21	50	95	96	28	17	16	17	1	17	9	0	38	53
Lower clinic	18	8	0	0	0	51	100	100	8	0	0	7	22	2	5	6	4	6	15	0	19	50
Managing authority																						
Public	72	66	54	51	24	59	91	77	70	6	14	63	62	59	29	28	48	62	63	0	53	511
Others	26	17	4	4	8	58	99	100	17	18	34	39	26	11	12	13	4	13	15	0	27	157
Urban/Rural																						
Urban	61	45	35	32	18	68	98	99	49	22	40	64	58	48	28	32	31	46	52	0	49	437
Rural	68	64	52	49	23	56	90	74	68	2	8	58	57	54	26	24	47	59	58	0	49	231
Total	**66**	**59**	**47**	**44**	**22**	**59**	**92**	**80**	**63**	**7**	**16**	**60**	**57**	**53**	**27**	**26**	**43**	**55**	**56**	**0**	**49**	**668**

Trends on child health preventive and curative care service readiness

- Availability of curative and preventive care service has shown decline from 91 in 2016 to 79 percent in 2018.
- In current survey, on average facilities had 9 and more of the 19 tracer items need to provide child health preventive and curative care service, this show very little improve from the 2016 SARA survey (less than 9) study.

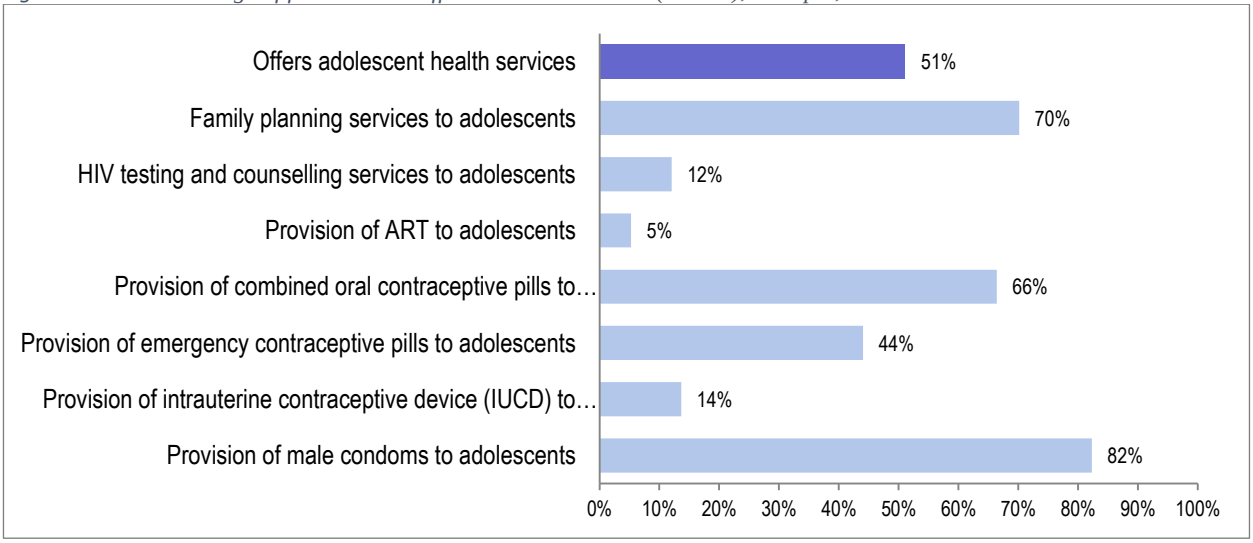
3.2.3 Adolescent health service availability and readiness

Adolescent health service availability

Provision of Adolescent service was assessed and presented on figure 3.2.3.1

- In general five in ten facilities in Ethiopia offer adolescent health service.
- Among facilities that provide adolescent health, only 5 percent of facilities provide ART adolescent, followed by 12 percent provision of HIV testing and counselling and 14 percent intrauterine contraceptive device (IUCD).\

Figure 3.2.3. 1 Percentage of facilities that offer Adolescent service (N=764), Ethiopia, 2018

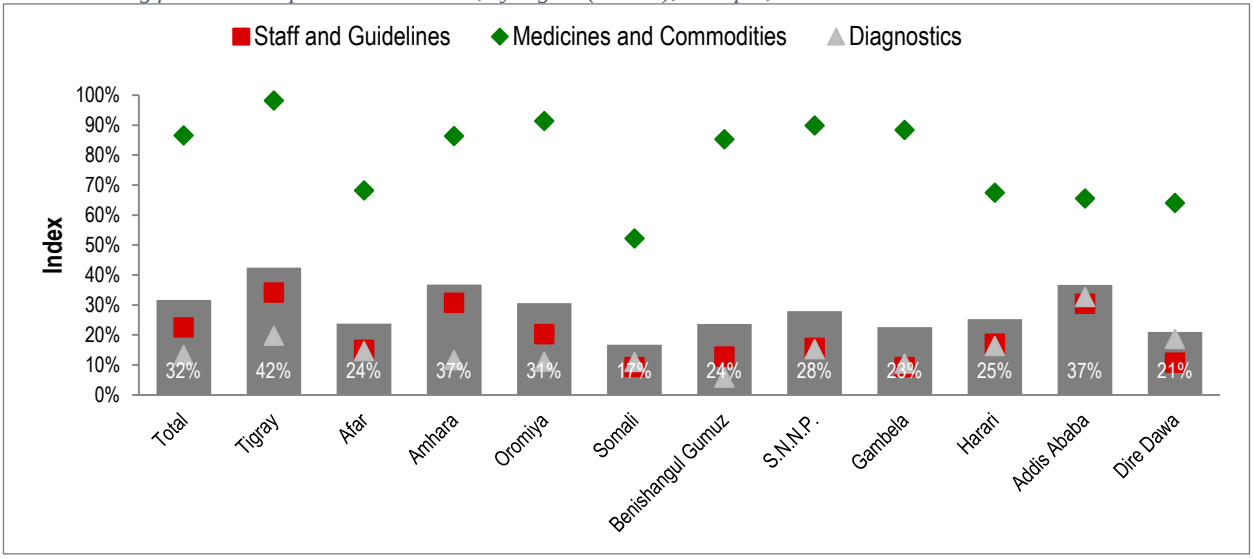


Adolescent health service Readiness

Figure 3.2.3.2 describe percentage of facilities that have tracer items for adolescent health services among facilities that provide this service.

- The readiness to provide adolescent health service was assessed using six tracer items. On average facilities have 2 and more tracer items that required to provide adolescent service, with overall readiness of 32 percent.
- Of the tracer items, availability of trained staff and guideline and diagnostics service is the low across all regions. Relative to other trance items the availability of medicine is higher (above 60 percent) among all regions except in Somali (Figure 3.2.7)

Figure 3.2.3. 2 Percentage of facilities that have tracer items for Percentage of facilities that have tracer items for adolescent health services among facilities that provide this service, by region (N=543), Ethiopia, 2018



Trend of Adolescent health service availability and Readiness

- Service availability for Adolescent has shown decline from 60 percent in 2016 to current 51 percent.
- However, the service availability for Adolescent has declined, the readiness has shown increment over the last 2 years.

3.3 HIV/AIDS

Ethiopia is one of the sub-Saharan countries that is highly affected by the HIV epidemic. Nearly eight hundred thousand adults aged fifteen and above live with the virus. HIV prevalence rate in adults aged 15 to 49 is 1.1 percent. In 2016 nearly thirty eight thousand adults and children were newly infected with the virus (UNAIDS, Country fact sheet, 2016). Of the estimated HIV positive population, only fifty four percent are on ART. Currently there are more than four hundred thousand HIV positive people on ART>

The 2015-2020 Ethiopia HIV /AIDS prevention care and treatment Strategic plan, designed to pave the path for ending AIDS by 2030 through averting 70,000- 80,000 new HIV infections and saving about half a million lives till 2020. The targets set in the strategic plan are in line with the three 90's (90-90-90) treatment targets set by UNAIDS to help end the AIDS epidemic.

Implementing high impact and targeted prevention program, intensifying Targeted HIV testing and counselling services, attainment of virtual elimination of MTCT, and optimizing and sustaining quality care and treatment are the effective strategic objectives of the plan (HIV/AIDS strategic plan, 2015-20, Federal HAPCO, December 2014).

3.3.1 HIV counselling and testing

The current national focus with regard HIV counselling and testing is to raise the proportion of people living with HIV who know their HIV status from 60-65 % to 90% by 2020 through intensifying targeted HIV testing to the identified target population groups for identification of majority of the HIV infections (HIV/AIDS strategic plan, 2015-20, Federal HAPCO, December 2014), the national HIV counselling and testing guideline clearly states that all public and private facilities should provide HIV testing and counselling services. All health facilities should provide couple HTS, and all health facilities should provide PITC service for eligible clients at outpatient and inpatient departments. (National guidelines for comprehensive HIV prevention, care and treatment federal ministry of health Feb, 2017)

Service availability

The 2018 SARA survey result showed that nineteen percent of all facilities including health posts give HIV counselling and testing services. The actual percentage of facilities that give HIV counselling and testing service has decreased from fifty four percent in SARA 2016 to Nineteen percent currently.

Table 3.3.1.1 shows percentage of facilities including HP that offer HIV counselling and testing services by facility type, managing authority, and by urban/ rural.

- Eighteen percent of public facilities give HIV counselling and testing services
- The actual percentage of public facilities that give HIV counselling and testing service has decreased from eighty four percent in SARA 2016 to nineteen percent currently.
- Higher clinics, referral and general hospitals have the highest HIV counselling and testing service. (93, 94 and 96 percent respectively).
- Health posts have the lowest proportion (6 percent) of facilities that offer HIV counselling and testing services.

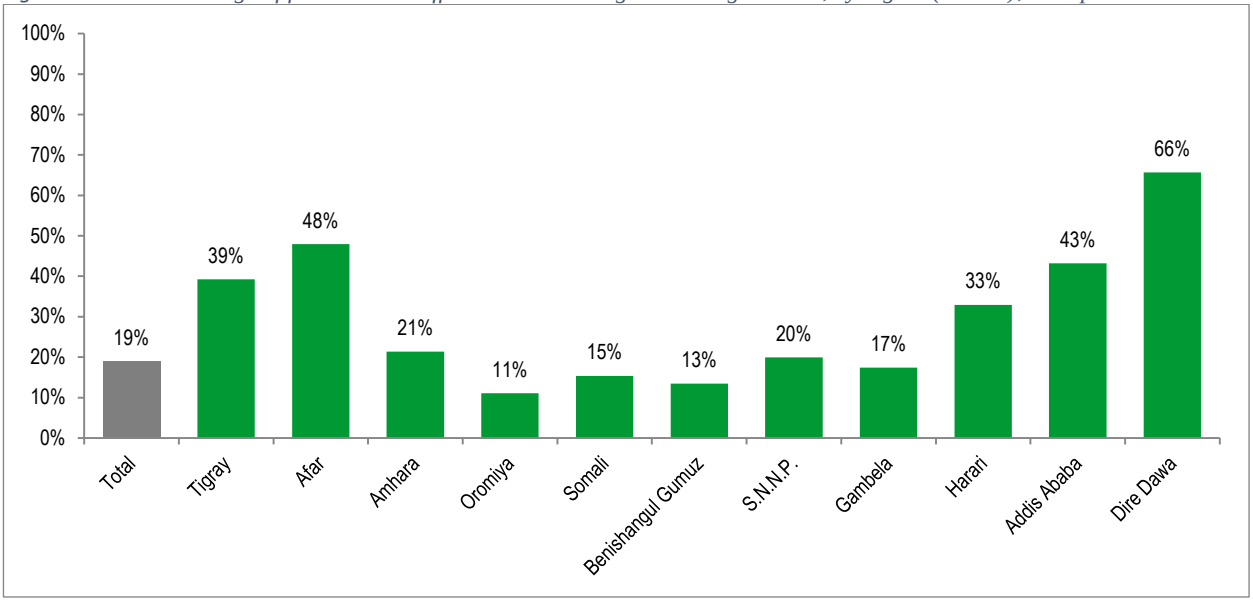
Table 3.3.1. 1 Percentage of facilities that offer HIV counselling and testing services (N=764), Ethiopia 2018

	Offers HIV counselling and testing services	Total number of facilities
Facility type		
Referral hospital	94	31
General hospital	96	116
Primary hospital	81	156
Health centre	68	164
Health post	6	132
Higher clinic	93	19
Medium clinic	55	74
Lower clinic	1	72
Managing authority		
Public	18	542
Others	23	222
Urban/Rural		
Urban	36	504
Rural	13	260
Total	**19**	**764**

Figure 3.3.1.1 shows regional distribution of HIV counselling and testing services for all facilities

- Oromia, Benishangul Gumuz, Somali, and Gambella regions have smaller proportion of facilities that offer HIV counselling and testing service. (11, 13, 15 and 17 percent respectively)
- Afar and Dire Dawa regions have the largest proportion of facilities that offer HIV counselling and testing service. (48 and 66 percent respectively).

Figure 3.3.1. 1 Percentage of facilities that offer HIV counselling and testing services, by region (N=764), Ethiopia 2018



Service readiness

Service readiness for HIV counselling and testing was done by using five tracer items; HIV counselling and testing guidelines availability, presence of at least one trained staff on HIV counselling and testing, room with visual and auditory privacy, HIV diagnostic capacity, and condoms.

Figure3.3.1.2. shows 2018 SARA percentage of facilities that have tracer items for HIV counselling and testing service among facilities that provide the service

- Out of the four hundred seventy five facilities that give HIV counselling and testing services only thirteen Percent have all tracer items
- On average facilities that give HIV counselling and testing have three out of five tracer items.
- Of the tracer items, Room with visual and auditory privacy and condom have the highest percentage. (eighty one and seventy three percent respectively)
- The least available of the tracer items is HIV diagnostic capacity (27 percent)

Figure 3.3.1. 2. Percentage of facilities that have tracer items for HIV counselling and testing services among facilities that provide this service (N=475), Ethiopia 2018

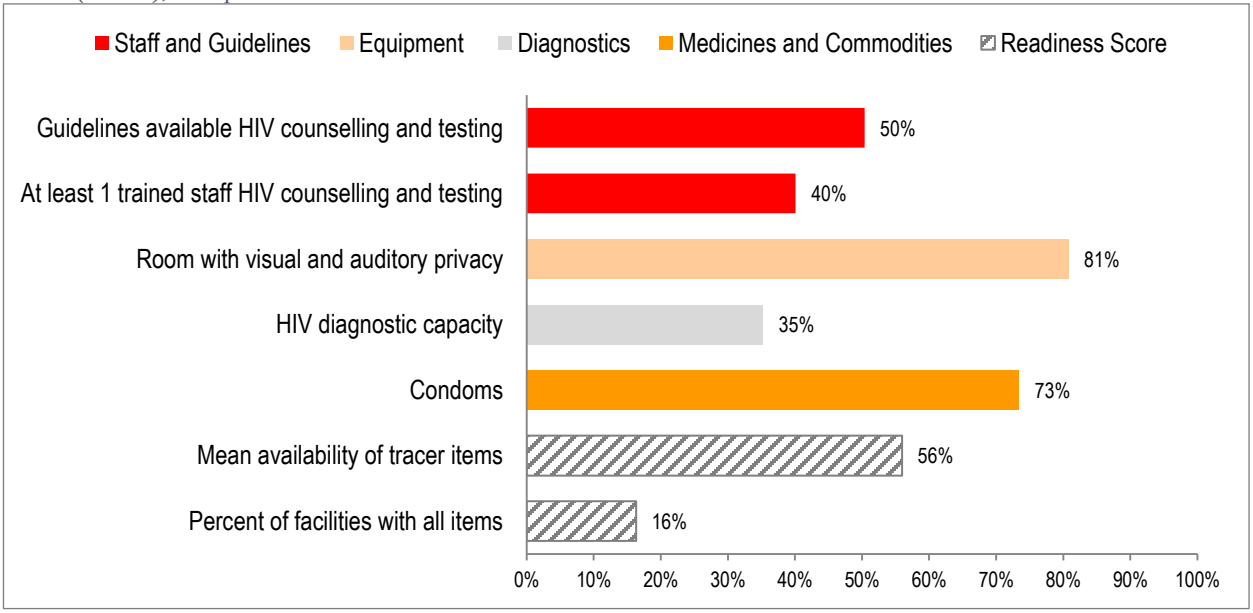


Table3.3.1.2 shows Percentage of facilities that have tracer items for HIV counselling and testing services among facilities that provide this service, by region

- Gambella region have the highest tracer score (73 percent), followed by Tigray and Benishangul Gumuz (sixty nine percent) and , Harari (68 percent)
- Somali and Oromia region have thirty three and thirty eight percent tracer score
- The mean tracer item score was highest for referral hospitals (Ninety percent) and lowest for health post (thirty seven percent).
- At health post, room with visual and auditory privacy and condoms were the most available of the tracer items

Table 3.3.1. 2 Percentage of facilities that have tracer items for HIV counselling and testing services among facilities that provide this service, by region (N=475), Ethiopia 2018

	Guidelines available HIV counselling and testing	At least 1 trained staff HIV counselling and testing	Room with visual and auditory privacy	HIV diagnostic capacity	Condoms	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions								
Tigray	65	59	100	42	89	27	71	63
Afar	24	44	70	26	63	9	45	33
Amhara	53	47	91	48	81	23	64	68
Oromiya	36	28	41	31	72	10	42	79
Somali	29	29	51	17	37	2	33	32
Benishangul Gumuz	90	76	57	31	88	12	68	16
S.N.N.P.	54	28	99	23	68	9	54	63
Gambella	80	56	100	44	86	33	73	18
Harari	52	69	95	33	95	23	69	16
Addis Ababa	67	66	100	55	67	33	71	59
Dire Dawa	37	43	68	25	72	15	49	28
Facility type								
Referral hospital	90	90	97	90	86	59	90	29
General hospital	71	66	95	76	73	32	76	111
Primary hospital	65	74	83	73	76	32	74	127
Health centre	57	49	74	47	76	24	61	131
Health post	29	7	85	0	64	0	37	20

Higher clinic	22	32	100	20	40	0	43	14
Medium clinic	59	47	90	33	87	9	63	38
Lower clinic	39	0	93	7	93	0	46	5
Managing authority								
Public	50	39	78	35	73	18	55	360
Others	53	45	91	35	75	8	60	115
Urban/Rural								
Urban	64	53	92	53	79	24	68	373
Rural	37	28	70	18	68	9	44	102
Total	**50**	**40**	**81**	**35**	**73**	**16**	**56**	**475**

3.3.2 HIV/AIDS care and support services

It is critical for people living with HIV to initiate ART as early as possible. This enables both shorten the time between HIV diagnosis and ART initiation hence significantly reducing HIV related morbidity and mortality, reducing forward transmission of HIV including MTCT. Many care interventions are relevant across the full continuum of care, including HIV-exposed individuals and people living with HIV before initiation and during ART. (National guidelines for comprehensive HIV prevention, care and treatment federal ministry of health Feb, 2017)

Service availability

Table 3.3.2.1. shows percentage of facilities excluding health posts that give HIV /AIDS care and support services by region, facility type, managing authority and urban/rural.

- Overall, excluding health posts, twenty nine percent of surveyed facilities give HIV /AIDS care and support services.
- Tigray region has the highest (72 percent) and Somali the lowest (14 percent) percentage of facilities that offer HIV /AIDS care and support services.
- All referral and ninety seven percent of general hospitals offer HIV /AIDS care and support services, while only twenty nine and forty one percent of medium clinics and health centres give the service.
- Forty three percent of public give HIV /AIDS care and support services compared to only fifteen percent of facilities governed by other than government.
- Treatment of opportunistic infection (28 percent) is given in larger proportion of facilities compared to treatment of Kaposis sarcoma (9 percent) and IV treatment of fungal infection (11 percent).

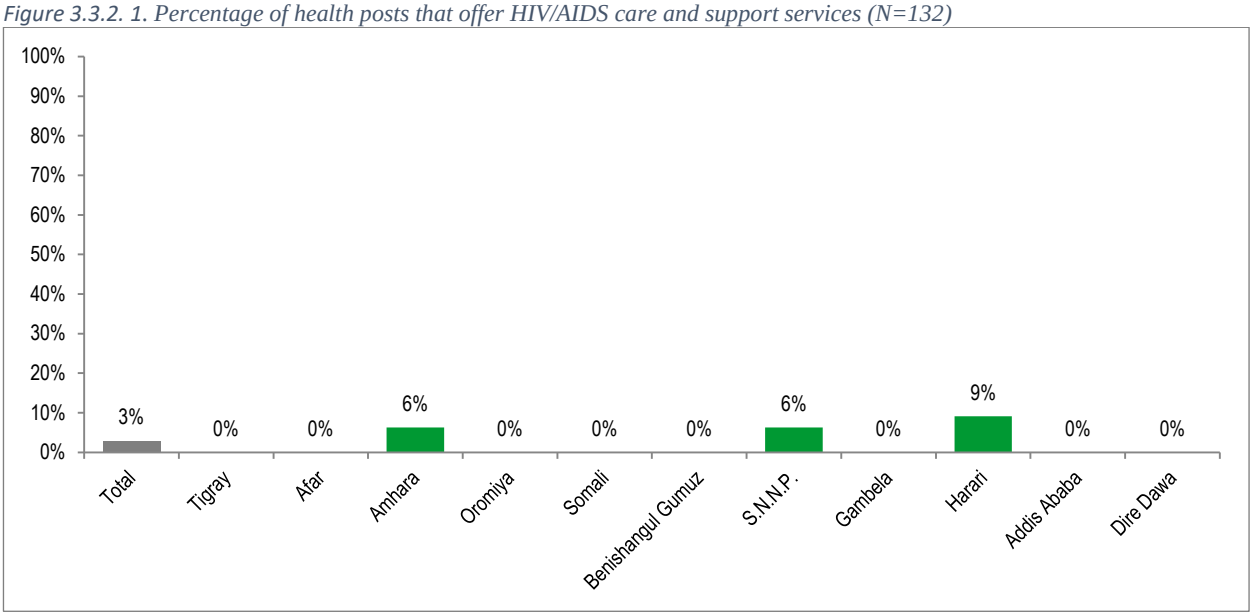
Table 3.3.2. 1 Percentage of facilities excluding health posts that offer HIV/AIDS care and support, Ethiopia 2018

	Offers HIV care and support services	Treatment of opportunistic infections	Provision of palliative care	IV treatment of fungal infections	Treatment for Kaposi's sarcoma	Nutritional rehabilitation	Provide/prescribe fortified protein supplementation	Care for paediatric	Provide/prescribe preventative treatment for TB	Preventative treatment for opportunistic	Provide/prescribe micronutrient supplementation	Family planning counselling	Provide condoms	Total number of facilities
Regions														
Tigray	72	72	61	24	34	61	45	68	58	61	61	68	65	65
Afar	42	42	34	12	6	30	16	40	25	29	38	39	42	37
Amhara	25	25	16	13	8	22	19	19	16	16	15	22	22	98
Oromiya	24	24	17	6	6	24	20	24	20	24	20	20	23	109
Somali	14	9	8	3	2	4	9	4	9	9	9	4	8	44
Benishangul Gumuz	48	48	44	29	8	48	40	38	31	40	37	48	45	31
S.N.N.P.	27	24	24	8	8	24	21	24	24	24	24	24	24	89
Gambella	19	13	9	3	3	12	12	12	10	13	12	19	17	30
Harari	25	25	23	18	18	25	20	20	23	23	18	25	25	24
Addis Ababa	36	36	24	20	14	31	25	24	27	36	21	35	28	77
Dire Dawa	34	34	31	13	16	32	27	30	28	28	31	28	28	28
Facility type														
Referral hospital	100	100	100	90	90	100	87	97	97	100	90	97	100	31
General hospital	97	97	95	81	79	87	78	86	94	97	86	95	87	116
Primary hospital	85	83	81	59	53	79	72	83	83	83	72	84	81	156

Health centre	41	40	32	12	9	38	31	37	34	37	35	36	39	164
Higher Clinic	68	68	22	19	22	34	34	22	34	34	34	34	34	19
Medium Clinic	29	29	18	13	10	26	23	25	16	22	10	29	25	74
Lower Clinic	1	1	1	0	1	1	0	1	1	1	1	1	1	72
Managing authority														
Public	43	41	34	15	12	39	33	39	36	39	37	38	40	410
Others	15	15	9	6	6	12	10	11	9	11	7	13	11	222
Urban/Rural														
Urban	38	37	29	13	11	34	30	33	31	33	28	36	35	494
Rural	15	13	10	7	6	12	9	12	9	12	13	10	12	138
Total	**29**	**28**	**22**	**11**	**9**	**26**	**22**	**25**	**22**	**25**	**22**	**26**	**26**	**632**

- Overall, three percent of Health posts offer HIV/AIDS care and support service .Harari region have the highest percentage (9 percent) of health post that offer HIV/AIDS care and support service followed by SNNP and Amhara (6 percent), while none of the other regions and administrative council do.

