KINGDOM OF ESWATINI
MINISTRY OF HEALTH

SERVICE AVAILABILITY AND READINESS ASSESSMENT (SARA), 2017

World Health Organization

SIYINQABA

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Introduction

1.1. SARA Overview

The Service Availability and Readiness Assessment (SARA) effort builds on previous and current approaches designed to assess health service delivery in Eswatini. The SARA methodology takes into account best practices and lessons learned from the many countries that have implemented health facility assessments of service availability and readiness. SARA is designed to assess and monitor the availability of health services in countries and how prepared health facilities are to provide these services. This survey aims to generate evidence to inform and enhance health sector planning and management and is built upon the almost similar previous assessment approaches.

The Ministry of Health (MoH) in Eswatini previously conducted four Service Availability Mapping (SAM) assessments in 2006, 2008, 2010 and 2013. These assessments were used to determine how the country was progressing regarding the distribution of health facilities and service provision within and between regions. The assessments also provide useful information on resource availability. In 2013, the survey was modified to be aligned to the Essential Health Care Package (EHCP), which includes a minimum set of services that are expected to be provided at different levels of health facilities. Similar to the previous assessments, the 2017 SARA survey used census sampling where all health facilities providing any health sector-based interventions were surveyed regardless of ownership and facility type.

1.2. Purpose of SARA

The purpose of this census presented was to ensure that the Eswatini Ministry of Health has an evidence-based understanding of service availability, readiness and the quality of health services that are provided in all public and private facilities, using the Eswatini Essential Health Care Package (EHCP) as the guiding framework. This purpose is also in line with the World Health Organisation's (WHO) and the Global Fund objectives of working with countries to utilise Health Facility Assessments and Data Quality Reviews (HFA/DQR) so as to attain the following:

- Improve the efficiency and quality of the programs
- Institutionalize quality improvement as part of a country's routine program and data management.

1.3. Aims and objectives

The aim of the 2017 Health Facilities Assessment (HFA) was to conduct a Service Availability and Readiness Assessment (SARA) census, data quality review (DQR) and quality of care (QoC) assessment in all public and private health facilities across all levels of care in Eswatini, using a country-led, locally-tailored approach to inform policy decisions for priority services such as Reproductive Health, Child Health, Communicable (HIV, TB, Malaria) and Non-communicable (Diabetes, Chronic Respiratory Diseases, Cardiovascular and Cervical Cancer).

1.3.1. Specific Objectives

a. To compile a revised Master Facilities List that includes updated geospatial co-ordinates of all health facilities.
b. To conduct an assessment of availability of health services and the readiness of health facilities to provide a range of services using locally-adapted WHO tools.
c. To conduct a review of the quality of routinely collected health data.
d. To verify data that is collected at health facilities and regional levels.
e. To conduct a health information systems assessment at facility and regional levels.
f. To conduct an independent desktop review of data quality.
g. To conduct a quality of care survey for HIV, TB and Malaria, using locally-adapted questionnaires.

1.4. Background

The Kingdom of Eswatini is a landlocked country in Southern Africa with an estimated land area of 17,364 square kilometres (Km2). According to the 2017 national population and household census, Eswatini has a population of 1,093,238, a minor increase from 1,018,449 in the 2007 census. The population is made up of 531,111 males and 562,127 females.

Table 1-1: Population of Eswatini/regions: 2007-2017

Eswatini/ Regions	Population 2007	Population 2017	Percentage to total Population 2017	Absolute change in Population 2007-2017	Annual Growth Rate 2007-2017
Total	**1,018,449**	**1,093,238**	**100.0**	**74,789**	**0.7**
Hhohho	282,734	320,651	29.3	37,917	1.3
Manzini	319,530	355,945	32.6	36,415	1.1
Shiselweni	208,454	204,111	18.7	-4,343	-0.2
Lubombo	207,731	212,531	19.4	4,800	0.2

Source: Eswatini 2017 national population and household census

Eswatini has a gross domestic product (GDP) per capita of about $3,000, and is classified as a lower middle-income country by the World Bank. The primary development challenge for the Kingdom of Eswatini is to address the high rate of poverty and inequality in the country. An estimated 63% of the population lives below the poverty line, and about 29% lives below the extreme poverty line. The HIV incidence among people 15+ years decreased from 2.70% in 2010 to 1.36% in 2017 but the adult prevalence remains high at 27%.

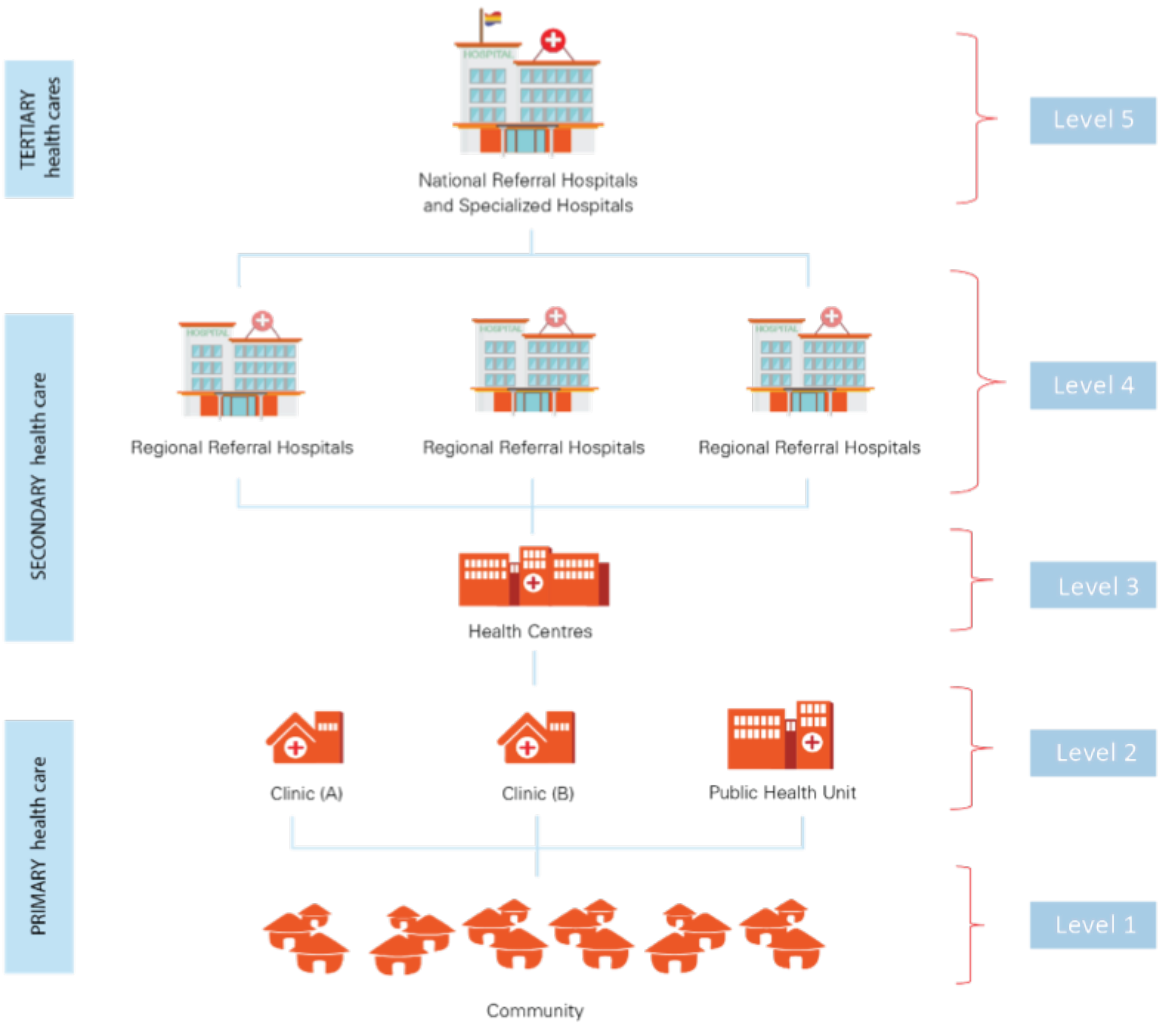
1.4.1. Health Care System in Eswatini

Eswatini, through the Ministry of Health, has a goal of providing universal health care coverage to its citizens. This has been enshrined both through the National Health Policy 2007 and the 2014 National Health Sector Strategic Plan II (NHSSP II). The NHSSP II's mission is "to build an efficient and equitable client-cantered health system for accelerated attainment of highest standard of health to all people in Eswatini". This NHSSP II goal is designed around the need to attain Universal Health Coverage for all health related services as defined in the Essential Health Care Package (EHCP).