Figure 3.3.2. 1. Percentage of health posts that offer HIV/AIDS care and support services (N=132)



Service readiness

HIV/AIDS care and support service readiness is assessed by using the ten tracer elements. Table3.3.2.2. shows HIV/AIDS care and support service readiness of facilities excluding health posts by region, facility type, managing authority and urban/ rural.

- Overall, only three percent of facilities that offer HIV/AIDS care and support service, excluding health posts, have all tracer items available.
- Facilities that offer HIV/AIDS care and support service, excluding health posts, have on average seven out of the ten tracer items.
- Of the tracer item categories, diagnostics are available in higher percentage (72 percent) and staffs and guidelines in smallest percentage (56 percent) of facilities
- Harari region has the highest readiness score (84 percent) with all, ninety percent and seventy eight percent of facilities having staff and guidelines, diagnostics and, medicine and commodities available. On the other hand Gambella region has a lowest readiness score of fifty one percent.
- Hospitals have the highest readiness score compared to Health centres and lower level facilities
- Public facilities have readiness score of forty three percent compared to fifteen percent in others.

Figure 3.3.2. 2 Percentage of facilities that have tracer items for HIV/AIDS care and support services, Ethiopia 2018

	Guidelines available clinical management HIV/AIDS	Guidelines available palliative care	At least 1 trained staff clinic management	System for diagnosis of TB among HIV+ clients	Intravenous solution with infusion set	IV treatment fungal infection	Co-trimoxazole cap/tab	All first line TB medications	Palliative care pain management	Condoms	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions													
Tigray	71	39	51	76	82	9	77	77	82	100	8	66	55
Afar	68	40	38	53	59	4	86	89	91	100	2	63	17
Amhara	75	40	49	77	50	23	59	87	60	100	2	62	59
Oromiya	54	36	25	54	100	17	85	100	85	100	1	66	80
Somali	16	12	16	60	100	60	64	28	100	96	4	55	9
Benishangul Gumuz	59	59	57	78	88	27	77	78	92	92	18	71	17
S.N.N.P.	87	85	86	89	34	2	77	100	88	99	1	75	62
Gambella	55	23	39	63	47	0	70	63	63	92	0	51	11
Harari	100	80	90	100	90	20	90	80	90	100	0	84	10
Addis Ababa	70	47	63	70	61	6	44	69	51	88	3	57	57
Dire Dawa	69	63	78	75	84	12	94	84	100	84	12	74	13
Facility type													
Referral hospital	81	58	74	97	97	45	100	97	100	100	23	85	31
General hospital	87	62	79	93	97	29	92	96	99	90	13	82	112
Primary hospital	80	65	79	92	99	17	91	98	99	97	11	82	132
Health centre	69	50	55	72	79	15	89	98	94	100	2	72	92
Higher Clinic	32	0	0	11	11	0	11	29	11	100	0	20	5
Medium Clinic	77	55	35	78	18	0	7	67	12	91	0	44	14
Lower Clinic	9	0	0	49	22	0	9	0	9	100	0	20	4
Managing authority													
Public	71	52	59	75	81	17	90	98	94	100	4	74	308
Others	65	38	28	63	27	2	19	58	24	93	1	42	82
Urban/Rural													
Urban	71	47	51	74	65	15	72	87	71	98	3	65	342
Rural	62	53	52	61	77	6	68	92	98	99	3	67	48
Total	**69**	**48**	**51**	**72**	**67**	**13**	**71**	**88**	**76**	**98**	**3**	**66**	**390**

3.3.3 Antiretroviral therapy

As all people living with HIV are eligible for ART and enrolment in care provides an opportunity for close clinical and laboratory monitoring, early assessment for opportunistic infection, co morbidities and timely screening and management of OIs. ART treatment is commenced with the less toxic and more convenient regimens as fixed-dose combinations dose. Once-daily regimens comprising NRTI backbone (TDF + 3TC) and one NNRTI (EFV) are maintained as the preferred choices in adults, adolescents and children older than ten years. For children younger than three years a PI-based regimen is preferred.

Service availability

Service availability is assessed using the three components of ART service; ART prescription or ARV treatment follow up, ART prescription, and treatment follow up.

Figure3.3.3.1. Show Percentage of facilities that offer ARV services excluding health posts.

- Overall, seventeen percent of facilities, excluding health posts, Offer ARV prescription or ARV treatment follow-up services. This result is similar with SARA 2016 findings.

Figure 3.3.3. 1 Percentage of facilities excluding health posts that offer ARV services (N=632), Ethiopia 2018

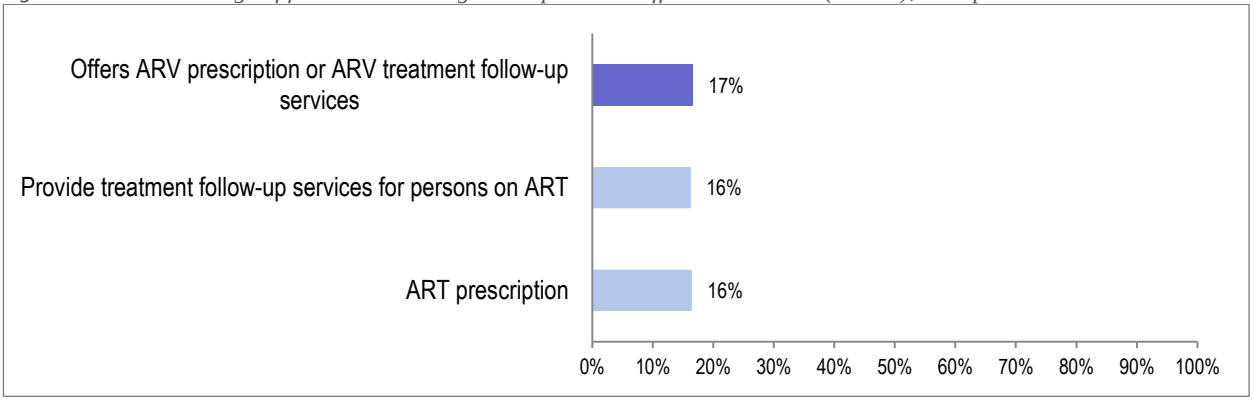


Table 3.3.3.1 shows Percentage of facilities that offer ARV services excluding health posts.

- Tigray region has the highest percentage (37 percent) of facilities that offer ARV prescription or ARV treatment follow-up services.
- Somali region has the lowest percentages with only nine percent offering ARV prescription or ARV treatment follow-up services.
- Larger proportion of hospitals offer ART service; ninety four, ninety five and eighty three percent of referral, general and primary hospitals offering ARV prescription or ARV treatment follow-up services respectively
- Only two percent of private facilities offer ART service in comparison to thirty one percent of public facilities.

Table 3.3.3. 1 Percentage of facilities that offer ARV services excluding health posts, by region, facility type, managing authority and urban/rural, Ethiopia, 2018.

	Offers ARV prescription or ARV treatment follow-up services	ART prescription	Provide treatment follow-up services for persons on ART	Total number of facilities
Regions				
Tigray	37	37	37	65
Afar	20	20	20	37
Amhara	10	10	10	98
Oromiya	17	17	16	109
Somali	9	3	3	44
Benishangul Gumuz	28	28	28	31
S.N.N.P.	18	18	18	89
Gambella	13	13	10	30
Harari	25	23	18	24
Addis Ababa	19	19	18	77
Dire Dawa	28	28	28	28
Facility type				
Referral hospital	94	94	90	31
General hospital	95	95	90	116
Primary hospital	83	83	79	156
Health centre	28	27	27	164
Higher Clinic	15	15	15	19
Medium Clinic	0	0	0	74
Lower Clinic	0	0	0	72
Managing authority				
Public	31	30	30	410
Others	2	2	2	222
Urban/Rural				
Urban	24	24	24	494
Rural	5	4	4	138
Total	**17**	**16**	**16**	**632**

Service readiness

Service readiness for ART was done using the seven tracer items; Guidelines available for ART, at least one trained staff on ART prescription and management, availability of four laboratory tests, (CD4 or viral load, complete blood count (CBC). liver function test, and renal function test), and three first line ARVs.

- Only six percent of facilities that give ART service have all the tracer items. Facilities that give ART service have on average three tracer item.
- ART guidelines and at least 1 trained staff are the most available of the tracer items
- No difference was observed compared with 2016 SARA result.

Table 3.3.3.2. shows percentage of facilities excluding health posts that have tracer items for ARV services among facilities that provide this service, by region , facility type, managing authority , and urban/ rural.

- Guidelines, three first line ARV drugs and trained staff are the most available of the tracer items
- Dire Dawa region has the highest proportion of facilities (76 percent) with tracer items and Somali has the lowest (22 percent).
- By facility type, Referral and General hospital have the highest readiness score eighty percent and seventy five percent respectively as compared with forty percent for health centre and higher clinics
- Diagnostics is the lowest available tracer item (19 percent)

Table 3.3.3. 2. Antiretroviral therapy readiness at health facilities excluding health posts, Ethiopia 2018

	Guidelines available ART	At least 1 trained staff ART prescription and management	Complete blood count (CBC)	CD4 or viral load	Renal function test	Liver function test	3 first line ARVs	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions										
Tigray	99	79	33	26	21	29	89	6	54	45
Afar	96	96	46	46	8	8	100	0	57	10
Amhara	98	98	16	18	11	14	96	6	50	52
Oromiya	98	98	14	33	7	8	58	4	45	76
Somali	30	30	12	12	18	18	36	6	22	8
Benishangul Gumuz	90	62	10	8	14	18	79	0	40	11
S.N.N.P.	82	80	7	9	5	6	99	4	41	56
Gambella	88	100	0	6	0	0	94	0	41	10
Harari	90	70	50	70	50	40	50	0	60	10
Addis Ababa	88	91	61	52	47	54	87	17	68	52
Dire Dawa	100	93	80	63	46	56	93	29	76	12
Facility type										
Referral hospital	83	76	97	76	66	72	93	28	80	29
General hospital	93	81	78	78	50	60	85	27	75	110
Primary hospital	89	89	45	49	31	33	89	14	61	129
Health centre	93	92	8	16	6	7	80	2	43	71
Higher Clinic	100	50	50	0	0	50	50	0	43	2
Medium Clinic	0	0	0	0	0	0	0	0	0	1
Lower Clinic	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0
Managing authority										
Public	92	91	17	25	12	13	82	5	48	284
Others	92	67	72	41	36	59	63	13	62	58
Urban/Rural										
Urban	92	89	23	28	15	18	80	6	49	313
Rural	91	90	4	10	4	4	89	2	42	29
Total	**92**	**89**	**21**	**26**	**14**	**16**	**81**	**6**	**49**	**342**

3.3.4 Prevention of mother to child transmission (PMTCT)

Ethiopia has started implementing PMTCT option B+ since December 2014.

Service availability

Figure 3.3.4.1. Shows percentage of facilities that offer PMTCT services

- Forty five percent of facilities surveyed excluding health posts offer PMTCT services.
- The absolute percentage is similar to 2016 SARA finding.

- Large proportion of PMTCT services are offered on Family planning counselling (40 percent), HIV counselling & testing (42 percent), Infant & young child feeding counselling (42 percent), and Nutritional counselling for HIV+ women & their infants (41 percent).

Figure 3.3.4. 1 Percentage of facilities that offer PMTCT services (N=632), Ethiopia 2018

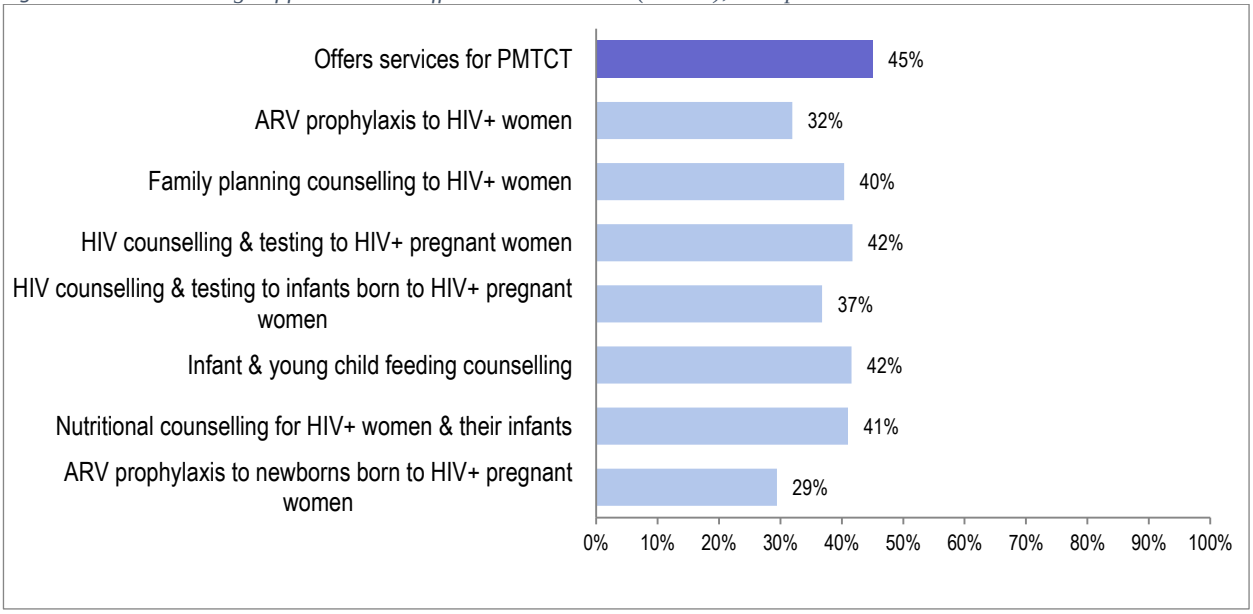


Table 3.3.4.1. Shows percentage of facilities that offer PMTCT services by region, facility type, managing authority and urban/ rural

- Tigray region has the largest proportion of facilities (70 percent) that offer PMTCT services, while Addis Ababa (19 percent) and Gambella (20 percent) have the least.
- Ninety five percent and more of hospitals offer PMTCT services r, compared with fifty one percent of higher clinics.
- Eighty four percent of public facilities offer PMTCT services, but only five percent of privates do.
- Rural facilities have highest percentage (59 percent) of facilities that offer PMTCT services.

Table 3.3.4. 1 Table 3.3.4.1. Prevention of mother to child transmission (PMTCT) availability, all facilities excluding health posts, by back ground characteristics, Ethiopia 2018

	Offers services for PMTCT	HIV counselling & testing to pregnant women	HIV counselling & testing to infants born to HIV+ pregnant	ARV prophylaxis to HIV+ women	ARV prophylaxis to newborns born to HIV+ pregnant women	Infant & young child feeding counselling	Nutritional counselling for HIV+ women & their infants	Family planning counselling to HIV+ women	Total number of facilities
Regions									
Tigray	70	70	67	67	63	70	70	70	65
Afar	48	48	48	32	32	48	48	48	37
Amhara	47	47	44	36	34	47	44	42	98
Oromiya	51	41	34	30	27	44	44	44	109
Somali	32	32	32	26	26	31	32	32	44
Benishangul Gumuz	46	46	46	40	40	46	46	46	31
S.N.N.P.	41	41	33	27	24	35	35	35	89
Gambella	20	20	20	12	13	20	20	20	30
Harari	57	57	39	33	33	51	57	57	24
Addis Ababa	19	19	19	19	19	19	19	19	77
Dire Dawa	43	43	40	43	43	43	43	43	28
Facility type									
Referral hospital	97	97	97	97	97	97	97	97	31

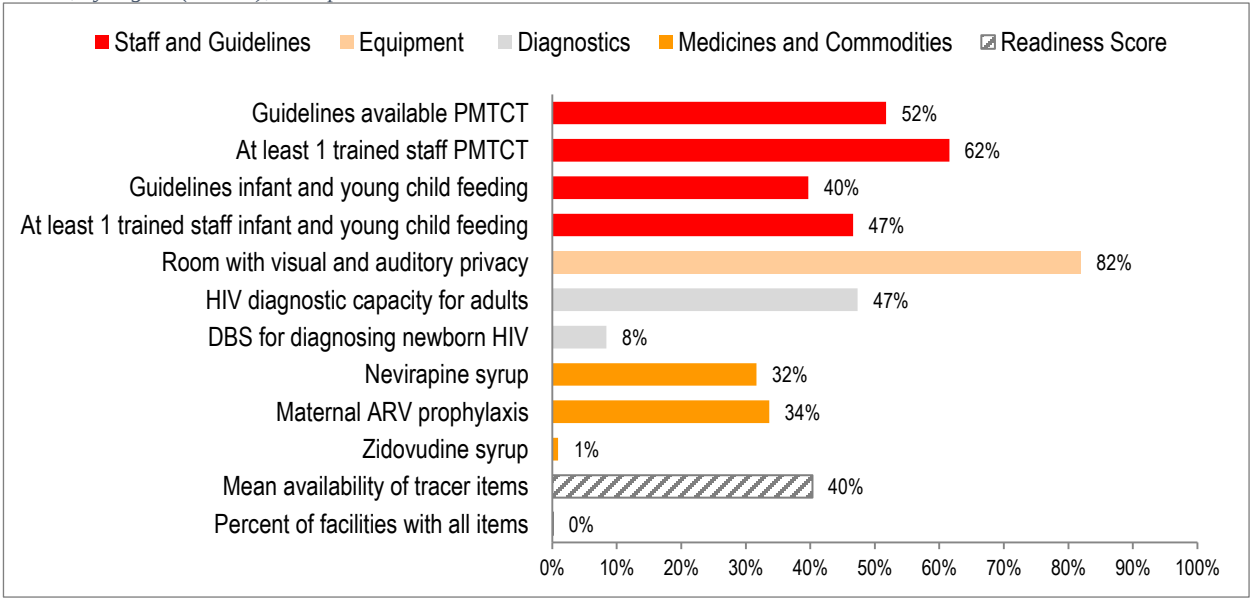
General hospital	96	95	96	95	95	95	96	95	116
Primary hospital	95	95	92	88	90	94	94	94	156
Health centre	86	79	69	59	53	79	78	76	164
Higher Clinic	51	51	43	50	50	50	51	51	19
Medium Clinic	3	3	2	0	0	2	3	3	74
Lower Clinic	0	0	0	0	0	0	0	0	72
Managing authority									
Public	84	77	68	59	54	77	76	75	410
Others	5	5	5	5	4	5	5	5	222
Urban/Rural									
Urban	36	36	34	32	31	36	36	35	494
Rural	59	51	42	32	27	51	49	49	138
Total	**45**	**42**	**37**	**32**	**29**	**42**	**41**	**40**	**632**

Service readiness

Figure 3.3.4.2 shows PMTCT service readiness. PMTCT service readiness was assessed using the ten tracer items.

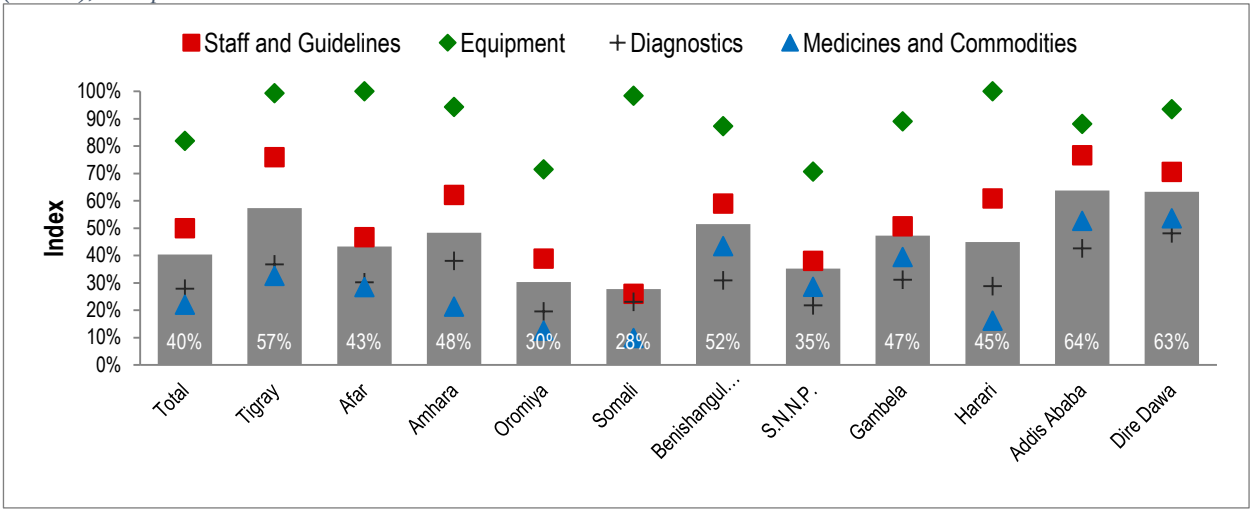
- Overall, none have all tracer items in a facility. And on average facilities have four of the ten tracer items.
- The least available tracer items are diagnostics (23 percent) and, medicines and commodities (22 percent).
- The most available tracer item was equipment (82 percent).
- Compared with 2016 SARA, the actual percentage of mean availability of tracer items has decreased from forty one to thirty nine percent.

Figure 3.3.4. 2 Percentage of facilities excluding health posts that have tracer items for PMTCT services among facilities that provide this service, by region (N=443), Ethiopia 2018



- Addis Ababa (61 percent) and Dire Dawa (63 percent) have the highest readiness score, while Somali (28 percent) and Oromia (29 percent) regions have the lowest score.
- Hospitals have highest readiness score (greater than sixty percent) compared with higher clinics (32 percent) and health centres (38 percent)

Figure 3.3.4. 3 Percentage of facilities that have tracer items for PMTCT services among facilities that provide this service, by region (N=443), Ethiopia 2018



3.4 Sexually Transmitted Infection (STI)

Sexually transmitted infections (STIs) are a variety of clinical syndromes caused by pathogens that can be acquired and transmitted through sexual activity. In Ethiopia, according to the 2016 Ethiopian Demographic and Health Survey, 4% of women and men age 15-49 reported having an STI and/or symptoms of an STI in the past 12 months prior to the survey.

Service availability

- Overall, twenty seven percent of facilities including health posts offered STI services. Of these those that offer STI diagnosis and treatment were 25 and 23 percent respectively.

Table 3.4.1 shows the percentage of facilities offering STI services by region, facility type, managing authority, and residence.

- Regions that have the least percentage of facilities that offer STI service are Harari (61 percent), and Amhara (62 percent).
- All referral hospitals, and general hospitals (99 percent), primary hospitals (97 percent) and health centres (96 percent) offer STI service.
- Public organizations have a lower percentage (22 percent) of facilities that offer STI service as compared to private (51 percent)
- Urban facilities have larger proportion of facilities that offer STI service.

Table 3.4. 1 Table 3.4.1. Percentage of facilities that offer sexually transmitted infections excluding health posts, Ethiopia 2018

	Offers services for STIs	Diagnosis of STIs	Prescribe treatment for STIs	Total number of facilities
Regions				
Tigray	97	97	93	65
Afar	96	96	96	37
Amhara	62	57	59	98
Oromiya	67	67	67	109
Somali	99	99	99	44
Benishangul Gumuz	81	73	81	31
S.N.N.P.	83	80	83	89
Gambella	100	75	100	30
Harari	61	61	61	24
Addis Ababa	75	75	75	77
Dire Dawa	100	100	100	28
Facility type				
Referral hospital	100	100	100	31

General hospital	99	99	99	116
Primary hospital	97	97	97	156
Health centre	96	93	96	164
Higher Clinic	64	64	64	19
Medium Clinic	93	93	93	74
Lower Clinic	32	29	29	72
Managing authority				
Public	96	93	96	410
Others	51	49	49	222
Urban/Rural				
Urban	70	69	70	494
Rural	79	75	76	138
Total	**74**	**71**	**73**	**632**

Table 3.4.2 shows the percentage of health posts offering STI diagnosis and treatment services by region and residence.

- Overall, 4 percent of health posts offered STI services (diagnosis) and none provided STI treatment, compared to Percent of health posts which offered STI services in the 2016 SARA(11 percent)
- Only health posts in Afar, Somali, SNNP, Gambella and Dire Dawa give STI services
- Of the regions, Somali (38 percent) and Dire Dawa (36 percent) have the highest and SNNP (6 percent) have the smallest percentage of Health posts that offer STI services.
- Urban health posts are more likely to provide STI service(5 percent) than the rural ones (4 percent); however, in the 2016 SARA rural health posts (11 percent) were more likely to provide STI services than urban ones (5 percent).

Table 3.4. 2 Percentage of health posts offering STI diagnosis and treatment services by region and residence, Ethiopia 2018

	Offers services for STIs	Diagnosis of STIs	Prescribe treatment for STIs	Total number of facilities
Regions				
Tigray	0	0	0	11
Afar	25	25	0	12
Amhara	0	0	0	16
Oromiya	0	0	0	16
Somali	38	38	0	13
Benishangul Gumuz	0	0	0	14
S.N.N.P.	6	0	0	16
Gambella	8	8	0	12
Harari	0	0	0	11
Addis Ababa	#DIV/0!	#DIV/0!	#DIV/0!	0
Dire Dawa	36	36	0	11
Facility type				
Health Post	4	3	0	132
Managing authority				
Public	4	3	0	132
Urban/Rural				
Urban	5	5	0	10
Rural	4	2	0	122
Total	**4**	**3**	**0**	**132**

Service Readiness

Facilities offering STI services were also assessed on their readiness to provide the services based on the availability of the following 7 tracer items: guidelines for diagnosis and treatment of STIs, staff trained in diagnosis and treatment of STIs in the past two years, capacity to conduct on site syphilis rapid test, availability of male condoms, metronidazole cap/tab, ciprofloxacin cap/tab, and ceftriaxone injection.

Figure 3.4.1 shows percentage of facilities that have tracer items for STI services among facilities that provide this service by region, facility type, managing authority, and urban/ rural.

- Eighteen percent of the health facilities had all tracer items.
- On average, facilities had 4 of the 7 tracer items,

- Male condoms were the most widely available item with eighty two percent of facilities having this commodity in stock on the day of the survey while availability of trained staff on diagnosis and treatment of STI in the last two years was the least among the tracer items which was reported by only forty eight percent of the health facilities.
- Hospitals are more likely to have the tracer items available, with readiness score of eighty seven percent in primary hospitals to ninety five percent in Referral hospitals.
- Public institutions have highest percentage of facilities that have tracer items available (65 percent).

Table 3.4. 3 Table 3.4.4 shows percentage of facilities excluding health posts that have tracer items for STI services among facilities that provide this service by region, facility type, managing authority, and residence (N=573), Ethiopia, 2018.

	Guidelines available diagnosis and treatment of STIs	At least 1 trained staff diagnosis and treatment of STIs	Syphilis rapid test	Condoms	Metronidazole	Ciprofloxacin	Ceftriaxone injectable	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions										
Tigray	80	74	66	97	65	69	73	28	75	64
Afar	52	49	33	87	74	72	75	14	63	36
Amhara	62	70	53	94	59	63	55	20	65	85
Oromiya	40	41	53	91	76	76	76	23	65	95
Somali	52	37	54	88	76	63	79	18	64	43
Benishangul Gumuz	64	52	45	90	64	65	72	23	65	26
S.N.N.P.	47	44	50	92	53	49	57	9	56	79
Gambella	32	39	25	99	44	42	25	4	44	30
Harari	80	48	100	60	56	56	56	43	65	17
Addis Ababa	64	47	78	66	30	30	29	18	49	70
Dire Dawa	43	40	67	84	84	84	75	29	68	28
Facility type										
Referral hospital	90	87	90	100	100	100	100	77	95	31
General hospital	83	80	85	88	98	98	97	50	90	115
Primary hospital	72	72	77	95	98	99	97	46	87	151
Health centre	50	52	58	97	87	87	86	23	74	159
Higher Clinic	70	18	99	95	43	45	56	3	61	16
Medium Clinic	68	70	75	79	13	13	13	9	47	67
Lower Clinic	31	19	0	72	4	4	9	0	20	34
Managing authority										
Public	51	53	57	96	85	84	84	24	73	400
Others	54	48	51	77	16	16	19	8	40	173
Urban/Rural										
Urban	64	61	66	86	49	51	50	22	61	451
Rural	36	37	39	96	78	75	77	14	63	122
Total	**52**	**51**	**55**	**90**	**61**	**61**	**61**	**18**	**62**	**573**

3.5 Tuberculosis

World Health Organization aims for a world free of TB and, as part of the Sustainable Development Goals, to end the global TB epidemic by 2030. It seeks to enable universal access to TB prevention and care, guide the global response to threats, and promote innovation[4].

Service availability

Figure 3.5.1. Shows the percentage of facilities excluding health posts that offer tuberculosis service.

- More than half (57 percent) of facilities in Ethiopia excluding health post offer tuberculosis service and 21 percent of health posts offer TB service at the time of the survey.
- Excluding health post, the percentage of facilities that offer TB diagnosis is 54 percent.

[4] World Health Organization, (2016), Report of the 16th meeting of the strategic and technical advisory group for tuberculosis, Geneva, Switzerland. http://www.who.int/tb/advisory_bodies/stag_tb_report_2016.pdf

- Among the facilities that offer TB diagnosis the percentage of facilities offering TB diagnosis by chest X-ray, rapid test (GeneXpert MTB/RIF), and culture is low which is 12 percent ,11 percent and 3 percent respectively.
- Among the facilities offering TB diagnosis 39 percent of the TB diagnosis were by clinical symptoms.
- 50 percent of health facilities excluding health post offer TB diagnosis by sputum smear microscopy examination.

Figure 3.5. 1 Percentage of facilities that offer tuberculosis services (N=632), Ethiopia, 2018

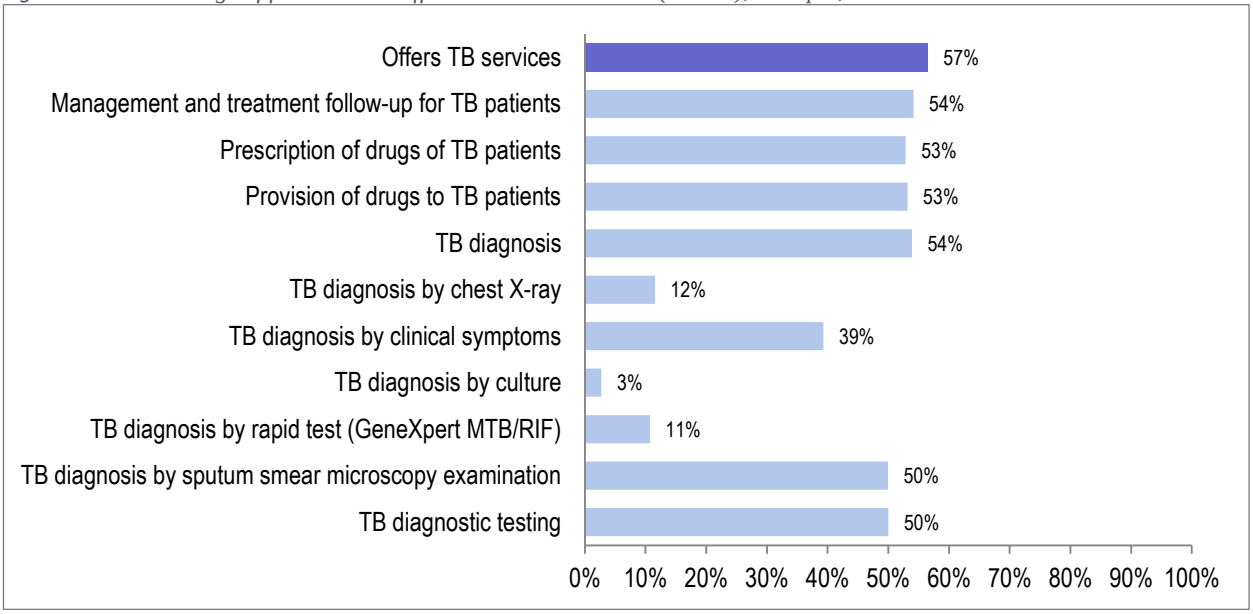


Table 3.5.1 Show the percentage of facilities excluding health posts offering TB diagnosis and treatment service by regions, facility type, managing authority, and urban vs. rural location at the time of the survey.

- In terms of managing authority, governmental health facilities mostly offer TB service than health facilities managed by nongovernmental authorities (93 percent vs. 19 percent).
- Variation was observed among regions on the availability of TB service, health facilities in Tigray and Harari region has the highest TB service availability (83, and 82 percent respectively) while health facilities in Gambella region has the lowest availability (34 percent).
- Urban health facilities were less likely to offer TB treatment service (48 percent) than rural health facilities (70 percent).
- Health centres had the highest availability of TB service (97 percent) compared to other facility types, followed by general hospitals (96 percent) and the lowest availability of TB service was at lower clinics (3 percent).

Table 3.5. 1 Percentage of facilities excluding health posts offering TB diagnosis and treatment service by regions, facility type, managing authority, and urban vs. rural location, Ethiopia 2018

	Offers TB services	TB diagnosis	TB diagnostic testing	TB diagnosis by clinical symptoms	TB diagnosis by sputum smear microscopy examination	TB diagnosis by culture	TB diagnosis by rapid test (GeneXpert MTB/RIF)	TB diagnosis by chest X-ray	Prescription of drugs of TB patients	Provision of drugs to TB patients	Management and treatment follow-up for TB patients	Total number of facilities
Regions												
Tigray	83	83	65	69	65	6	10	14	80	67	77	65
Afar	55	55	52	55	52	0	8	5	55	55	55	37
Amhara	56	48	43	28	43	0	9	14	47	52	52	98

Oromiya	58	58	58	41	58	0	12	9	58	58	58	109
Somali	71	71	66	71	66	1	4	14	59	58	63	44
Benishangul Gumuz	44	44	44	18	44	0	2	2	44	44	44	31
S.N.N.P.	54	51	45	41	45	4	8	3	54	54	54	89
Gambella	34	28	28	27	28	1	5	2	31	32	32	30
Harari	82	82	76	50	76	0	25	22	45	33	33	24
Addis Ababa	43	43	42	35	42	15	18	33	36	32	36	77
Dire Dawa	62	62	62	62	60	11	37	28	43	62	62	28
Facility type												
Referral hospital	94	94	94	77	90	35	87	94	90	94	94	31
General hospital	96	96	96	85	94	24	69	91	93	96	96	116
Primary hospital	96	96	96	72	95	10	35	61	90	92	92	156
Health centre	97	91	85	66	85	2	16	11	93	96	96	164
Higher Clinic	54	54	52	39	52	12	16	44	50	36	50	19
Medium Clinic	40	40	40	26	40	4	5	16	34	30	32	74
Lower Clinic	3	3	0	3	0	0	0	0	1	0	1	72
Managing authority												
Public	93	88	83	64	83	3	18	15	90	93	93	410
Others	19	19	16	14	16	2	3	8	15	13	15	222
Urban/Rural												
Urban	48	48	46	31	46	3	10	14	45	43	44	494
Rural	70	63	57	52	57	2	12	8	66	70	70	138
Total	**57**	**54**	**50**	**39**	**50**	**3**	**11**	**12**	**53**	**53**	**54**	**632**

Service readiness

Figure 3.5.2. Shows the percentage of facilities that have tracer items for tuberculosis service among facilities excluding health posts that provide this service at the time of the survey.

- Eight four percent of facilities excluding health post had at least 1 trained staff for diagnosis and treatment of TB.
- Eighty three percent of facilities excluding health post had guidelines available for diagnosis and treatment of TB.
- Eighty seven percent of facilities excluding health post and 10 percent of health post had the system for diagnosis of HIV among TB clients.
- Of all the facilities, only 10 percent of facilities excluding health post had all the items that are needed to provide TB services.
- Availability of all first line medications for TB was very high at 94 percent.
- On average 68 percent of facilities had eight out of twelve items for TB treatment service.

Figure 3.5. 2 Percentage of facilities that have tracer items for tuberculosis services among facilities that provide this service (N=482), Ethiopia, 2018

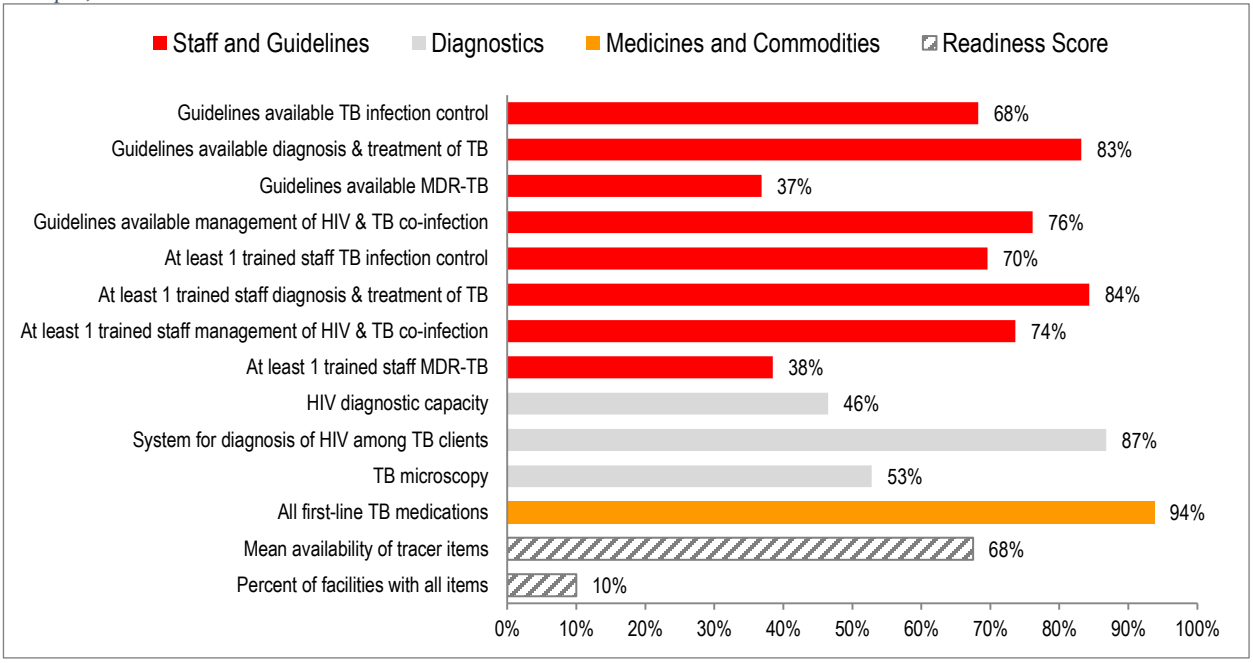


Table 3.5.2 shows percentage of facilities that have tracer items for tuberculosis services among facilities that provide this service by regions, facility type, managing authority, and urban vs. rural location at the time of the survey.

- Readiness to provide TB service was high on governmental facilities (71 percent) compared to nongovernmental facilities (51 percent).
- Readiness to provide TB service was almost the same between urban facilities and rural facilities (68 percent vs. 67 percent respectively).
- Dire Dawa had the greater readiness for TB service (85 percent), followed by Benishangul Gumuz (81 percent) and the lowest readiness for TB service showed at Harari region (51 percent).

Table 3.5. 2percentage of facilities that have tracer items for tuberculosis services among facilities that provide this service by regions, facility type, managing authority, and urban vs. rural location, Ethiopia 2018

	Guidelines available diagnosis & treatment of TB	Guidelines available management of HIV & TB co-infection	Guidelines available MDR-TB	Guidelines available TB infection control	At least 1 trained staff diagnosis & treatment of TB	At least 1 trained staff management of HIV & TB co-infection	At least 1 trained staff MDR-TB	At least 1 trained staff TB infection control	TB microscopy	HIV diagnostic capacity	System for diagnosis of HIV among TB clients	All first-line TB medications	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions															
Tigray	88	66	34	46	75	71	47	53	40	48	80	80	5	61	59
Afar	79	83	29	83	93	79	47	78	67	58	77	100	2	73	20
Amhara	90	79	44	73	83	72	38	78	37	55	89	94	10	69	80
Oromiya	87	81	27	74	93	81	33	69	52	39	88	100	7	69	90
Somali	76	75	35	62	75	75	38	74	45	42	61	74	8	61	29
Benishangul Gumuz	100	85	85	91	87	84	69	84	44	58	100	91	13	81	16
S.N.N.P.	71	71	37	60	83	65	38	65	73	48	95	100	13	67	75
Gambella	58	68	38	73	75	91	43	91	60	38	83	96	6	68	16

Harari	75	42	19	46	70	52	40	57	100	25	48	34	9	51	21
Addis Ababa	75	73	55	70	65	65	45	64	69	46	75	75	25	65	55
Dire Dawa	83	74	70	79	100	100	91	100	70	49	100	100	22	85	21
Facility type															
Referral hospital	86	90	83	72	86	76	90	79	86	83	97	100	38	86	29
General hospital	88	84	68	72	87	86	75	83	82	76	97	98	32	83	111
Primary hospital	78	70	48	68	92	79	51	74	86	66	94	99	17	75	149
Health centre	84	79	36	71	92	81	39	74	50	47	91	99	8	70	150
Higher Clinic	83	78	50	56	46	46	23	33	31	20	67	67	0	50	12
Medium Clinic	75	69	34	61	34	35	25	50	70	40	72	73	17	53	29
Lower Clinic	82	0	0	0	82	0	0	0	0	0	0	0	0	14	2
Managing authority															
Public	84	79	37	71	92	81	41	74	52	49	91	99	10	71	381
Others	79	63	33	56	48	39	24	45	58	36	66	67	12	51	101
Urban/Rural															
Urban	90	80	42	71	76	62	29	60	72	58	85	89	13	68	388
Rural	76	72	32	65	93	86	49	80	32	34	89	99	7	67	94
Total	**83**	**76**	**37**	**68**	**84**	**74**	**38**	**70**	**53**	**46**	**87**	**94**	**10**	**68**	**482**

3.6 Malaria

Malaria is one of the most important public health problems in Ethiopia, representing the commonest communicable disease and accounting for 30% of the overall disability adjusted life years lost as well as imposing a high economic cost. Malaria is endemic in approximately 75% of the national territory of Ethiopia. About 50 million inhabitants are at risk of infection. In most parts of Ethiopia, malaria is unstable and seasonal because of the altitude and climatic factors. Areas at altitudes between 1,600 and 2,000 m above sea level (masl) are epidemic-prone hypo endemic zones of malaria.

Service Availability

Table 3.6.1 presented the distribution of facilities that offered malaria service by region, managing authority, facility type, and urban/rural setting.

- Sixty eight percent of the facilities offered diagnosis or treatment of malaria.
- Except Amhara, Oromiya, Somali and SNNP, all other regions' facilities have offered diagnosis or treatment of malaria services by more than 80 percent
- The highest proportion of facilities which offered malaria service was observed in Gambella (100 percent) and the lowest were in Somali, Oromia, and SNNP regions (60, 62 percent).
- Health posts were the lowest (65 percent) from the public facilities to offer malaria treatment and diagnosis service
- Facilities that offered malaria diagnosis by microscopy was lower, which accounted 17 percent while, malaria diagnosis by clinical symptoms and RDT were higher, 42 percent and 54 percent respectively.