1.4.2. Levels of Health Care Delivery

The service delivery system of the Eswatini Health Sector is organized in a four-tier system: i) Three National Referral Hospitals; ii) Regional Hospitals; iii) Primary Health Care facilities including Health Centers, Public Health Units (PHUs), Rural Clinics and a network of outreach sites; iv) Community Based Care where Rural Health Motivators (RHM), Faith-based Health Care Providers, Volunteers and Traditional Practitioners provide care, support and treatment. Clinics are further divided into Type A and Type B, with the main distinction lying in the provision of maternity services: the Type B facilities offer maternity services while the Type A do not. The Public Health Units on the other hand concentrate on provision of primary health care services, and constitute the base for outreach services, while the Health Centres have traditionally provided more curative and in-patient care as well as primary health care services.

Figure 1—1: Levels of Health Care Delivery



Furthermore, the revised EHCP 2016 divided the health care system into five (5) health service delivery levels where Level 1 relates to the delivery of health services at the Community level; Level 2 relates to the delivery of services in Primary Health Care facilities comprising of Clinic Type A, Clinic Type B and the Public Health Units; Level 3 relates to delivery of services in the Health Centres while Level 4 relates to delivery of services in Regional Referral Hospitals and lastly; Level 5 relates to delivery of services at the National Referral Hospitals.

1.4.3. Health Status of the Population

Eswatini is going through an epidemiological transition and experiencing a double burden of disease. While communicable diseases still remain a serious challenge, non-communicable diseases (NCDs) particularly hypertension, diabetes and cancers are growing problems resulting in high morbidity and mortality rates in the population.

Table 1-2: Major causes of morbidity and mortality in Eswatini (2017)

TOP 10 CAUSES OF MORBIDITY	
1	Upper Respiratory Infections
2	Skin Disorders
3	Hypertension
4	Musculoskeletal Conditions
5	Acute Watery Diarrhoea
6	Lower Respiratory Infection (Mild)
7	Digestive Disorders
8	Diabetes Mellitus
9	Eye Diseases
10	Injury

TOP 10 CAUSES OF MORTALITY	
1	Tuberculosis
2	Acquired Immune Deficiency Syndrome
3	Pneumonia And Influenza
4	Diabetes Mellitus
5	Cancers
6	Non-infective Enteritis And Colitis
7	Diseases Of Blood And Blood - Forming Organs
8	Inflammatory Diseases Of Central Nervous System
9	Cerebrovascular Disease
10	Hypertensive Disease

(Source: Eswatini HMIS, 2017)

1.4.3.1. Health Indicators

The life expectancy at birth in Eswatini was estimated to be 45.9 years in 2017 (CSO, 2007). Of concern, however, are high rates of mortality such as the Infant Mortality Rate which is 50 deaths per 1,000 live births (MICS, 2014). The Under-Five Mortality Rate is 67 deaths per 1,000 live births (MICS, 2014) and the Maternal Mortality Rate is 593 deaths per 100,000 live births (CSO, 2012). Hence, there is need for improving the health system in order to address these existing health challenges in the country.

1.4.3.2. Communicable Diseases

Although Eswatini made excellent strides towards addressing the high burden of communicable diseases including HIV/AIDS and TB, these diseases are still major causes of morbidity and mortality. Similarly, significant strides in fighting malaria cases in the country have been made and Eswatini is part of the 8 countries in Africa that are working towards Malaria elimination by 2020. One third of the deaths among in-patients are also still attributed to HIV/AIDS and TB. Recent findings however indicate a drop in new HIV infections by 44% since 2011 (SHIMS 2016). The HIV prevalence in the general population still remains high at 27% and high co-infection with TB (>72%) has been the single most important contributor to HIV-related morbidity and mortality (2016 global TB WHO report).