Table 3.6. 1 Percentage of facilities that offered malaria service by region, managing authority, facility type, and urban/rural setting, Ethiopia 2018

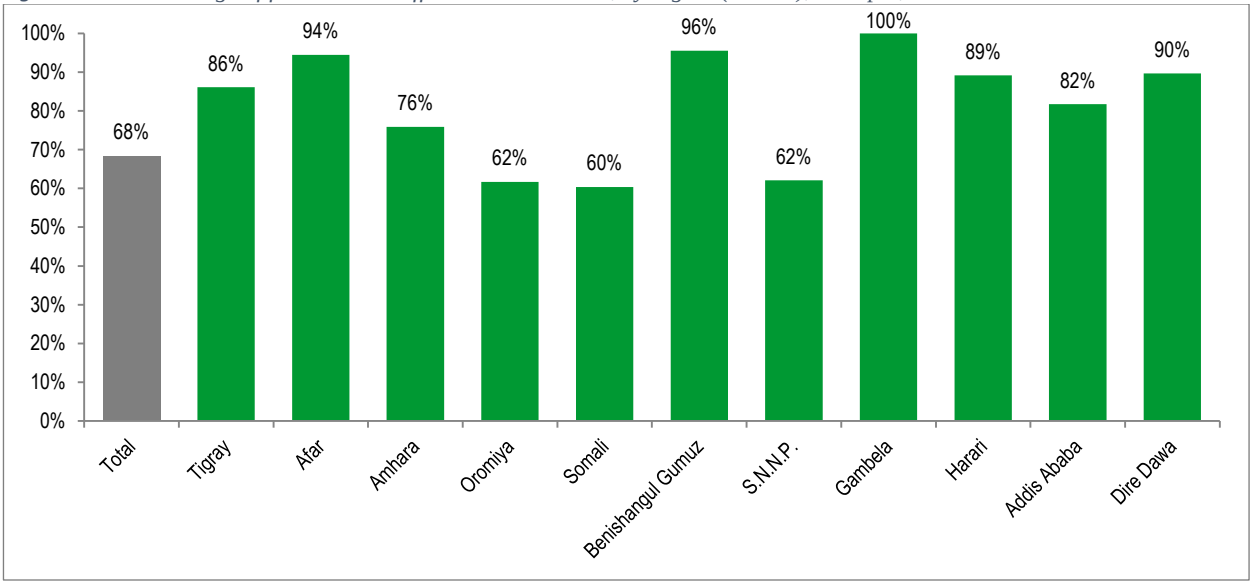
	Offer diagnosis or treatment of malaria	Malaria diagnosis	Malaria diagnosis testing	Malaria diagnosis by clinical symptoms	Malaria diagnosis by RDT	Malaria diagnosis by microscopy	Malaria treatment	Total number of facilities
Regions								
Tigray	86	86	85	35	72	26	86	76
Afar	94	94	94	93	85	32	94	49
Amhara	76	76	72	32	62	15	75	114
Oromiya	62	57	53	35	45	13	53	125
Somali	60	60	53	60	53	12	60	57
Benishangul Gumuz	96	96	94	18	90	10	96	45
S.N.N.P.	62	62	59	51	51	16	62	105
Gambella	100	94	88	85	75	26	100	42
Harari	89	89	86	85	43	53	86	35
Addis Ababa	82	82	74	77	37	74	82	77
Dire Dawa	90	90	90	90	52	55	86	39

Facility type								
Referral hospital	94	94	94	74	23	94	94	31
General hospital	98	98	98	81	33	97	97	116
Primary hospital	99	99	99	77	37	97	99	156
Health centre	95	95	94	65	59	72	95	164
Health post	65	62	62	34	62	0	60	132
Higher clinic	58	58	58	58	9	58	58	19
Medium clinic	97	97	97	83	39	97	97	74
Lower clinic	41	40	7	40	7	0	38	72
Managing authority								
Public	70	68	68	40	60	14	66	542
Others	58	58	37	54	18	32	56	222
Urban/Rural								
Urban	73	73	63	51	34	45	71	504
Rural	67	65	63	39	60	7	63	260
Total	**68**	**67**	**63**	**42**	**54**	**17**	**65**	**764**

Figure 3.6.1 revealed the percentages of facilities that offer malaria services by region.

- Facilities from regions where there are expected to be malaria endemic have a relatively high services of malaria.
- Higher percentage of facilities in Gambella, Afar, Benishangul Gumuz regions and Dire Dawa city administration offered malaria services (100, 94, 96 and 90 percent respectively.

Figure 3.6. 1 Percentage of facilities that offer malaria services, by region (N=764), Ethiopia, 2018



Service Readiness

Table 3.6.2 showed the percentage of facilities that have tracer items for malaria services among facilities which provide the service by region, managing authority and facility type. Service readiness was assessed from those facilities which have already offered malaria service according to the six tracer items. So that, the percentage of facilities that have the six tracer items for malaria services among facilities that provide the service (N=682) were classified by the three groups, staff and guidelines, diagnostics, and medicines and commodities.

- The readiness of government facilities for malaria diagnostic capacity was higher (80 percent), while the private facilities were lowest (55 percent)
- Overall, the readiness of public facilities when measured in terms of the availability of first line antimalarial, paracetamol cap/tab and ITN were higher than the private facilities.
- Facilities which are in Gambella region were the least to conduct malaria microscopy (1 percent), but higher in regions like Harari and Afar (75 and 65 percent)

- Facilities which are from Harari, Oromiya and Addis Ababa have a lowest capacity to conduct RDT, but the highest was observed in Somali region
- Exceptionally, facilities in Harari region did not experience stock out of RDT, but they did not have also a capacity to conduct RDT. This may be due to the reason that the stock out was collected from the report without observing.

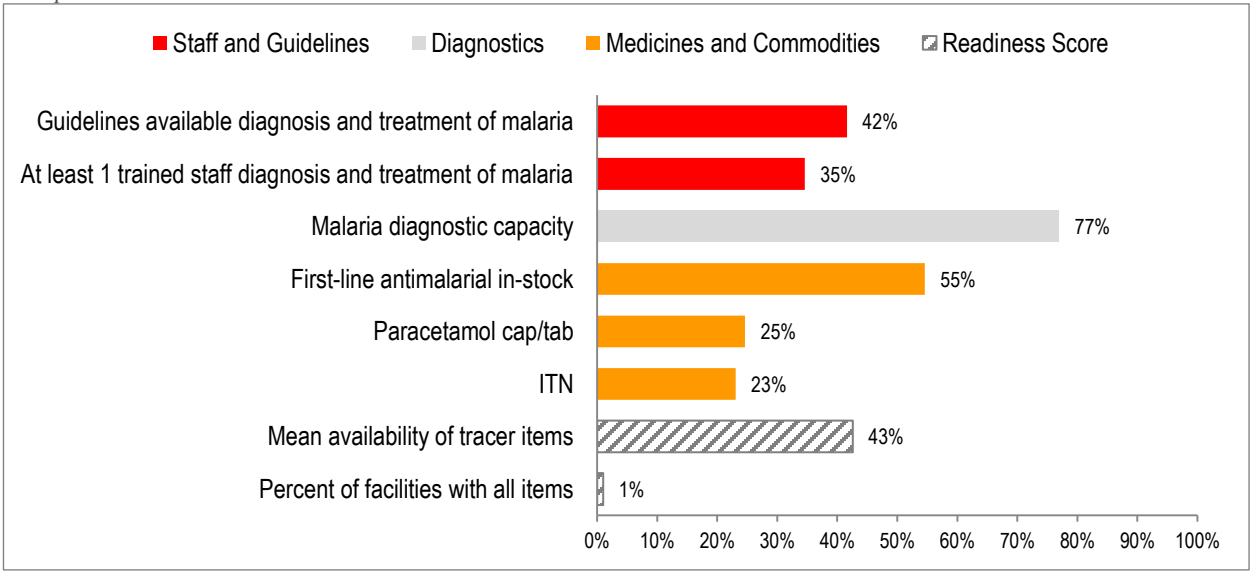
Table 3.6. 2 Percentage of facilities that have tracer items for malaria services among facilities which provide the service by region, managing authority, facility type, and urban/rural, Ethiopia 2018

	Guidelines available diagnosis and treatment of malaria	At least 1 trained staff diagnosis and treatment of malaria	Malaria diagnostic capacity	First-line antimalarial in-stock	Paracetamol cap/tab	ITN	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions									
Tigray	63	57	73	47	32	17	3	48	72
Afar	28	21	86	74	29	22	1	43	48
Amhara	43	37	91	72	28	25	1	49	101
Oromiya	35	28	63	55	24	14	0	36	106
Somali	4	46	86	47	22	48	2	42	47
Benishangul Gumuz	10	9	84	71	12	47	1	39	39
S.N.N.P.	55	42	77	40	20	32	1	44	91
Gambella	29	49	74	52	26	28	2	43	42
Harari	48	32	90	36	25	2	0	39	32
Addis Ababa	63	7	90	18	31	0	0	35	68
Dire Dawa	23	45	71	53	57	51	3	50	36
Facility type									
Referral hospital	31	24	86	90	100	7	3	56	29
General hospital	44	28	91	70	96	12	5	57	114
Primary hospital	46	30	91	87	98	17	3	61	154
Health centre	41	21	82	76	94	23	4	56	160
Health post	42	43	80	56	0	28	0	42	102
Higher clinic	61	16	63	36	46	0	0	37	16
Medium clinic	63	18	91	14	18	0	0	34	69
Lower clinic	12	11	12	7	34	0	0	13	38
Managing authority									
Public	42	38	80	61	24	27	1	45	502
Others	40	12	55	14	28	1	1	25	180
Urban/Rural									
Urban	33	21	78	57	44	5	2	40	463
Rural	45	40	77	54	17	30	1	44	219
Total	**42**	**35**	**77**	**55**	**25**	**23**	**1**	**43**	**682**

Figure 3.6.2 presented the percentage of facilities that have tracer items for malaria services among facilities that provide the service (N=682)

- Overall, only 1 percent of facilities have all the tracer items and on average facilities have 3 out of the six tracer items, for an overall readiness score of 43 percent.
- Among the tracer items malaria diagnostic capacity was available in 77 percent of facilities that offer malaria service Seventy one percent of the facilities have malaria diagnostic capacity among those who provide the service of malaria
- Only 23 percent of the facilities have ITN, while the availability of first line antimalarial was 55 percent.

Figure 3.6. 2 Percentage of facilities that have tracer items for malaria services among facilities that provide the service (N=682), Ethiopia 2018



3.7. Non communicable diseases

The growing burden of chronic non-communicable diseases in low and middle-income countries is gaining attention worldwide, including in the African continent. Non-communicable diseases (NCDs) are the leading causes of death worldwide. Cardiovascular diseases, cancer, diabetes and chronic respiratory diseases are the four major NCDs. NCD deaths in the African Region show an increasing trend over the years. In 2015, of the 9.2 million total deaths, 3.1 million (33.7%) were due to NCDs compared to 2.7million NCD deaths out of a total of 9.28 million deaths (29.1%) in 2010 and 2.4 million NCD deaths out of a total of 9.8 million deaths (27.6%) in 2005 (WHO, 2017).

The situation in Ethiopia is similar to the rest of the African region. Considering the trend of chronic diseases, federal ministry of health (FMoH) has developed a NCD strategy (MOH, 2016).

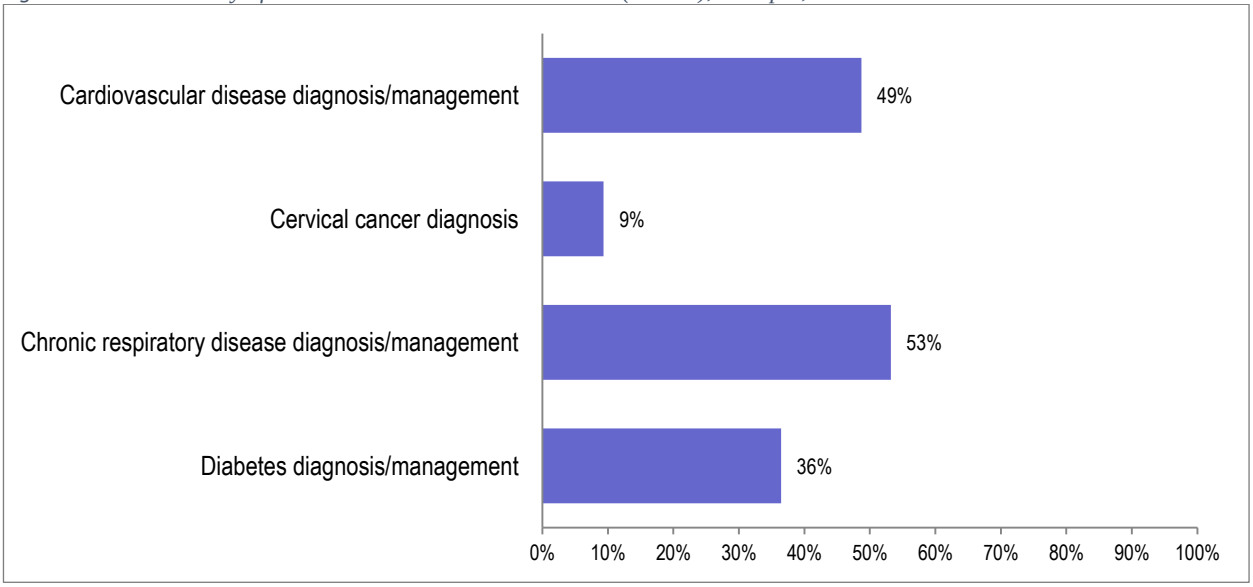
Overview

Service availability

Figure 3.7.1.1 shows percentage of facilities that offer NCD services

- Nationally 36, 49, 53 and 9 percent of facilities excluding HP offered diabetes diagnosis and management, cardiovascular disease diagnosis and treatment, chronic respiratory disease diagnosis and treatment, and cervical cancer diagnosis services.

Figure 3.7. 1 Availability of non-communicable disease services (N=632), Ethiopia, 2018



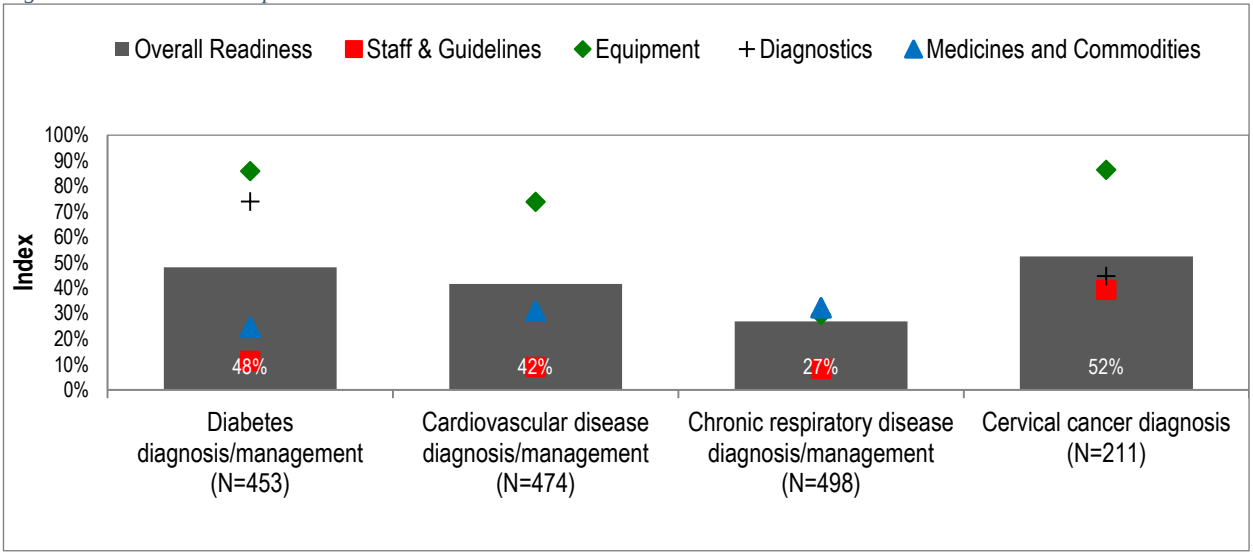
Service Readiness

Service readiness was made by assessing the four domains; namely staff & guidelines, equipment, diagnostics, and medicines and Commodities. In addition the overall readiness was assessed for each NCD.

Figure 3.7.1.2 shows service readiness to NCDs

- Nationally facilities excluding HP that offered NCD services had an overall readiness score of 46 percent for diabetes diagnosis/management, 34 percent for cardiovascular disease diagnosis/management, 18 percent for chronic respiratory disease diagnosis/management, and 51 percent for cervical cancer diagnosis.

Figure 3.7. 2 Readiness to provide non-communicable disease services



3.7.1 Diabetics diagnosis/management

Service Availability for Diabetics

Table 3.7.1.1 shows the distribution of facilities that offer diabetes services, by region

- Nationally 36 percent of the facilities excluding health post in Ethiopia provide diabetes services

- Diabetes diagnosis and or management were widely available in Dire Dawa (86 percent) and less available in Gambella (23 percent) region.
- Diabetes diagnosis and or management service were more likely provided by public facilities and urban facilities than their counters.

Trend in Service Availability for Diabetics

- The availability of service for diabetes diagnosis and or management has shown improvement from the 2016 (22 percent) to current 36 percent.

Table 3.7.1. 1 Percentage of facilities that offer diabetes services, by background characteristics (N=632)

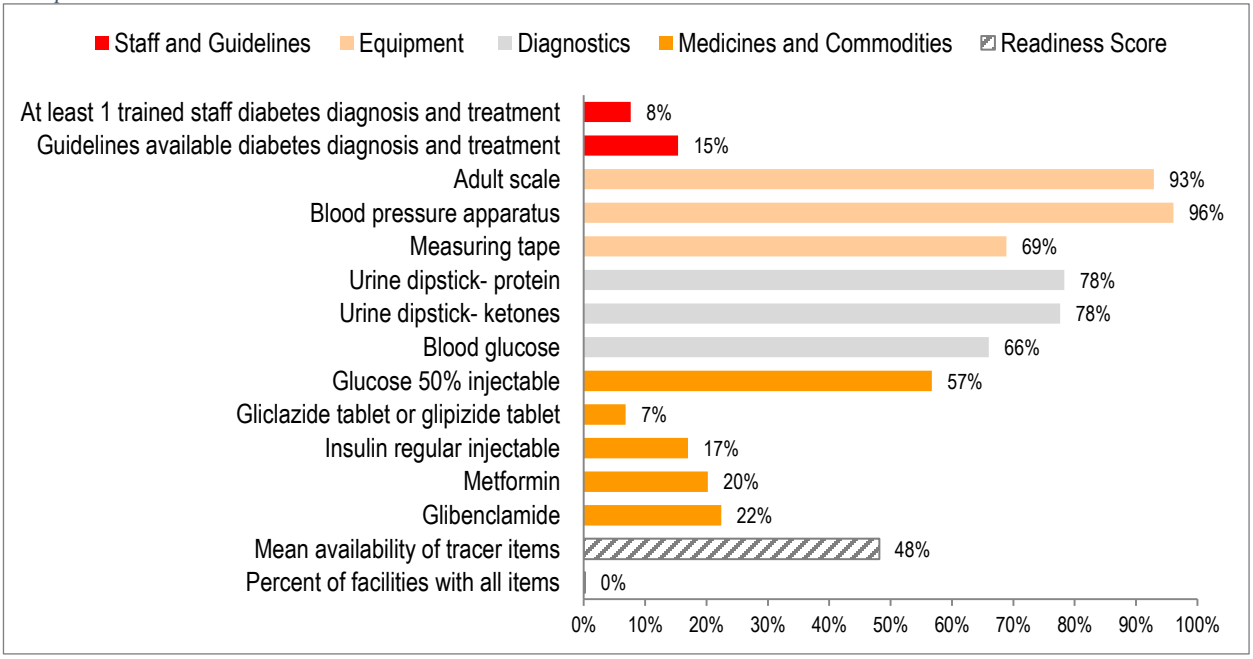
	Diabetes diagnosis and/or management	Total number of facilities
Regions		
Tigray	49	65
Afar	61	37
Amhara	24	98
Oromiya	25	109
Somali	79	44
Benishangul Gumuz	32	31
S.N.N.P.	41	89
Gambella	23	30
Harari	37	24
Addis Ababa	82	77
Dire Dawa	86	28
Facility type		
Referral hospital	97	31
General hospital	97	116
Primary hospital	95	156
Health centre	37	164
Higher Clinic	48	19
Medium Clinic	81	74
Lower Clinic	8	72
Managing authority		
Public	41	410
Others	32	222
Urban/Rural		
Urban	43	494
Rural	25	138
Total	**36**	**632**

Service readiness for Diabetics

Figure 3.7.1.1 and Table 3.7.1.2 shows the percentage of facilities that have tracer items required to provide diabetes services among facilities that provide the service.

- The overall readiness of diagnosis and/or management of diabetes were assessed. On average health facilities had 6 of 13 tracer items needs to provide the diagnosis and management of diabetes service, with overall readiness score of 48 percent.
- None of the facilities offering diabetes diagnosis and or management had not have all thirteen tracer items that are required to provide diabetes disease diagnosis and/or management.

Figure 3.7.1. 3 Percentage of facilities that have tracer items for diabetes services among facilities that provide this service (N=453), Ethiopia 2018



- The mean tracer items necessary to provide diagnosis and/or management is more likely to be available Dire Dawa facilities (63 Percent) and less likely in Oromiya facilities (41 Percent).
- Referral hospitals (78 percent) were much ready to provide diabetes diagnosis and/or treatment.
- Almost all health facilities had blood pressure apparatus and adult scale (96 percent and 93 percent, respectively)
- Few (8 percent) of the facilities excluding health post were had at least 1 trained staff for diabetes diagnosis and/or treatment.
- Medicine and commodities are the basics to provide the service. In this regards, it is observed that very few facilities had insulin regular injectable (17 percent).

Table 3.7. 1. 2 Percentage of facilities that have tracer items for diabetes services among facilities that provide this service (N=453), Ethiopia 2018

	Guidelines available diabetes diagnosis	At least 1 trained staff diabetes	Blood pressure apparatus	Adult scale	Measuring tape	Blood glucose	Urine dipstick-protein	Urine dipstick-ketones	Metformin	Glibenclamide	Insulin regular injectable	Glucose 50 injectable	Gliclazide tablet or glipizide tablet	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions																
Tigray	26	4	100	86	65	85	92	84	24	24	11	73	7	0	52	43
Afar	1	7	100	75	72	65	70	64	67	77	48	90	9	0	57	24
Amhara	2	2	99	98	57	64	75	75	14	22	11	60	2	0	45	72
Oromiya	12	12	86	86	62	26	62	62	11	23	24	54	16	0	41	81
Somali	1	1	87	73	68	55	68	68	52	43	16	63	4	0	46	38
Benishangul Gumuz	21	0	100	97	73	37	64	64	19	42	7	67	0	0	45	11
S.N.N.P.	10	1	100	100	76	84	85	85	8	7	15	59	1	0	49	70
Gambella	0	0	100	75	100	93	69	69	13	13	13	93	3	0	49	8
Harari	28	35	100	72	49	69	100	100	56	63	49	69	7	0	61	13
Addis Ababa	38	18	100	99	77	86	90	90	28	21	13	37	7	0	54	69
Dire Dawa	8	16	94	94	87	81	87	87	68	59	35	87	16	2	63	24
Facility type																
Referral hospital	33	30	100	100	87	93	100	100	97	73	90	93	13	3	78	30

General hospital	23	22	99	94	90	96	96	96	92	71	81	96	17	4	75	112
Primary hospital	22	10	98	97	89	93	95	95	88	77	74	98	14	0	73	148
Health centre	10	2	92	89	74	50	71	69	13	22	14	78	8	0	46	88
Higher Clinic	25	25	100	100	75	100	100	100	58	54	28	32	3	0	62	13
Medium Clinic	22	12	100	95	68	90	98	98	8	8	4	20	5	0	48	52
Lower Clinic	0	0	100	100	3	1	1	1	1	3	0	39	0	0	19	10
Managing authority																
Public	11	4	93	90	76	58	74	73	24	28	23	77	9	0	49	322
Others	21	12	100	96	60	77	84	83	16	15	9	30	4	0	47	131
Urban/Rural																
Urban	16	10	99	93	66	71	79	79	25	28	19	46	5	0	49	389
Rural	14	1	87	93	78	51	77	75	7	8	11	87	12	0	46	64
Total	**15**	**8**	**96**	**93**	**69**	**66**	**78**	**78**	**20**	**22**	**17**	**57**	**7**	**0**	**48**	**453**

3.7.2. Cardiovascular disease diagnosis/management

Service availability

Table3.7.3.1 shows percentage of facilities that offered cardiovascular disease diagnosis/management services.

- Nationally forty nine percent of facilities offered cardiovascular disease diagnosis/management services
- Seventy nine, seventy eight, and seventy seven percent of facilities in Somali region and Addis Ababa, and Dire Dawa city administrative councils offered cardiovascular disease diagnosis/management services respectively.
- Oromiya (42 percent) and Amhara (43 percent) regions had the smaller proportion of facilities that offered cardiovascular disease diagnosis/management services
- With regard facility type, all hospital types had the larger proportion of facilities that offered cardiovascular disease diagnosis/management services
- Public facilities were highly likely to offer cardiovascular disease diagnosis/management services when compared with private.

Table 3.7.2. 1 Percentage of facilities that offer cardiovascular disease services, by background characteristics (N=632)

	Offers cardiovascular disease diagnosis and/or management	Total number of facilities
Regions		
Tigray	52	65
Afar	65	37
Amhara	43	98
Oromiya	42	109
Somali	79	44
Benishangul Gumuz	59	31
S.N.N.P.	49	89
Gambella	30	30
Harari	20	24
Addis Ababa	77	77
Dire Dawa	78	28
Facility type		
Referral hospital	97	31
General hospital	97	116
Primary hospital	94	156
Health centre	66	164
Higher Clinic	48	19
Medium Clinic	79	74
Lower Clinic	5	72
Managing authority		
Public	68	410
Others	29	222
Urban/Rural		
Urban	53	494
Rural	41	138
Total	**49**	**632**

Service readiness

Service readiness was assesses using twelve tracer items in the three domain. (staff & guidelines, equipment, and medicines and Commodities).

Figure 3.7.2.1 shows availability of tracer items by back ground characteristics

- Nationally only two percent of the facilities that offered cardiovascular disease diagnosis/management services had all the tracer items.
- On average facilities had five of the twelve tracer items.
- Cardiovascular disease diagnosis/management equipment were more likely to be available of all the domains.

Figure 3.7.2. 1 Percentage of facilities that have tracer items for cardiovascular disease services among facilities that provide this service (N=474)

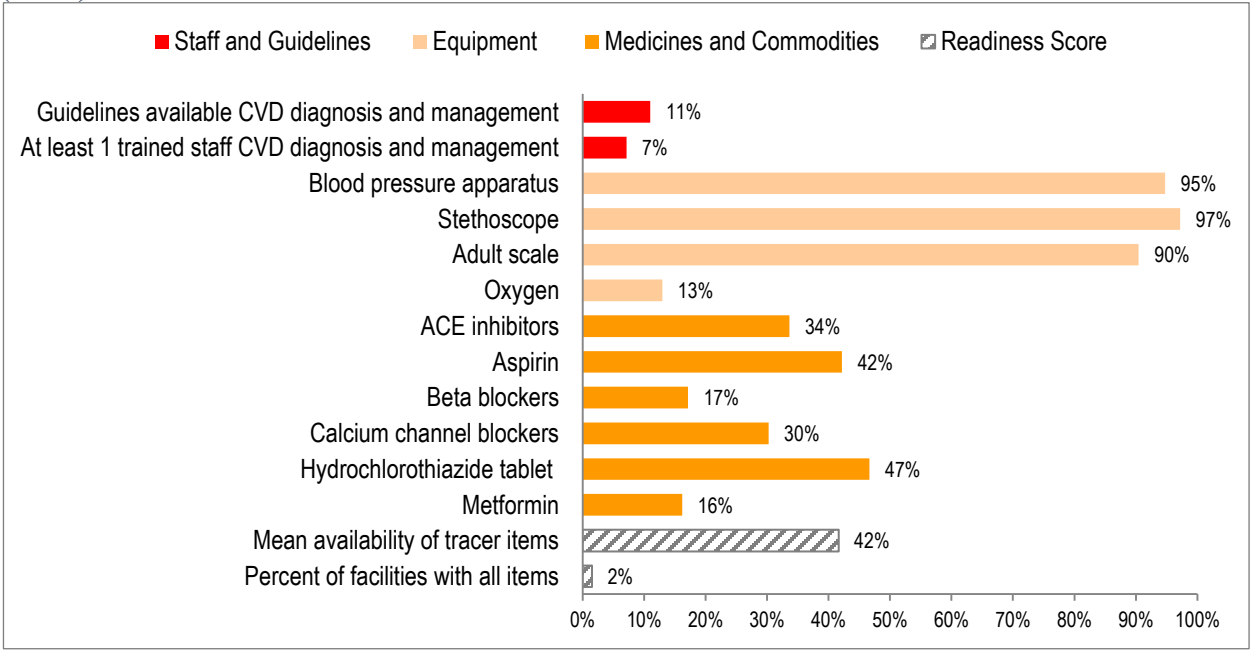


Table 3.7.2.1 shows availability of tracer items by back ground characteristics

- All facilities in Tigray, Afar, Amhara, Benishangul Gumuz, and Harari regions, and Addis Ababa city administrative council that offered cardiovascular disease diagnosis and management services had blood pressure apparatus and stethoscope.
- Facilities in Addis Ababa and Dire Dawa city administrative councils that offered cardiovascular disease diagnosis and management services are more likely to had oxygen (47 percent, and 45 percent respectively).
- Only seven percent of facilities in Gambella region that offered cardiovascular disease diagnosis and management services had ACE inhibitors.
- Four and seven percent of facilities in Benishangul Gumuz and SNNP regions that offered cardiovascular disease diagnosis and management services had beta blockers compared with 46 and 65 percent of facilities in Afar and Dire Dawa respectively

Table 3.7.2. 2 Percentage of facilities that have tracer items for cardiovascular disease services among facilities that provide this service (N=474), Ethiopia 2018

	Guidelines available CVD diagnosis and management	At least 1 trained staff CVD diagnosis and management	Stethoscope	Blood pressure apparatus	Adult scale	Oxygen	ACE inhibitors	Hydrochlorothiazide tablet	Beta blockers	Calcium channel blockers	Aspirin	Metformin	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions															
Tigray	17	3	100	100	80	24	31	61	13	28	37	22	0	43	44
Afar	1	16	100	100	80	7	61	35	46	39	63	63	0	51	25
Amhara	7	7	100	100	93	9	25	66	24	47	43	8	0	44	80
Oromiya	1	7	100	84	84	4	40	47	14	21	64	7	0	39	87
Somali	3	1	94	87	73	11	39	52	28	30	45	52	0	43	38
Benishangul Gumuz	7	0	100	100	88	9	25	66	4	30	61	17	0	42	20
S.N.N.P.	2	7	88	100	100	3	30	30	7	29	18	13	0	36	70
Gambella	5	2	100	95	63	5	7	20	15	7	39	15	0	31	13
Harari	13	25	100	100	63	0	75	75	75	75	88	75	0	64	8
Addis Ababa	53	12	100	100	99	47	35	33	20	22	26	28	9	48	66
Dire Dawa	15	18	93	93	93	48	78	41	65	65	78	75	8	63	23
Facility type															
Referral hospital	27	33	100	100	100	53	100	97	90	87	93	97	7	81	30
General hospital	21	16	99	99	94	57	93	87	82	72	92	92	3	75	112
Primary hospital	17	9	99	98	97	51	90	91	76	71	91	88	3	73	146
Health centre	5	5	96	92	88	7	36	58	13	34	51	9	0	41	115
Higher Clinic	51	25	100	100	100	58	54	30	56	54	56	58	25	62	13
Medium Clinic	22	10	100	100	95	12	10	10	6	7	8	9	3	32	49
Lower Clinic	0	2	100	100	94	2	7	2	2	4	4	2	0	27	9
Managing authority															
Public	6	6	96	93	88	11	40	59	18	36	52	16	0	43	346
Others	23	11	100	100	96	18	19	18	15	16	18	17	5	37	128
Urban/Rural															
Urban	15	8	98	99	90	16	42	48	20	31	41	22	2	44	396
Rural	3	4	96	85	91	7	16	45	11	29	45	5	0	36	78
Total	**11**	**7**	**97**	**95**	**90**	**13**	**34**	**47**	**17**	**30**	**42**	**16**	**2**	**42**	**474**

3.7.3. Chronic respiratory disease diagnosis/management

Service availability

Table 3.7.3.1 shows percentage of facilities that offer chronic respiratory disease diagnosis/management

- Nationally 53 percent of facilities excluding health posts offered chronic respiratory disease diagnosis and management services.
- Facilities in Dire Dawa (92 percent), and Somali (83percent) are more likely to offered chronic respiratory disease diagnosis/management services.
- Chronic respiratory disease diagnosis and management services were offered universally in all hospitals.
- Public facilities were more likely to offer chronic respiratory disease diagnosis and management services compared with private.

Table 3.7.3. 1 Percentage of facilities that offer chronic respiratory disease services, by region (N=632)

	Offers chronic respiratory disease diagnosis and/or management	Total number of facilities
Regions		
Tigray	67	65
Afar	67	37
Amhara	53	98
Oromiya	45	109
Somali	83	44
Benishangul Gumuz	59	31
S.N.N.P.	46	89

Gambella	59	30
Harari	37	24
Addis Ababa	74	77
Dire Dawa	92	28
Facility type		
Referral hospital	97	31
General hospital	95	116
Primary hospital	96	156
Health centre	70	164
Higher Clinic	48	19
Medium Clinic	82	74
Lower Clinic	13	72
Managing authority		
Public	71	410
Others	35	222
Urban/Rural		
Urban	57	494
Rural	47	138
Total	**53**	**632**

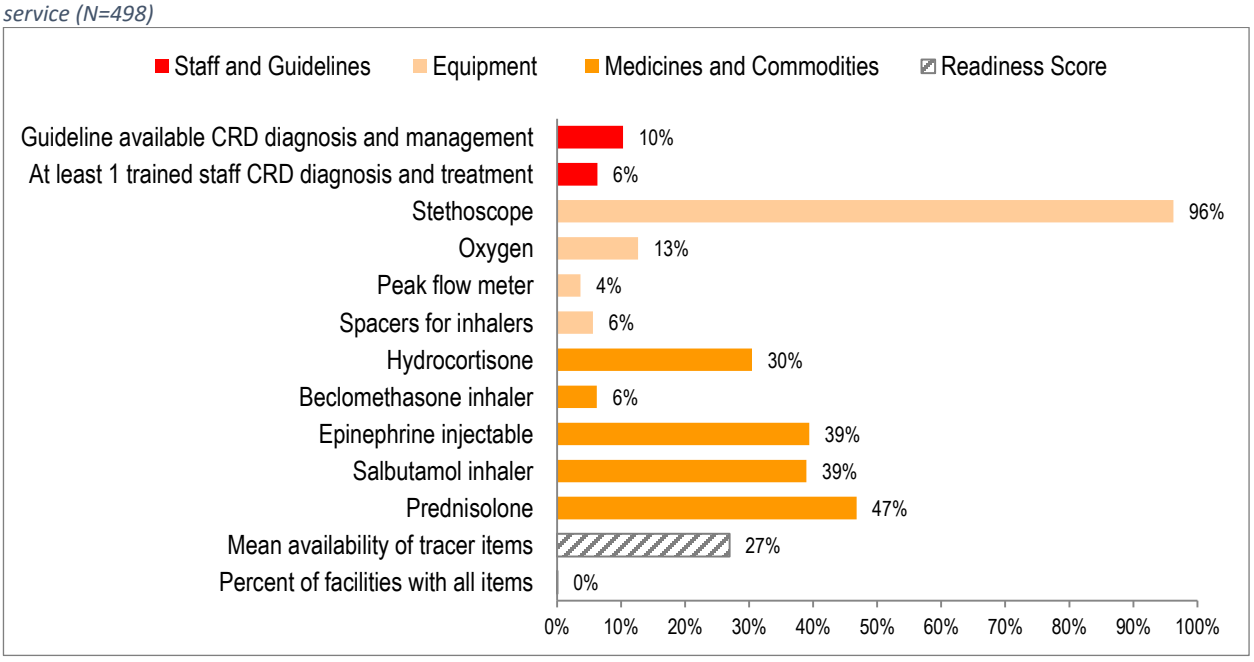
Service readiness

Service readiness among those who offered chronic respiratory disease services was assessed by eleven tracer items in the three domains (Staff & guidelines, equipment, and medicines and Commodities).

Figure 3.7.3.1 shows availability of tracer items among facilities excluding health posts that offered chronic respiratory disease services.

- On average facilities had 3 tracer items that are required to provide Chronic respiratory disease service availability, with overall readiness score of 18 percent.
- Stethoscope (96 percent) is the most available of the chronic respiratory disease tracer items followed by prednisolone (47 percent), epinephrine injectable and salbutamol inhaler (39 percent each), and hydrocortisone (30 percent)
- Peak flow meter (4 percent), beclomethasone inhaler, spacers for inhalers, and trained staff (6 percent each were the least available of the tracer items).

Figure 3.7.3. 1 Percentage of facilities that have tracer items for chronic respiratory disease services among facilities that provide this service (N=498)



- Less than one in ten facilities in Benishangul Gumuz, Oromiya, Somali, SNNP, Afar, and Dire Dawa had Guideline available for chronic respiratory disease diagnosis and management
- One, two, three and five percent of facilities in SNNP, Somali and Tigray each, Afar, and Benishangul Gumuz facilities had trained staff available for chronic respiratory disease diagnosis and management
- Facilities in Dire Dawa (35 percent) are more likely to had peak flow meter available.
- All hospital types had higher proportion of facilities with guideline available for chronic respiratory disease diagnosis and management, salbutamol inhaler, prednisolone, hydrocortisone, and epinephrine injectable.
- Urban facilities on average had three tracer items compared with rural which had on average two tracer items.

Table 3.7.3. 2 Percentage of facilities that have tracer items for chronic respiratory disease services among facilities that provide this service (N=498), Ethiopia 2018

	Guideline available CRD diagnosis and management	At least 1 trained staff CRD diagnosis and treatment	Stethoscope	Peak flow meter	Spacers for inhalers	Oxygen	Salbutamol inhaler	Beclomethasone inhaler	Prednisolone	Hydrocortisone	Epinephrine injectable	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions														
Tigray	19	2	100	2	4	19	55	8	47	36	60	0	32	49
Afar	3	3	100	4	5	7	84	15	54	71	55	0	37	26
Amhara	10	10	95	2	7	8	29	2	49	29	55	0	27	83
Oromiya	1	6	100	1	1	3	42	9	59	36	36	0	27	87
Somali	2	2	94	5	1	10	52	10	52	47	33	0	28	39
Benishangul Gumuz	0	5	100	17	0	9	41	12	87	33	59	0	33	20
S.N.N.P.	2	1	87	1	8	4	37	2	39	6	20	0	19	70
Gambella	25	22	100	3	3	3	24	4	11	17	4	0	19	19
Harari	14	21	100	0	0	14	28	14	63	56	42	0	32	13
Addis Ababa	40	7	100	14	12	54	34	8	24	38	35	0	33	66
Dire Dawa	7	9	94	35	28	47	62	24	55	65	31	0	41	26
Facility type														
Referral hospital	30	30	100	33	37	53	67	40	93	97	93	3	61	30
General hospital	20	17	99	20	22	57	72	28	89	85	95	1	55	110
Primary hospital	19	11	100	17	20	50	77	26	95	85	93	1	54	149
Health centre	7	5	94	1	2	7	48	6	62	33	47	0	28	127
Higher Clinic	25	0	100	34	28	58	56	30	53	58	30	0	43	13
Medium Clinic	17	10	100	3	9	14	14	1	7	13	8	0	18	55
Lower Clinic	0	0	100	0	0	1	3	0	3	0	22	0	12	14
Managing authority														
Public	8	6	95	2	4	11	49	7	62	37	50	0	30	359
Others	16	8	100	6	10	17	19	4	16	18	18	0	21	139
Urban/Rural														
Urban	12	9	98	5	8	16	39	5	37	32	31	0	27	414
Rural	8	0	93	1	0	6	38	8	65	27	55	0	28	84
Total	**10**	**6**	**96**	**4**	**6**	**13**	**39**	**6**	**47**	**30**	**39**	**0**	**27**	**498**

3.7.4. Cervical cancer screening test

Service availability

Table 7.3.4.1 shows percentage of facilities that offer cervical cancer screening services.

- Nine percent of facilities offered cervical cancer diagnosis service.
- Facilities in Somali (30 percent) and Addis Ababa (38 percent) were more likely to offer cervical cancer diagnosis service.
- Less than one in ten facilities in Gambella, Amhara and Oromiya, and Benishangul region offered cervical cancer diagnosis service.

- Fourteen percent of urban facilities offered cervical cancer diagnosis service compared with one percent of rural.

Table 3.7.4. 1 Percentage of facilities that offer cervical cancer services, by region (N=632)

	Offers cervical cancer diagnosis	Total number of facilities
Regions		
Tigray	15	65
Afar	17	37
Amhara	2	98
Oromiya	2	109
Somali	30	44
Benishangul Gumuz	4	31
S.N.N.P.	14	89
Gambella	1	30
Harari	11	24
Addis Ababa	38	77
Dire Dawa	16	28
Facility type		
Referral hospital	77	31
General hospital	64	116
Primary hospital	42	156
Health centre	6	164
Higher Clinic	29	19
Medium Clinic	24	74
Lower Clinic	0	72
Managing authority		
Public	8	410
Others	10	222
Urban/Rural		
Urban	14	494
Rural	1	138
Total	**9**	**632**

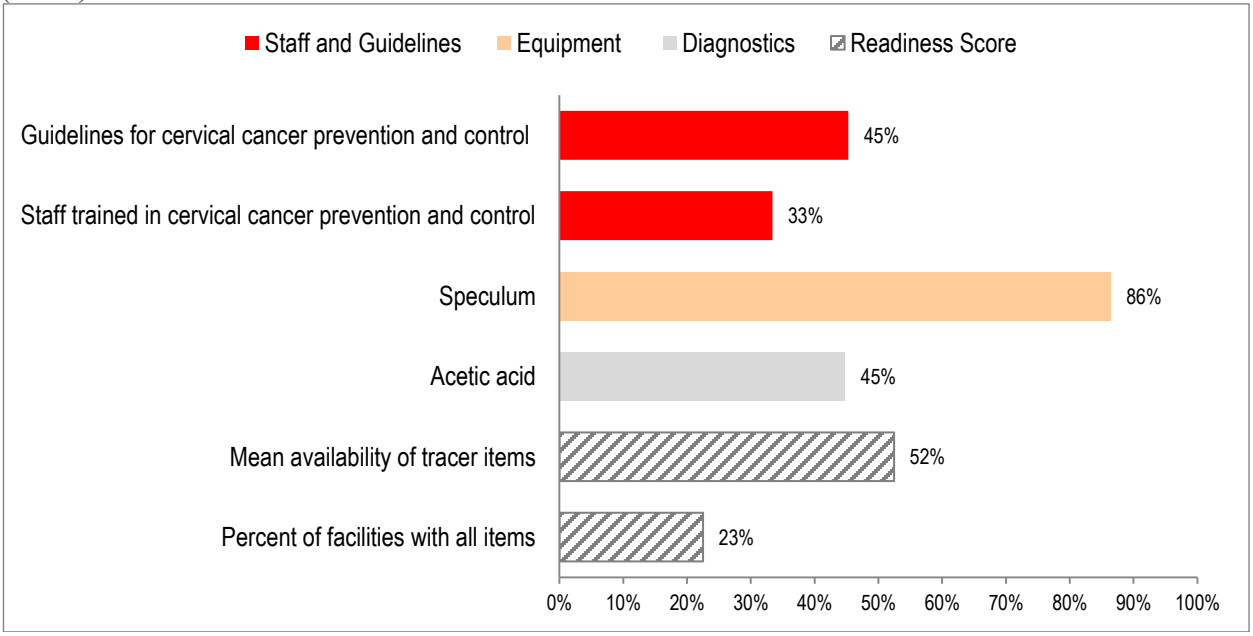
Service readiness

Cervical cancer diagnosis service readiness was assessed by four tracer items of the three domains. (Staff/guidelines, equipment, and diagnostics).

Figure 3.7.4.1 shows percentage of facilities that have tracer items for cervical cancer services among facilities that provide the service.

- Twenty three percent of facilities that offered cervical cancer diagnosis service had all tracer items.
- On average facilities that offered cervical cancer diagnosis service had two of the four tracer items.
- Speculum (86 percent) was the most available tracer item followed by Acetic acid and guidelines for cervical cancer prevention and control (45 percent each).

Figure 3.7.4. 1 Percentage of facilities that have tracer items for cervical cancer services among facilities that provide this service (N=211)



3.8. Neglected Tropical Disease (NTD)

Ethiopia has started addressing NTD's nationally and developed a national master plan that addresses eight priority NTD's, onchocerciasis, lymphatic filariasis, schistosomiasis, soil-transmitted helminths, trachoma, dracunculiasis, podoconiosis and leishmaniasis. NTDs are broadly classified as Preventive Chemotherapy (PCT) or Innovative and Intensified Disease Management (IDM) diseases. The first master plan was prepared in 2013 G.C. and the second in 2016 G.C.

Coordinated implementation of mass drug administration is recommended for the five NTDs targeted in the integrated NTDs control use MDA as the main intervention strategy. The six drugs available for use in preventive chemotherapy include IVM/DEC, Albendazole/Mebendazole, Praziquantel and Azithromycin. Drugs like meglumineantimoniate and sodium stibogluconate and surgical measures are used to combat NTDS classified as Innovative and Intensified Disease Management (IDM) diseases

Service availability

- Overall forty five percent of facilities offer diagnosis or management of neglected tropical diseases, such as onchocerciasis, lymphatic filariasis, schistosomiasis, soil transmitted helminths, trachoma, dracunculiasis, podoconiasis, or leishmaniosis.
- Of all NTDs, services for soil transmitted helminths is the most offered(45 percent) and services for podoconosis, dracunculiasis and leishmaniosis is the least offered (26, 27 and 28 percent respectively).
- In both 2016 and current survey, services for soil transmitted helminths, is the most offered.
- When compared with 2016 SARA result, the actual percentage for services for soil transmitted helminths has increased from thirty eight to forty five percent.

Table 3.8.1 shows the percentage of facilities that offer NTD service by background characteristics.

- None of the facilities in Harari region offered NTD services, in comparison to the 2016 SARA survey, where NTD services were given for the different NTD's in the range of ninety to seventy one percent of facilities
- Tigray region has the highest percentage of facilities offering NTD services; ranging from fifty five percent to podoconiasis to eighty three percent to soil transmitted helminths and trachoma.
- Except for services for schistosomiasis and soil transmitted helminths (24 percent each), only two percent of facilities in Dire Dawa offered services for the other NTDs.

- Hospitals are more likely to give NTD services compared to health centres and higher clinics. This is similar to the findings of the 2016 SARA survey.
- Public institutions have higher percentage of facilities (47 percent) offering NTD services as compared with private (21 percent). This is similar to the findings of the 2016 SARA survey.

Table 3.8. 1 Percentage of facilities that offer NTD services (N=632)

	Offers Onchocerciasis disease diagnosis, counselling, and treatment	Offers Lymphatic filiarsis diagnosis, counselling, and treatment	Offers Schistosomiasis diagnosis, counselling, and treatment	Offers Soil transmitted helminths diagnosis, counselling, and treatment	Offers Trachoma diagnosis, counselling, and treatment	Offers Dracunculiasis diagnosis, counselling, and treatment	Offers Podoconiosis diagnosis, counselling, and treatment	Offers Leishmaniosis diagnosis, counselling, and treatment
Region								
Tigray	67	67	78	83	83	70	55	79
Afar	21	29	51	63	49	13	19	23
Amhara	36	41	44	47	42	36	34	39
Oromiya	39	29	23	46	37	19	22	19
Somali	15	11	19	22	12	22	10	16
Benishangul Gumuz	43	44	48	61	58	33	22	37
S.N.N.P.	21	27	30	34	34	15	18	15
Gambella	31	29	29	31	31	31	28	31
Harari	0	0	0	0	0	0	0	0
Addis Ababa	35	35	47	45	45	35	31	35
Dire Dawa	2	2	24	24	2	2	2	2
Facility type								
Referral hospital	74	77	81	84	81	68	71	84
General hospital	71	74	77	84	84	66	59	72
Primary hospital	63	65	70	83	81	55	56	65
Health centre	47	45	45	64	56	32	33	36
Higher clinic	52	52	51	52	52	52	51	52
Medium clinic	35	35	51	49	47	36	31	32
Lower clinic	11	11	9	11	9	9	9	9
Managing authority								
Public	47	46	47	64	56	34	34	37
Others	21	21	24	25	23	20	18	18
Urban/Rural								
Urban	36	33	36	44	39	28	27	27
Rural	32	34	34	46	42	26	25	30
Total	**34**	**34**	**36**	**45**	**40**	**27**	**26**	**28**

Service readiness

Twenty two tracer items were used to evaluate the service readiness of the facilities.

Figure 3.8.1 shows Percentage of facilities that have tracer items for NTD services among facilities that provide this service.

- Overall at national level, out of the twenty two tracer items Albendazole or Mebendazole (74 percent), Azithromycin cap/tab or oral liquid (32 percent), and Praziquantel (32 percent) were available in facilities.
- Sodium stibo gluconate (ssg) and Amphotercin B are the least available medicines which are available in only one percent of facilities each.
- Trained staffs on NTD are the least available of the tracer items, ranging from two to seventeen percent.
- Management guidelines were available for podoconosis, leishmaniasis and schistosomiasis in only seven, eight and eight percent of facilities. The highest percentage for availability of management guideline is recorded for Trachoma (26 percent).

Figure 3.8. 1 Percentage of facilities that have tracer items for NTD services among facilities that provide this service (N=412)

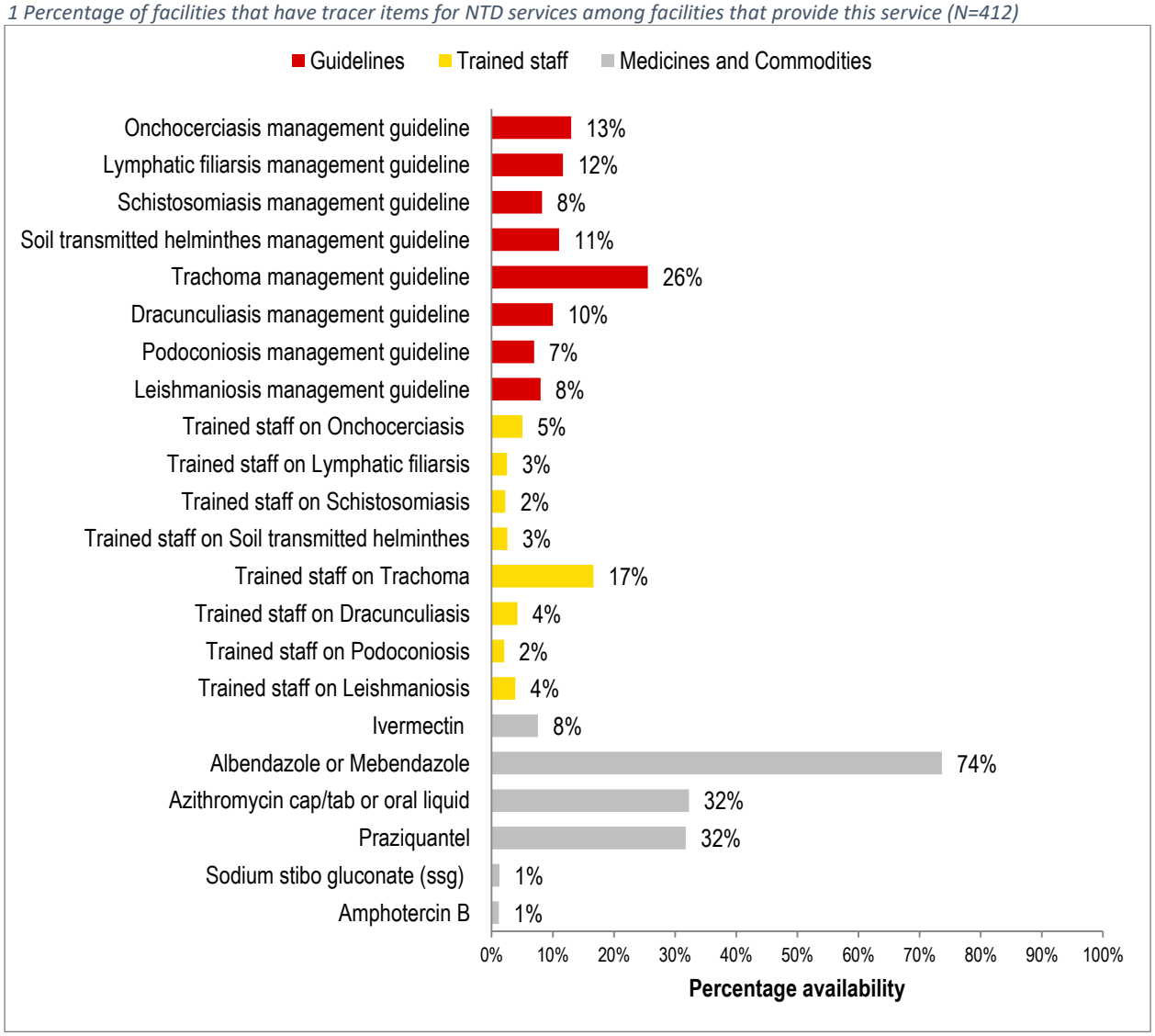


Table 3.8.2 shows Percentage of facilities that have tracer items for NTD services among facilities that provide this service by background characteristics.

- Except for schistosomiasis and soil transmitted helminths, all facilities in Dire Dawa have guidelines for the rest of the NTD's.
- Tigray region has the least percentage of facilities with guidelines, ranging from two percent for podoconosis to twelve percent for Trachoma and leishmaniasis each.
- By facility type Trachoma management guideline is the most available of the guidelines, available in forty percent of referral and general hospitals and thirty five percent of health centres.
- All Dire Dawa facilities have trained staff for NTD's, except for Schistosomiasis and Soil transmitted helminths. Tigray, Oromia and SNNP regions have the smallest percentage of facilities with trained staffs for all NTD's.
- Referral and general hospitals are more likely to have trained staff for all NTD's, compared with other facility types. There was similar trend in the 2016 SARA survey finding.

- Albendazole or Mebendazole is the most available of the medicines in all regions. (Ranging from 33 percent for Addis Ababa to ninety six and hundred percent of facilities in Somali and Benishangul Gumuz regions)
- By facility type, Albendazole or Mebendazole is the most available of the medicines; the highest for Oromiya and Amhara region with ninety five and ninety six percent of facilities and the lowest for Medium clinics (7 percent).

Table 3.8. 2 Percentage of facilities that have tracer items for NTD services among facilities that provide this service (N=412)

	Onchocerciasis management guideline	Lymphatic filiarsis management guideline	Schistosomiasis management guideline	Soil transmitted helminths management guideline	Trachoma management guideline	Dracunculiasis management guideline	Podoconiosis management guideline	Leishmaniosis management guideline	Trained staff on Onchocerciasis	Trained staff on Lymphatic filiarsis	Trained staff on Schistosomiasis	Trained staff on Soil transmitted helminths	Trained staff on Trachoma	Trained staff on Dracunculiasis	Trained staff on Podoconiosis	Trained staff on Leishmaniosis	Ivermectin	Albendazole or Mebendazole	Azithromycin cap/tab or oral liquid	Praziquantel	Sodium stibo gluconate (ssg)	Amphotercin B	Total number of facilities
Region																							
Tigray	3	3	3	3	12	9	2	12	1	1	2	1	19	7	1	15	0	72	30	55	2	1	59
Afar	4	3	8	6	4	0	5	4	4	3	14	11	5	0	5	12	0	83	49	25	3	1	25
Amhara	15	15	12	12	26	22	16	14	7	6	6	6	13	14	8	7	1	71	21	38	1	1	76
Oromiya	19	13	2	9	40	2	1	2	9	1	1	0	29	1	1	1	15	87	48	26	1	0	77
Somali	4	13	3	7	4	2	15	9	0	8	0	30	4	0	5	7	26	96	57	19	14	29	19
Benishangul Gumuz	20	29	8	7	17	18	26	8	34	27	0	0	27	18	26	18	9	100	40	60	0	0	21
S.N.N.P.	18	24	12	12	30	24	20	24	1	1	0	0	19	0	0	1	10	70	21	23	1	1	62
Gambella	17	5	10	10	7	32	5	5	20	21	5	5	15	24	5	5	24	63	32	34	5	0	16
Harari	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0
Addis Ababa	37	35	28	30	35	36	28	25	2	2	2	2	5	2	2	2	1	33	23	22	2	1	51
Dire Dawa	100	100	20	20	100	100	100	100	100	100	8	8	100	100	100	100	0	77	8	43	8	8	6
Facility type																							
Referral hospital	26	25	24	27	40	29	27	31	13	13	16	15	32	19	14	19	7	93	78	74	26	26	27
General hospital	23	22	22	31	40	28	19	20	12	10	9	8	20	13	12	20	10	93	67	61	19	19	99
Primary hospital	15	12	17	16	25	17	14	14	6	7	9	6	17	3	3	10	9	95	58	65	8	4	132
Health centre	18	15	7	9	35	16	9	11	9	4	3	3	27	11	5	7	11	96	40	39	0	0	100
Higher clinic	24	25	24	24	24	23	26	25	0	2	0	2	0	0	0	0	0	46	29	27	0	0	11
Medium clinic	12	12	9	9	9	12	7	7	0	0	1	1	0	0	0	5	0	7	5	5	0	0	35
Lower clinic	18	18	23	18	22	22	23	23	0	0	0	0	0	0	0	0	0	19	0	0	0	0	8
Managing authority																							
Public	17	15	9	10	34	17	10	12	9	5	4	3	26	11	5	8	10	95	41	41	2	1	315
Others	17	17	14	15	16	18	15	15	1	1	1	2	1	1	1	3	1	18	10	8	1	0	97
Urban/Rural																							
Urban	20	16	10	13	24	19	10	11	10	5	4	4	14	11	5	8	12	65	28	29	2	1	336
Rural	12	16	11	8	37	14	15	15	1	1	1	1	26	1	1	4	1	88	38	35	0	1	76
Total	**17**	**16**	**11**	**11**	**29**	**17**	**12**	**13**	**7**	**3**	**3**	**3**	**19**	**7**	**3**	**6**	**8**	**74**	**32**	**32**	**1**	**1**	**412**

3.9. Public Health Emergency Management (PHEM) Services

Public health emergency management is the process of anticipating, preventing, preparing for, detecting, responding to, controlling and recovering from consequences of public health threats. The identification of a public health threat by closely and frequently monitoring identified indicators and predicting the risk it poses on the health of the Public and the health system. The purpose of early warning is to enable the provision of timely and effective information to the public and to responders, through identified institutions that allow preparing for effective response or taking action to avoid or reduce risk.

The Ethiopian Weekly Epidemiological Bulletin of week ten (has shown that out of the thirteen immediately reportable diseases, 15 suspected anthrax cases without death, 57 rabies exposure cases with two deaths, and zero suspected cases of avian human influenza, drancunculiasis, pandemic influenza, small pox, haemorrhagic fever, SARS and yellow fever were reported during the week.

A total of 103,737 febrile cases were suspected for malaria and tested either by microscopy or RDT in the week. Of these cases, 13.1% (13,619) were treated for malaria.

Service availability

Table 3.9.1 shows Percentage of facilities that offer immediately reportable diseases to the next reporting level within thirty minutes, by region.

- Overall seventy five percent of facilities offer immediately reportable diseases to the next reporting level within thirty minutes.
- Tigray and Dire Dawa have the highest percentage of facilities that offer immediately reportable diseases to the next reporting level within thirty minutes.
- Benishangul Gumuz and Oromia region facilities are the least likely to offer immediately reportable diseases to the next reporting level within thirty minutes.
- More than nine in ten of referral, general and primary hospitals, and health centres offer immediately reportable diseases to the next reporting level within thirty minutes.
- The likely hood of offering immediately reportable diseases to the next reporting level within thirty minutes decreases as the health delivery unit level decreases. (97 percent at referral hospitals to 51 percent at lower clinic)
- Nearly nine out of ten public facilities offer immediately reportable diseases to the next reporting level within thirty minutes, compared with six in ten in private.

Table 3.9. 1 Percentage of facilities that offer immediately reportable diseases to the next reporting level within thirty minutes, by region (N=632)

	Percentage of facilities that offer immediately reportable diseases to the next reporting level within thirty minutes
Total	**75**
Tigray	90
Afar	81
Amhara	77
Oromiya	67
Somali	81
Benishangul Gumuz	65
S.N.N.P.	74
Gambella	78
Harari	76
Addis Ababa	82
Dire Dawa	93
Facility type	
Referral hospital	97
General hospital	94
Primary hospital	96
Health centre	91
Higher clinic	56
Medium clinic	73
Lower clinic	51
Managing authority	

Public	89
Others	60
Urban/Rural	
Urban	73
Rural	77

Service readiness

Table 3.9.2. Shows percentage of facilities that offer PHEM services by background characteristics. Service readiness was measured by assessing availability of national guideline and at least one provider(s) of PHEM services received any training in PHEM in the last two years.

- Overall 69 and 34 percent of facilities that offer PHEM service have national guideline and at least one providers of PHEM services received any training in PHEM in the last two years respectively.
- In comparison, the actual percentage in the 2016 SARA survey findings were two and seven percent for availability of national guideline and at least one provider(s) of PHEM services received any training in PHEM in the last two years respectively
- Tigray region (fifty percent) and Addis Ababa city administration (fifty four percent) have the highest percentage of facilities with national guideline for PHEM available.
- National guidelines for PHEM were least available in Somali, Dire Dawa and Gambella facilities.
- Of the facility types, hospitals are the most likely and lower clinics are the least likely to have national guideline for PHEM available.
- National guideline for PHEM are available more in public than private facilities
- More than five out of ten facilities in Tigray and Harari regions have at least one provider(s) of PHEM services received any training in PHEM in the last two years
- Gambella, SNNP and Somali region facilities are less likely to have at least one provider(s) of PHEM services received any training in PHEM in the last two years
- Hospitals are more likely to have at least one provider(s) of PHEM services received any training in PHEM in the last two years compared with other facility types
- Larger proportions of public facilities (49 percent) have at least one provider(s) of PHEM services received any training in PHEM in the last two years compared with only eleven percent of the private.
- The trends in the distribution of availability of tracer items in the current SARA survey are somewhat similar with the 2016 findings.
- Both tracer items have shown an increment in the actual percentage findings at all levels.

Table 3.9. 2 Percentage of facilities that have tracer items for PHEM services among facilities that provide this service (N=549)

	National guidelines for PHEM available in this facility	At least one provider(s) of PHEM services received any training in PHEM in the last two years	Total number of facilities
Regions			
Tigray	50	56	62
Afar	31	34	30
Amhara	38	39	90
Oromiya	28	33	94
Somali	6	18	35
Benishangul Gumuz	24	28	20
S.N.N.P.	39	18	76
Gambella	19	16	26
Harari	28	53	20
Addis Ababa	54	49	70
Dire Dawa	17	34	26
Facility type			
Referral hospital	53	57	30
General hospital	55	56	109
Primary hospital	52	67	150
Health centre	49	49	150
Higher clinic	27	26	14

Medium clinic	31	18	54
Lower clinic	2	2	42
Managing authority			
Public	49	49	382
Others	15	11	167
Urban/Rural			
Urban	32	30	429
Rural	67	40	120
Total	**69**	**34**	**549**

3.10. Surgery and blood transfusion

Surgery is often the only solution to prevent disabilities and death from road traffic accidents, falls, burns, disasters, domestic violence, pregnancy related complications, infections and congenital defects. Transfusion of safe blood products is also important to treat such conditions that cannot be prevented or managed effectively by other means. Increasing access to and improving the quality of surgical interventions and blood transfusion service is an increasingly recognized priority in developing countries like Ethiopia (Jin Yung Bae, and WHO).

3.10.1 Basic surgical services

Availability of basic surgical service at the facility during the implementation of the survey included: Basic surgical services (any basic service), Incision and drainage of abscesses, Suturing, Wound debridement, Acute burn management, Male circumcision, Closed repair of fracture, Hydrocele reduction, Biopsy of lymph node or mass or other, Chest tube insertion, Closed repair of dislocated joint Removal of foreign body, and Cricothyroidotomy.

Service availability

Figure 3.10.1.1 shows

- Forty three percent of facilities excluding health posts provided basic surgical services.
- Incision and drainage of abscesses, and suturing (43 percent) was the most practised surgical service.
- The least available basic surgical services were, closed repair of fracture(6 percent), closed repair of dislocated joint (6 percent), chest tube insertion (4 percent), Cricothyroidotomy (3 percent) and Biopsy of lymph node or mass or other (2 percent)

Figure 3.10.1. 1 Percentage of facilities that offer basic surgical services SARA 2018(N=632)

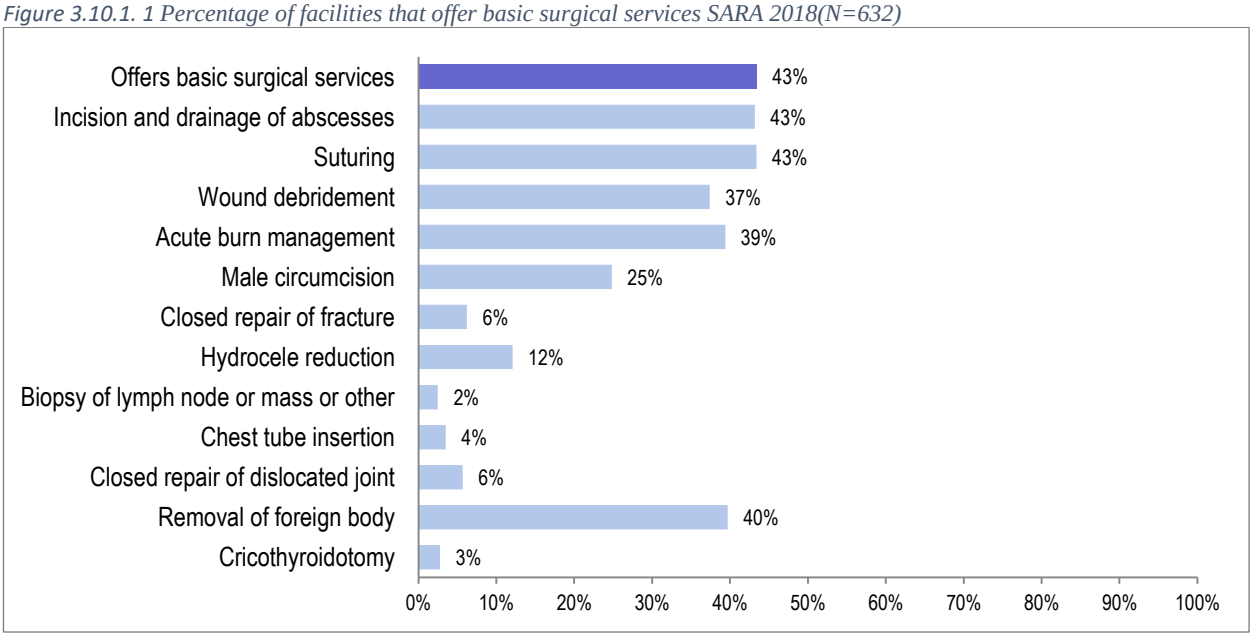


Figure 3.10.1.2 shows

- Service availability for basic surgical services was higher for Gambella (80 percent) followed by Addis Ababa (59 percent) Benishangul Gumuz (58 percent) and Afar (58percent). Health facilities in Dire dawa have the least surgical service availability (17 percent) in Ethiopia.

Figure 3.10.1. 2 Percentage of facilities that offer basic surgical services, by region, SARA 2018 (N=632)

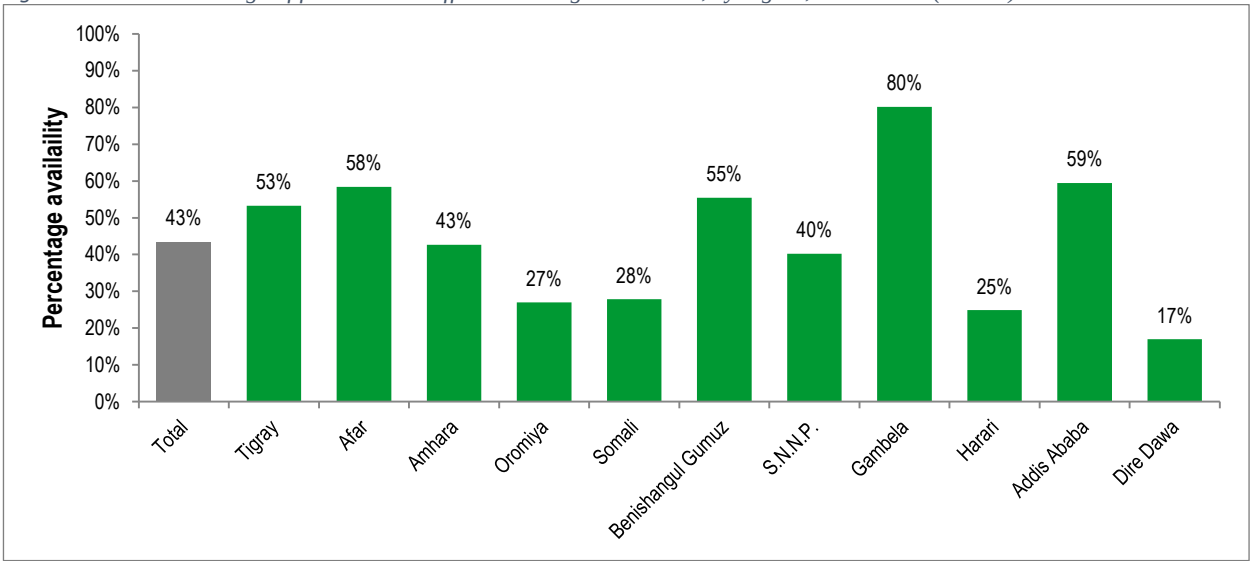


Table 3.10.1.1 illustrates the proportion of facilities that provide basic surgical service by facility type, managing authority, and residence.

- All referral and general hospitals provide basic surgical services, while 94 percent of primary hospitals have basic surgical services. Only 41 percent of health centres provided basic surgical services.
- Public facilities (43 percent) and facilities in urban areas (42 percent) were providing service as compared with facilities located in rural areas (36 percent) and facilities owned by other entities

Table 3.10.1. 1 Proportion of facilities that provide basic surgical services by facility type, managing authority, and residence, Ethiopia SARA 2018 (N=632)

	Offers basic surgical services	Incision and drainage of abscesses	Wound debridement	Acute burn management	Suturing	Closed repair of fracture	Cricothyroidotomy	Male circumcision	Hydrocele reduction	Chest tube insertion	Closed repair of dislocated joint	Biopsy of lymph node or mass or other	Removal of foreign body	Total number of facilities
Regions														
Tigray	57	53	50	46	57	9	7	28	14	5	6	2	53	65
Afar	68	64	58	68	68	10	4	28	9	7	7	3	58	37
Amhara	49	49	45	42	49	3	2	22	15	3	5	2	43	98
Oromiya	27	27	27	27	27	6	2	10	10	3	3	2	27	109
Somali	35	35	33	33	35	12	3	19	6	6	11	8	28	44
Benishangul Gumuz	59	59	53	59	59	5	4	28	5	5	9	4	55	31
S.N.N.P.	44	44	26	41	44	6	2	37	13	3	9	2	40	89
Gambella	80	80	80	80	80	5	1	25	1	1	4	1	80	30
Harari	25	25	25	25	25	13	13	25	13	13	13	13	25	24
Addis Ababa	71	71	59	58	70	15	7	56	14	6	8	6	59	77

Dire Dawa	22	22	20	22	22	12	12	17	14	14	10	12	17	28
Facility type														
Referral hospital	100	97	97	94	97	84	87	94	97	97	84	97	97	31
General hospital	100	100	100	97	100	88	78	98	97	97	91	72	100	116
Primary hospital	95	95	94	92	95	62	31	93	86	69	65	37	94	156
Health centre	43	43	35	41	43	3	1	19	10	0	2	0	41	164
Higher Clinic	52	45	37	43	52	2	1	43	20	1	1	3	44	19
Medium Clinic	77	77	65	70	77	12	2	63	18	0	12	0	68	74
Lower Clinic	21	21	21	16	21	0	0	6	3	0	0	0	18	72
Managing authority														
Public	46	46	39	44	46	7	4	23	14	5	6	3	43	410
Others	41	40	36	34	41	5	2	27	10	2	5	2	36	222
Urban/Rural														
Urban	47	46	39	43	47	10	4	35	17	5	9	4	42	494
Rural	38	38	35	34	38	1	0	9	4	1	1	0	36	138
Total	**43**	**43**	**37**	**39**	**43**	**6**	**3**	**25**	**12**	**4**	**6**	**2**	**40**	**632**

Service Readiness

Service readiness was assessed using 17 tracer items as stated in table 3.10.1.2

Table 3.10.1. 2 Tracer items required for basic surgical service delivery

Trained staff and guidelines	Medicines and commodities
•Guidelines for IMEESC	•Skin disinfectant
•At least one Staff trained in IMEESC	•Sutures (both absorbable and non-absorbable)
Equipment	•Ketamine (injectable)
•Needle holder	•Lidocaine (1% or 2% injectable)
•Surgical scissors	•Splints for extremities
•Tourniquet	•Material for cast
•Scalpel handle with blade	
•Retractor	
•Suction apparatus (manual or electric sucker)	
•Nasogastric tubes (10-16 FG)	
•Oxygen	
•Adult and paediatric resuscitators	

Figure 3.10.1.3 depicts percentage of facilities that have tracer items for basic surgical services among those providing basic surgical service.

- Five percent of the facilities had at least one person trained in IMEESC (Integrated Management for Emergency and Essential Surgical Care) while guideline for IMEESC was available in 14 percent of the facilities.
- The most available surgical equipment were Needle Holders (95 percent), surgical scissors (87 percent) and Tourniquet (87 percent) whereas oxygen (12 percent) and suction apparatus (20 percent) were the least available.

- Among medicines and commodities, skin disinfectant (98 percent), Lidocaine (1% or 2% injectable) (98 percent), and sutures (100 percent) were the most available items. Splints for extremities were least available (4 percent)
- Findings do not show major difference with SARA 2016

Figure 3.10.1. 3 Percentage of facilities that have tracer items for basic surgical services among facilities that provide this service SARA 2018 (N=451)

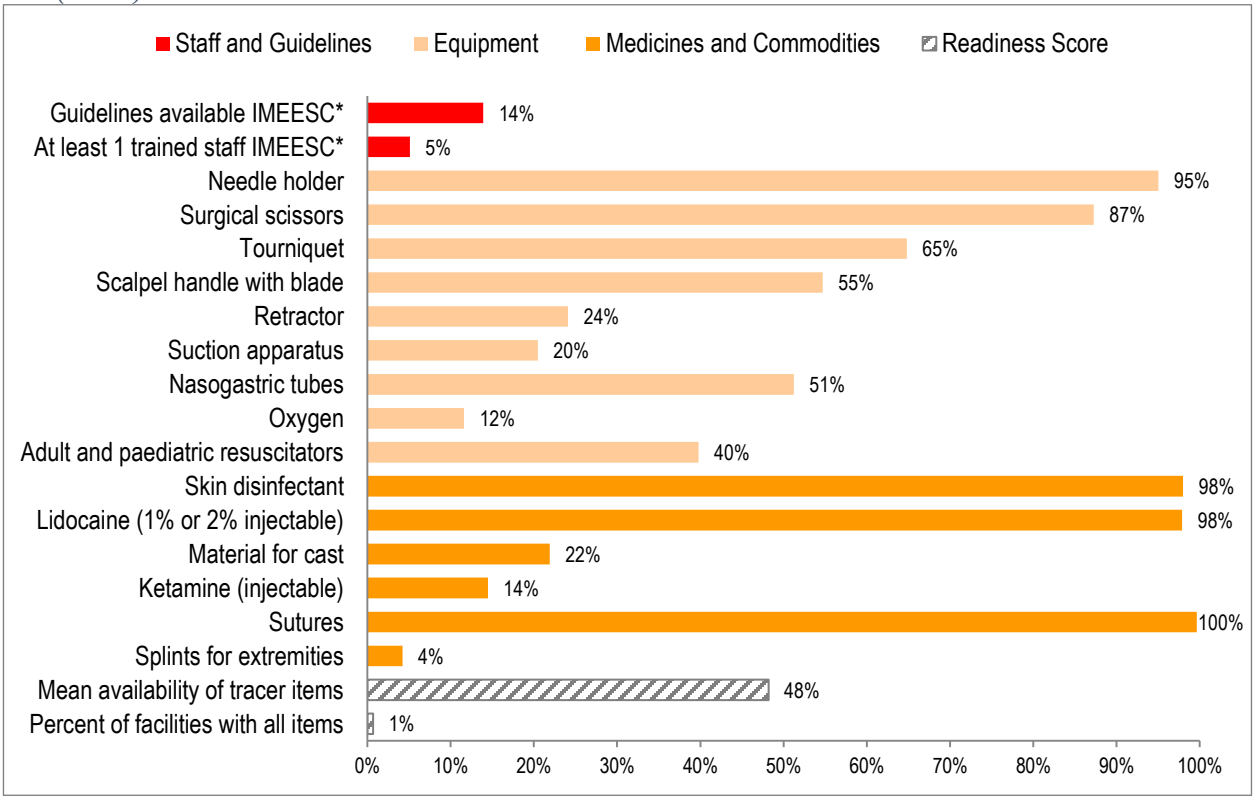


Table 3.10.1.3 shows Percentage of facilities that have tracer items for basic surgical services and service readiness score among facilities that provide this service, by region, facility type, managing authority, and residence.

- Amon facilities excluding health posts that offer basic surgical services, 14 percent of the facilities have guidelines for IMEESC.
- Urban facilities had higher readiness score (52 percent) than rural (40 percent) while there was no difference in by managing authority. Harari (71 percent), Dire Dawa (74 percent) and Addis Ababa (60 percent) had higher readiness score while Gambella (36 percent) Amhara (42 percent) and Benishangul Gumuz (43 percent) had lower readiness score
- Compared with SARA 2016, overall readiness score among facilities that provide basic surgical service increased from 41 percent to 48 percent

Table 3.10.1. 3 Percentage of facilities that have tracer items for basic surgical services and service readiness score among facilities that provide this service, by region, facility type, managing authority, and residence (N=451), Ethiopian SARA 2018

	Guidelines available IMEESC*	At least 1 trained staff IMEESC*	Needle holder	Scalpel handle with blade	Retractor	Surgical scissors	Nasogastric tubes	Tourniquet	Adult and paediatric resuscitators	Suction apparatus	Oxygen	Skin disinfectant	Sutures	Ketamine (injectable)	Lidocaine (1 or 2 injectable)	Splints for extremities	Material for cast	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions																				
Tigray	32	12	100	68	26	94	51	92	45	35	18	100	100	15	100	6	16	1	55	50
Afar	9	3	83	66	23	86	52	62	41	39	7	91	100	13	94	0	22	0	47	25
Amhara	2	3	95	37	13	95	39	45	24	6	3	100	100	12	93	3	21	0	42	77
Oromiya	5	3	99	48	23	73	73	46	59	10	5	100	100	10	100	4	21	0	46	81
Somali	28	23	86	47	25	86	60	77	52	33	16	97	100	20	97	9	17	3	52	25
Benishangul Gumuz	18	7	92	48	13	92	39	43	39	12	10	87	93	15	100	9	13	0	43	19
S.N.N.P.	17	3	100	72	30	93	58	84	34	23	4	93	100	15	100	2	22	0	51	70
Gambella	0	1	86	8	34	73	9	73	14	14	2	96	93	3	100	1	4	0	36	25
Harari	24	24	100	100	100	100	51	100	51	51	24	100	100	51	100	31	76	0	71	7
Addis Ababa	38	11	86	75	36	83	46	87	52	49	46	100	100	25	100	9	33	1	60	63
Dire Dawa	27	36	100	100	63	100	100	91	63	63	54	100	100	63	100	27	45	18	74	9
Facility type																				
Referral hospital	58	35	90	90	87	87	84	84	87	90	52	100	100	100	100	48	81	10	82	31
General hospital	40	32	97	95	96	96	92	89	85	97	57	100	100	96	100	40	83	9	83	116
Primary hospital	36	34	97	93	87	97	89	73	81	95	51	99	100	92	100	34	72	6	78	148
Health centre	6	3	94	47	11	81	52	54	47	10	5	96	100	8	100	0	16	0	44	79
Higher Clinic	43	4	100	83	45	86	32	59	52	32	51	100	100	5	100	2	42	0	59	11
Medium Clinic	24	2	97	64	35	94	45	87	26	24	11	99	99	8	100	3	23	0	51	43
Lower Clinic	0	0	92	33	3	90	40	52	13	0	1	99	100	1	88	0	1	0	37	23
Managing authority																				
Public	10	7	95	54	21	83	55	55	50	21	10	97	100	19	100	5	24	1	48	312
Others	18	3	96	55	28	92	47	76	28	19	13	99	99	9	96	4	20	1	48	139
Urban/Rural																				
Urban	20	7	96	65	33	94	48	72	47	27	17	99	99	21	97	6	24	1	52	376
Rural	2	2	93	34	7	74	58	51	25	9	2	95	100	3	100	1	18	0	40	75
Total	**14**	**5**	**95**	**55**	**24**	**87**	**51**	**65**	**40**	**20**	**12**	**98**	**100**	**14**	**98**	**4**	**22**	**1**	**48**	**451**

3.10.2 Comprehensive Surgical services

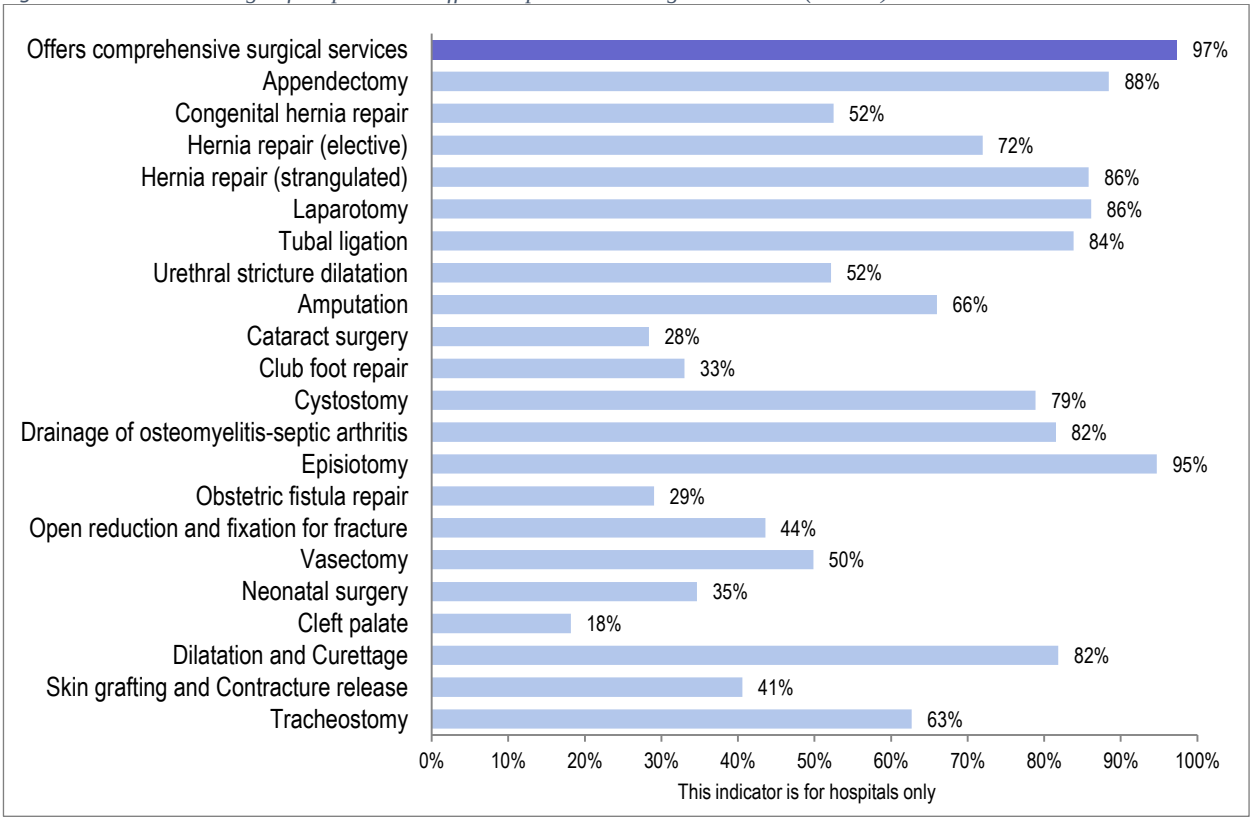
Service availability

Availability of comprehensive surgical service was assessed for hospitals that provide one of the following surgical services; Appendectomy, Congenital hernia repair, Hernia repair (elective), Hernia repair (strangulated), Laparotomy, Tubal ligation, Urethral stricture dilatation, Amputation, Cataract surgery, Club foot repair, Cystostomy, drainage of osteomyelitis-septic arthritis Episiotomy, Obstetric fistula repair, Open reduction and fixation for fracture, Vasectomy, Neonatal surgery Cleft palate, Dilatation & Curettage, Skin grafting and contracture release and Tracheostomy.

Figure 3.10.2.1 shows availability of comprehensive surgical services in hospitals

- As seen in the figure, while all hospitals offer comprehensive surgical services and laparotomy, the percentages were high for hernia repair, appendectomy, episiotomy and dilatation and curettage (97 percent).
- Cleft palate (39 percent), club foot repair (58 percent) and obstetric fistula repair (61 percent) were less likely to be provided.

Figure 3.10.2. 1 Percentage of hospitals that offer comprehensive surgical services (N=303)



Service readiness

Service readiness was assessed along the tracer items stated in the table 3.10.2.1

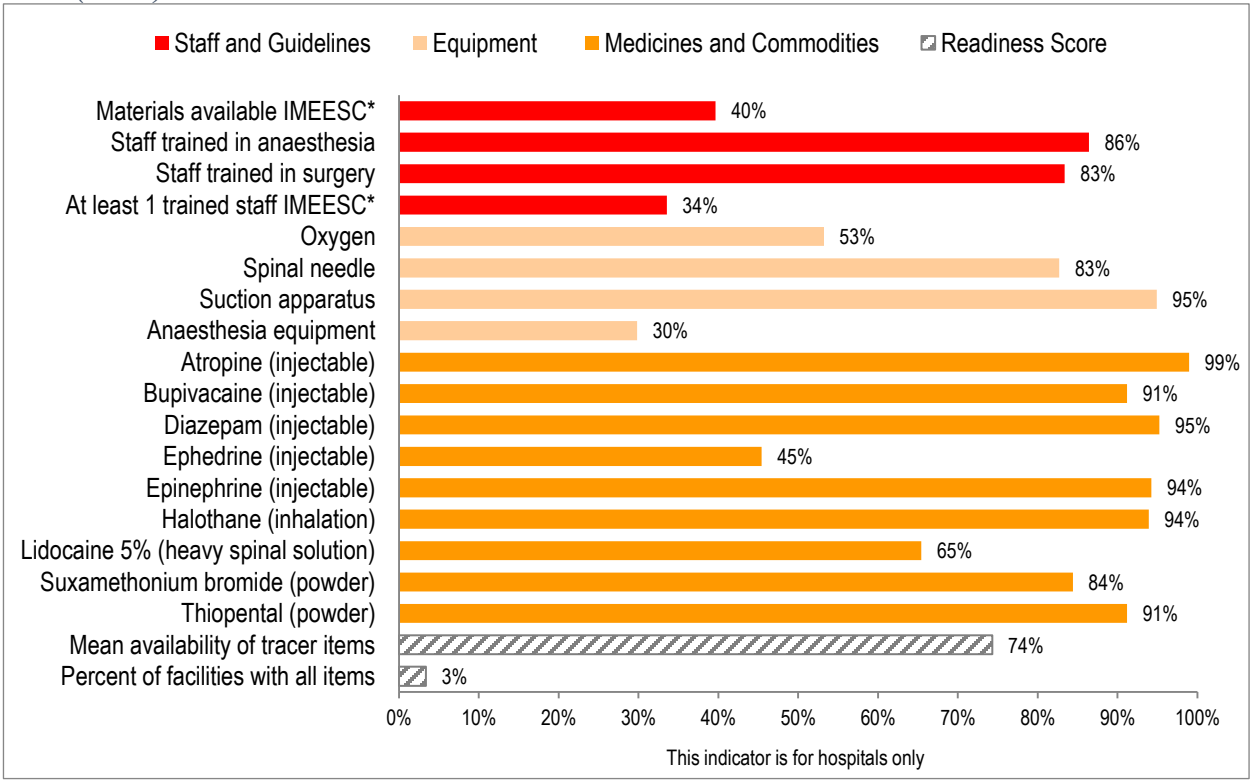
Table 3.10.2. 1 Types of tracer items required for comprehensive surgical care services, Ethiopia SARA 2018.

Trained staff and guidelines	**Medicines and commodities**
•Guidelines for IMEESC (WHO Integrated Management for Essential and Emergency Care)	•Thiopental (powder)
•Staff trained in IMEESC	•Suxamethonium bromide (powder)
•Staff trained in surgery	•Atropine (injectable)
•Staff trained in anaesthesia	•Diazepam (injectable)
Equipment	•Halothane (inhalation)
•Oxygen	•Bupivacaine (injectable)
•Anaesthesia equipment	•Lidocaine 5% (heavy spinal solution)
•Spinal needle	•Epinephrine (injectable)
•Suction apparatus	•Ephedrine (injectable)

Figure 3.10.2.2 displays Percentage of hospitals that have tracer items for comprehensive surgical services.

- Ninety percent of hospitals reported as having staff trained in anaesthesia and surgery.
- All hospitals had thiopenthal, halothane, atropine and Bupivacaine.
- Epinephrine (injectable) is the least available medicine (32 percent)
- On average, hospitals have 13 tracer items out of 17 to provide comprehensive surgery service (79 percent) whereas 6 percent of facilities had all the items. This is higher than the finding during the 2016 SARA (72 percent).

Figure 3.10.2. 2 Percentage of hospitals that have tracer items for comprehensive surgical services among facilities that provide this service (N=303)



3.10.3 Blood transfusion

Service availability

As shown in Table 3.10. 3.1

- Overall, 4 percent of health facilities excluding health posts offered blood transfusion services. All referral hospitals (100 percent), and General hospitals (97 percent) provide the service. Two-third of primary hospitals (67 percent) and none of the health centres provide the service.
- Service availability across regions shows wide variability with Dire Dawa the highest (20 percent) and Gambella the lowest (1 percent).

Table 3.10.3. 1 Percent distributions of blood transfusion services, by regions, facility type, managing authority, and residence, Ethiopian SARA, 2018 (N=632)

	Offers blood transfusion	Total number of facilities
Regions		
Tigray	6	65
Afar	3	37
Amhara	3	98
Oromiya	3	109
Somali	11	44
Benishangul Gumuz	5	31
S.N.N.P.	2	89
Gambella	1	30
Harari	13	24
Addis Ababa	8	77
Dire Dawa	20	28
Facility type		
Referral hospital	100	31
General hospital	97	116
Primary hospital	67	156
Health centre	0	164

Higher Clinic	5	19
Medium Clinic	2	74
Lower Clinic	0	72
Managing authority		
Public	5	410
Others	2	222
Urban/Rural		
Urban	6	494
Rural	1	138
Total	**4**	**632**

Service readiness

Health facilities offering blood transfusion service were assessed on service readiness based on the availability of the 7 tracer items. These are: presences of at least 1 trained staff for appropriate use of blood and safe blood transfusion, Guidelines for appropriate use of blood and blood transfusion, blood storage refrigerator, blood typing, cross match typing, blood supply safety, and blood supply sufficiency.

Figure 3.10.3.1

- Among facilities that offer blood transfusion services, 47 percent of the facilities have at least one person trained in the appropriate use of blood and safe blood transfusion whereas 44 percent had guidelines available for appropriate use of blood and safe blood transfusion.
- Ninety seven percent of facilities were doing blood typing and 34 percent were doing cross match testing
- On average, facilities excluding health posts have 4 tracer items out of 7 to provide basic blood transfusion service (61 percent) and only 5 percent of all facilities had all the items

Figure 3.10.3. 1 Percentage of facilities that have tracer items for blood transfusion services among facilities that provide this service, Ethiopian SARA 2018 (N=256)

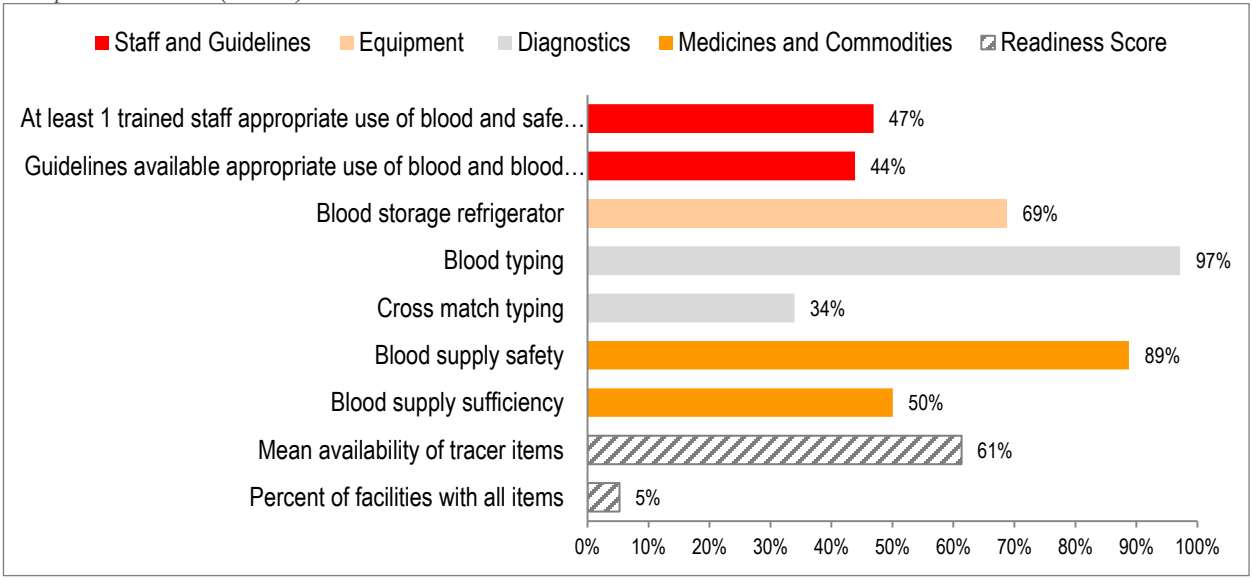


Table 3.10.3.2 shows readiness of facilities to offer blood transfusion services by regions, facility type, residence and managing authority.

- Overall readiness score was 61 percent with Gambella (86 percent) and Benishangul Gumuz (74 percent) scoring higher and Somali (46 percent), Oromia (55 percent), and SNNP (56 percent) had the lowest score.
- Trained staff and guidelines were available in all facilities excluding health posts included from Gambella while the same was true in only 33 percent in Addis Ababa, while it was the lowest in Somali region (23 percent) having trained staff and guidelines).
- Equipment were available in all facilities of Gambella and Harari while the same is true for only 25 percent of facilities in Afar

- Medicines and commodities were available in all facilities in Gambella and Benishangul Gumuz.
- No major difference in readiness score was measured along residence and managing authority.
- Overall readiness score increased from 56 percent (SARA 2016) to 61 percent

Table 3.10.3. 2 Percentage of facilities that have tracer items for blood transfusion services among facilities that provide this service, by region (N=256)

	Guidelines available appropriate use of blood and blood transfusion	At least 1 trained staff appropriate use of blood and safe blood transfusion	Blood storage refrigerator	Blood typing	Cross match typing	Blood supply sufficiency	Blood supply safety	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Regions										
Tigray	65	65	77	96	38	58	85	15	69	26
Afar	75	50	25	100	50	0	100	0	57	4
Amhara	48	68	68	98	25	45	88	5	63	56
Oromiya	37	46	57	96	19	43	84	0	55	67
Somali	23	23	28	95	18	37	95	0	46	16
Benishangul Gumuz	57	79	79	100	0	100	100	0	74	3
S.N.N.P.	51	27	73	97	24	27	89	0	56	37
Gambella	100	100	100	100	0	100	100	0	86	1
Harari	60	40	100	80	40	60	100	20	69	5
Addis Ababa	36	31	91	100	78	76	93	13	72	33
Dire Dawa	31	79	72	100	0	59	90	0	62	8
Facility type										
Referral hospital	45	61	77	100	71	48	84	19	70	31
General hospital	50	50	69	96	35	41	87	6	61	112
Primary hospital	49	50	65	96	11	48	88	2	58	104
Health centre	100	100	100	100	0	100	100	0	86	1
Higher Clinic	17	17	17	100	17	33	100	0	43	6
Medium Clinic	0	10	90	100	90	100	100	0	70	2
Lower Clinic	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0
Managing authority										
Public	49	53	66	96	24	42	89	5	60	192
Others	33	34	74	100	55	67	88	5	64	64
Urban/Rural										
Urban	44	47	69	97	35	50	88	6	61	241
Rural	46	52	58	100	18	52	94	0	60	15
Total	**44**	**47**	**69**	**97**	**34**	**50**	**89**	**5**	**61**	**256**

3.11. Emergency service

In the last 10 years, Ethiopia shows a progress in the health sector with an increasing health care infrastructure and health coverage. The life expectancy of the population is increasing significantly with consequent changes in disease epidemiology. For decades, the major health problems of the country were preventable communicable diseases and nutritional disorders.

But currently, non-communicable diseases and accidents are becoming major concerns. According to WHO, injuries are becoming among the leading causes of global disease burden and represent a serious public health problem threatening future generations. (WHO global burden report, 2014)

The government of Ethiopia has tried to tackle these healthcare challenges by expanding health services through increasing the number of hospitals and health care professionals. Specialty and subspecialty services are rapidly expanding, training programs have been introduced with emergency medicine (EM) being one of the most recent additions. Since the introduction of emergency medicine training programs in 2009, twenty two emergency physicians and over 80 EM specialist nurses have completed the program (Menbeu Sultan, 2018).

In Ethiopia, information on injuries and accidents was collected for the first time in the 2016 EDHS. The result shows that 3% of households reported having at least one member who was injured or killed in the 12 months

before the survey. Among household members who were involved in an accident in the past 12 months, 89% survived and 10% died as a result of the accident. (EFHS 2016)

Service availability

Emergency service was assessed by the availability of ambulance parking space and entrance, triage area, resuscitation area, and examination and treatment area. Table3.11.1. shows proportion of facilities that offer emergency services by background characteristics.

- Overall Ninety six percent of facilities offer emergency services.
- Examination and treatment area is the most available of all emergency services (87 percent), and triage area is the least available. (21 percent)
- all facilities in Tigray, Afar, SNNP, and Gambella regions offer emergency services, while only seventy and seventy eight percent of facilities in Harari region and Dire Dawa administrative council offer emergency services respectively.
- All hospitals and health centres offer emergency services
- All public facilities offer emergency services compared with ninety one percent of private clinics.

Table 3.11. 1 Percentage of facilities that offer emergency services, by region (N=632)

	Offer emergency service	Ambulance parking space and entrance	Triage area	Resuscitation area	Examination and treatment area
Regions					
Tigray	100	64	11	78	96
Afar	100	76	31	72	100
Amhara	93	31	29	54	80
Oromiya	95	56	19	52	85
Somali	97	65	29	61	95
Benishangul Gumuz	85	64	16	48	80
S.N.N.P.	100	38	9	47	94
Gambella	100	44	16	55	99
Harari	70	34	8	32	67
Addis Ababa	93	52	38	84	88
Dire Dawa	78	65	17	62	73
Facility type					
Referral hospital	100	84	100	97	100
General hospital	100	91	84	97	97
Primary hospital	100	87	76	90	99
Health centre	100	56	26	53	85
Higher clinic	98	39	17	63	98
Medium clinic	94	44	23	75	91
Lower clinic	90	30	7	47	85
Managing authority					
Public	100	58	28	54	86
Others	91	35	14	59	87
Urban/Rural					
Urban	94	43	20	62	89
Rural	98	53	23	48	84
Total	**96**	**47**	**21**	**56**	**87**

Service readiness

Emergency service readiness was made by assessing the availability of trained staffs and guideline, fourteen emergency equipment and thirteen emergency medicines and commodities. Table3.11.2. shows proportion of facilities with tracer item categories by background characteristics.

- None of the facilities have all tracer items available. Facilities on average have ten out of the twenty nine tracer items.
- The most available tracer items were equipment (40 percent) and the least was trained staffs and guidelines (14 percent)
- Of the regions, Tigray and Gambella have the lowest proportion of facilities with trained staff and guidelines. (3 percent each)

- Larger proportion of hospitals have all categories of tracer items as compared with other facility types
- There was no marked difference in the availability of trained staff and guideline by managing authority,
- Urban facilities were more likely to have trained staffs and guidelines when compared with rural.
- The availability of equipment and medicines was almost uniform by background characteristics

Table 3.11. 2 Percentage of facilities that have tracer items for emergency services among facilities that provide this service, by region (N=610)

	Staff trained in NIEM or ETATA	Emergency treatment and management guideline	Bag valve mask /Ambu bag	Intubation set (adult and paediatric)	Resuscitation set on trolley	Oxygen	Suction machines and tubes	Tracheostomy set	Intravenous set	Bandages and gauze	Different types of Splints	Examination couch	Examination lamps	Stretchers	Wheel chairs	Sterilizer (Dry autoclave)	Adrenalin	Atropine	Dopamine	Ventolin puff	Hydrocortisone	Diazepam	Normal saline	40 glucose	Regular insulin	Oral Rehydration salt (ORS)	Hydralazine	Anti-Tetanus Serum	Frusemide IV	Mean availability of tracer items	Percent of facilities with all items	Total number of facilities
Regions																																
Tigray	18	61	73	25	12	30	26	3	100	96	37	97	78	66	62	62	97	33	14	22	46	47	100	96	22	88	52	23	20	52	0	65
Afar	7	13	46	9	10	23	15	6	94	96	7	92	48	51	37	54	73	21	4	13	35	21	77	70	16	72	33	25	28	38	1	37
Amhara	8	22	44	5	9	10	15	1	82	83	15	96	34	55	19	67	71	19	2	12	29	24	89	77	5	57	33	11	25	35	0	96
Oromiya	1	5	49	1	1	14	5	1	82	89	1	98	26	49	26	54	71	10	2	6	11	10	70	49	12	41	13	20	17	29	0	107
Somali	3	17	40	4	4	37	13	3	99	99	15	94	56	31	55	54	83	34	10	6	56	78	93	93	24	97	70	65	49	48	0	41
Benishangul Gumuz	10	29	37	6	7	22	6	0	73	78	9	97	25	17	23	33	54	6	3	1	6	14	60	60	5	30	9	21	14	26	0	27
S.N.N.P.	5	19	37	5	5	10	12	4	85	88	2	93	44	39	18	62	76	25	2	11	32	28	76	79	5	81	13	11	27	34	0	89
Gambella	1	4	32	7	1	7	5	0	94	100	4	99	43	8	10	35	97	16	1	14	11	29	86	86	8	84	7	23	16	32	0	30
Harari	27	34	74	20	36	82	63	4	91	100	18	100	96	79	50	93	91	43	39	16	52	47	74	79	7	44	42	31	34	54	0	19
Addis Ababa	31	43	73	13	15	50	47	4	92	100	43	100	88	50	54	82	92	40	15	20	59	35	96	96	21	80	36	65	47	55	0	75
Dire Dawa	25	34	86	21	28	79	57	10	100	100	54	89	43	69	93	63	100	35	28	25	65	54	93	89	44	70	52	49	55	59	0	24
Facility type																																
Referral hospital	61	77	100	71	65	100	97	52	100	100	68	100	84	97	100	81	100	90	77	55	100	90	100	100	65	74	97	58	74	84	19	31
General hospital	52	71	98	64	58	98	94	28	97	97	61	100	70	93	89	70	97	87	61	36	83	89	97	95	52	66	81	50	81	76	3	116
Primary hospital	32	65	92	42	34	88	81	17	99	96	37	99	62	79	78	67	96	86	46	35	78	85	97	94	38	64	81	38	64	68	3	156
Health centre	3	17	60	3	2	18	11	0	81	81	7	99	19	69	38	48	60	18	2	3	17	26	68	51	5	43	28	21	21	32	0	163
Higher clinic	48	72	82	45	38	69	68	2	100	100	63	100	91	76	41	84	93	66	24	52	92	70	98	100	18	34	67	30	26	64	0	17
Medium clinic	13	19	60	8	10	21	25	5	93	95	10	98	85	28	28	79	90	32	3	40	72	28	97	99	22	82	28	42	41	47	0	63
Lower clinic	4	13	15	0	3	0	2	0	85	97	9	90	50	18	4	71	91	7	0	3	12	8	89	85	8	84	5	10	17	30	0	64
Managing authority																																
Public	6	19	60	6	4	22	15	1	81	83	9	99	24	68	40	51	63	23	5	7	21	28	71	55	10	46	30	21	25	34	0	409
Others	9	20	34	6	8	12	14	2	90	96	14	93	62	26	15	73	91	18	3	16	36	20	92	90	12	80	18	22	25	38	0	201
Urban/Rural																																
Urban	12	23	49	8	9	17	20	3	87	87	16	95	49	47	27	72	80	27	6	17	37	28	80	75	11	67	26	24	31	39	0	474
Rural	2	13	46	3	1	17	7	0	83	92	4	98	31	51	29	46	70	11	2	3	14	19	81	67	9	55	21	17	15	31	0	136
Total	**8**	**19**	**48**	**6**	**6**	**17**	**15**	**2**	**85**	**89**	**11**	**96**	**42**	**48**	**28**	**62**	**76**	**21**	**4**	**11**	**28**	**24**	**81**	**72**	**11**	**62**	**24**	**21**	**25**	**36**	**0**	**610**

3.12. Intensive Care Unit service

An intensive care unit (ICU), also known as an intensive therapy unit or intensive treatment unit (ITU) or critical care unit (CCU), is a special department of a hospital or health care facility that provides intensive treatment medicine.

ICUs mostly originated from postoperative care wards or recovery rooms and later grew to interdisciplinary units caring for critically ill patients with surgical and nonsurgical pathologies. Although today many district and regional hospitals in least developed countries have units where severely ill patients can be separately cared for, major ICUs are only found in large hospitals of urban or metropolitan areas. In Ethiopia hospitals are expected to offer ICU services. (A review and analysis of intensive care medicine in the least developed countries (Martin W, 2006).

This section of the survey presents the findings of ICU service availability and readiness.

Service availability

Table 3.12.1 shows percentage of hospitals that offer ICU services by back ground characteristics. ICU services were asked only in hospitals.

- Overall 36 percent of the total facilities offer ICU services.
- Eighty seven percent of referral hospitals offer ICU services compared with fifty five percent of general hospitals and twelve percent of primary hospitals.
- Addis Ababa region facilities are more likely to offer critical care Services/ ICU services (84 percent).

Table 3.12. 1 Percentage of hospitals that offer ICU services, by region (N=303)

	Offer critical care Services/ ICU services	ICU have Admission, discharge & transfer criteria	ICU have separate Clean and dirty utility rooms	Total No of facilities
Region				
Tigray	33	31	31	39
Afar	33	33	33	6
Amhara	31	28	25	65
Oromiya	25	25	23	75
Somali	55	55	45	11
Benishangul Gumuz	50	50	50	2
S.N.N.P.	22	19	17	58
Gambella	33	33	33	3
Harari	60	60	60	5
Addis Ababa	84	81	75	32
Dire Dawa	71	71	57	7
Facility type				
Referral hospital	87	77	77	31
General hospital	55	53	47	116
Primary hospital	12	12	10	156
Managing authority				
Public	32	30	28	243
Others	53	53	47	60
Urban/Rural				
Urban	39	37	34	273
Rural	10	10	10	30
Total	**36**	**34**	**31**	**303**

Service readiness

The tracer items used to assess ICU service readiness are: Availability of staff and guidelines, and eight equipment were used as tracer items to assess ICU service readiness. The equipment include: Cardiac monitor, ECG machine, Portable mechanical ventilator, acid base analyser, defibrillators, mechanical ventilator, mobile x-ray machine and portable patient monitor.

Figure 3.12.1 shows percentage of facilities with tracer items among those who offer ICU services by back ground characteristics.

- Overall seven percent of Facilities that offer ICU services have all the tracer items for ICU services.
- Facilities that offer ICU services have on average six of the ten tracer items
- ICU management guideline and Staff trained in critical care services are the most available of the tracer items
- Of the equipment portable patient monitor, mechanical respirator/ ventilator, and ECG machine are the most available. (74, 68 and 66 percent respectively) and the least available is mobile X-ray machine.

Figure 3.12. 1 Percentage of facilities that have tracer items for ICU services among facilities that provide this service (N=110)

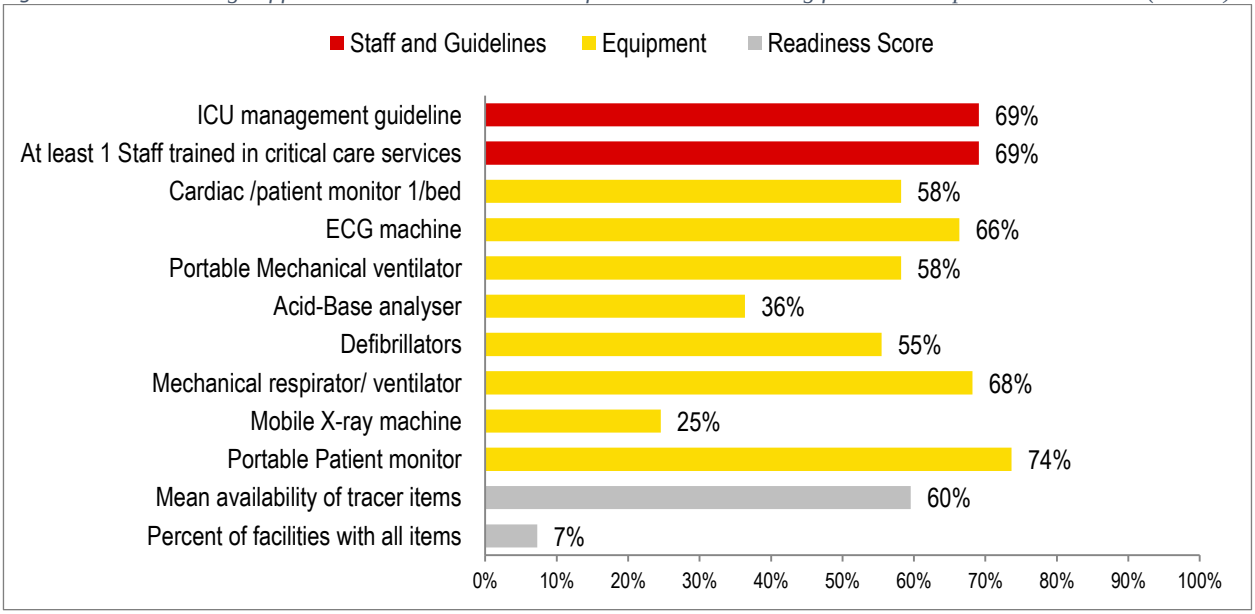


Table 3.12.2 shows percentage of hospitals with tracer items among those who offer ICU services by background characteristics.

- Eleven percent of referral and primary hospitals have all tracer items
- Of the regions only one percent of facilities in Afar region have all the tracer items
- Referral hospitals are more likely to have tracer items.

Table 3.12. 2 Percentage of facilities with tracer items among those who offer ICU services (N=110)

	At least 1 Staff trained in critical care services	ICU management guideline	Cardiac /patient monitor 1/bed	ECG machine	Portable Mechanical ventilator	Acid-Base analyser	Defibrillators	Mechanical respirator/ ventilator	Mobile X-ray machine	Portable Patient monitor	Mean availability of tracer items	Percent of facilities with all items	Total number of facilities
Regions													
Tigray	77	69	54	46	31	23	46	31	23	46	52	0	13
Afar	50	100	100	100	100	50	100	100	0	100	38	1	2
Amhara	80	90	75	60	65	45	50	80	25	75	35	0	20
Oromiya	58	53	68	42	42	26	37	42	26	79	29	0	19
Somali	17	50	50	50	17	17	17	33	17	50	48	0	6
Benishangul Gumuz	100	0	100	100	100	0	0	100	0	0	26	0	1
S.N.N.P.	54	69	85	62	62	31	54	69	8	62	34	0	13
Gambella	100	100	0	0	0	0	0	0	0	0	32	0	1
Harari	33	0	100	67	67	0	33	100	0	67	54	0	3
Addis Ababa	89	81	85	100	81	52	85	96	37	93	55	0	27
Dire Dawa	60	20	100	80	60	60	80	80	40	100	59	0	5

Facility type													
Referral hospital	74	81	89	93	89	67	85	89	37	85	79	11	27
General hospital	66	63	75	63	53	28	50	64	20	73	55	5	64
Primary hospital	74	68	58	42	32	21	32	53	21	58	46	11	19
Managing authority													
Public	68	68	72	58	53	36	50	60	23	1	56	6	78
Others	72	69	34	88	72	38	69	88	28	78	68	9	32
Urban/Rural													
Urban	69	68	77	67	60	37	56	69	25	74	60	7	107
Rural	67	67	33	33	0	0	33	33	0	67	33	0	3
Total	**69**	**68**	**75**	**66**	**58**	**36**	**55**	**68**	**25**	**74**	**60**	**7**	**110**

4. References

Ethiopian FMHACA, National essential medicines list fifth edition; Addis Ababa, Ethiopia, November 2014

Ethiopian FMHACA, minimum standard for health post; Addis Ababa, Ethiopia, November 2011FMOH. Health sector development programme IV annual performance report EFY 2007 (2015), 2015, Ethiopia

Jin Yung Bae , Reinou S Groen& Adam L Kushner, Surgery as a public health intervention: common misconceptions versus the truth , 2011Bulletin of the World Health Organization;89:394-394. Doi: 10.2471/BLT.11.088229.

Menbeu Sultan, Finot Debebe, Aklilu Azazh. The status of emergency medicine in Ethiopia, challenges and opportunities; Ethiopian Medical Journal, 2018, Vol 56, No. 2.

Martin W. Dünser, MD; Inipavudu Baelani, MA; Lundeg Ganbold, MD; A review and analysis of intensive care medicine in the least developed countries; Crit Care Med 2006 Vol. 34, No. 4.

National health promotion and communication strategy 2016-2020, Ethiopia, Federal ministry of health.

Regional framework for integrating essential non-communicable disease services in primary health care: report of the secretariat, WHO/AFRO AFR/RC67/12, 14 June 2017.

UN, Report of the United Nations Conference on Sustainable Development (Rio de Janeiro, Brazil, 20–22 June 2012), A/CONF.216/16 , 2012.

WHO. Facts on non-communicable diseases, WHO March 2013

WHO, the clinical use of blood in medicine, obstetrics, paediatrics, surgery & anaesthesia, and trauma &burn, accessed at http://www.who.int/bloodsafety/clinical_use/en/Manual_EN.pdf, in 8/1/2016.

WHO, Background to Safe Surgery Saves Lives, Why safe surgery is important? ; Patient safety, accessed at http://www.who.int/patientsafety/safesurgery/issue/en/ on 6/25/2016.

WHO 2013. Service Availability and Readiness Assessment (SARA) Implementation Guide : An annual monitoring system for service delivery *In:* WHO (ed.). 20 Avenue Appia, 1211 Geneva 27, Switzerland: World Health Organization.

SURVEY PERSONNEL *Appendix A*

NATIONAL LEVEL COORDINATORS

Theodros Getachew
Abebe Bekele
Atkure Defar
Geremew Gonfa
Tefera Taddele
Girum Taye
Habtamu Teklie
Misrak Getnet
Dr. Adugna Tamiru
Kassahun Amenu

Questionnaire customization

Theodros Getachew
Atkure Defar
Kassahun Amenu
Habtamu Teklie
Girum Taye
Tefera Tadele
Geremew Gonfa
Misrak Getnet
Merga Mekonnen
Fisseha Mulualem
Mohammedamin Adem
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26. Biruk Demisse
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37. Fitsum Fiseha Mebrate
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39. Girum Yihun
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61. Rabira Tariku
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63. Sabita Alewi
64. Samuel Argae
65. Senbato Tamiru
66. Selamawit Assefa
67. Sena Gelacha Ayana
68. Shegaw Ayalew Yeneneh
69. Solomon Tsegaye
70. Sora Asfaw
71. Suleyman Mohammed
72. Tadesse Fufa
73. Tamirat Tekassa
74. Tesfaye Mershu
75. Teshome Kefeley
76. Teshome Mezegbu Abeje
77. Teshome Worke
78. Tigist Tekle
79. Wasihun Zewedu
80. Wondante Getenet
81. Worku Adane
82. Yitagesu Zeleke
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87. Habtamu Oljira
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Final Report

2018