1.4.3.3. Non-Communicable Diseases (NCDs)

Eswatini has been experiencing an increase in non-communicable diseases (NCDs) since 2010. NCDs such as diabetes mellitus, hypertension, cardio-vascular diseases (CVDs), cancers, psychiatric illnesses, trauma and injuries as well as other chronic diseases also significantly contribute to the country's burden of disease. Findings from 2014 Steps Survey showed that 43.8% of the population was overweight while 20.5% was obese. In addition, 24.5% had raised Blood Pressure of which 78.9% were not on medication for raised BP. Routine data showed that NCDs in 2017 accounted for 30% of the outpatient cases and 14% of the inpatient cases.

Methodology

2.1. Design

This cross-sectional survey was conducted in all public and private health facilities across all levels of care in Eswatini. The assessment had three parts which were concurrently conducted: i) a cross-sectional survey of health facilities to assess readiness ii) a data quality review (DQR) that was conducted by an independent contractor and (iii) a quality of care assessment. The whole assessment lasted six months.

2.2. Sampling

Census sampling was done by surveying all public and private health facilities in Eswatini. The key respondents were facility managers and relevant staff working at each facility.

2.2.1. Selection of 5% sampled facilities for data verification

At the start of the survey, fourteen facilities located in one geographical region were included in the data verification sample. Two teams, each supervised by two supervisors, oversaw the data collection process in the 5% of facilities that were selected. Data collection teams that were different from the team that originally assessed the site conducted the data verification process to ensure that the quality of the results is enforced. Collected data was downloaded from the tablets and compared to that previously collected as part of the survey in terms of quality and comparability. A debriefing meeting with the survey manager and the team conducting the verification exercise was held immediately after the 5% sample verification process was completed. Urgent corrective measures to be undertaken based on the verification process were discussed.

2.3. Data collection tools (measurements)

A series of standardised interview data collection tools were adapted to the Eswatini context prior to their application in the field. Tailoring included ensuring that the variables in the questionnaires (e.g. for equipment, drugs, and guidelines), data elements and indicators reflected local packages of care and policies. Where this was not possible, the revisions reflected international standards. The process of revision of these questionnaires formed part of the assessment activities. The original tools were as follows:

i. WHO SARA tools for assessing health facility service availability and readiness and the WHO DQR tools for assessing data quality at health facilities.

ii. The USAID and Measure Evaluation Data quality tool.

iii. A Global Fund approved questionnaire for assessing quality of care (QoC).

2.3.1. Digitisation of the data collection tools

Once the tools were revised to be applicable to the local setting, the adapted SARA tool was converted into digital format using CSPro software and uploaded onto sets of mobile computer tablets used for data collection. The DQR and QoC tools were administered using a paper based tool and later captured into an Excel spreadsheet.

2.3.2. Plans for storage of data collection tools and equipment

Local policies were adhered to regarding storage of data collection tools and equipment.

2.4. Implementation planning and execution

2.4.1. Selection of external data quality assessor for desktop reviews

As part of the DQR process, the MOH contracted an independent external consultant to perform a desktop review of the quality of routinely collected data.

2.4.2. Route map finalisation

The survey manager worked closely with the regional representatives to map the facilities to be visited and possible routes to maximize efficiencies on travelling time. This was done to ensure that the teams' allocations per region was adequate and that data collection could be completed within the specified number of days per region. A master facility list was received from regional representatives and validated prior to finalization of route maps. The final route maps were provided to data collection teams during survey training and adopted after further validations.

2.4.3. Training of field teams

Ten teams of 4 members each were trained over a period of 5 days. Five trainers were recruited by the MOH Technical Team to deliver the training. The training included a range of didactic, interactive and practical approaches. Participants were also oriented on the purpose and processes of the SARA assessment as well as the assessment tools. The training also covered use of the mobile devices for data collection. A pilot was conducted as part of the training to test the tools. Minor modifications were made on the tools prior to commencement of field activities.

2.5. Data collection

Data collection lasted 20 days in the period between the 2nd and 27th October 2017. Immediately after completing training, all data collection teams (N=10) started data collection in the Manzini region. This was to ensure that there was uniformity amongst data collection teams as well as managing troubleshooting needs at initial stages of data collection by guaranteeing accessibility of all teams. Shortly after, three teams were deployed to Hhohho and Manzini regions each and two teams deployed to Lubombo and Manzini regions each. Data were collected through face to face interviews with facility managers, and/or suitable representatives in a facility or in a department. The questionnaire had 14 sections according to the priority areas defined in the EHCP and a total of 532 questions and interviews on average lasted between 2 and 3 hours. An observation checklist, was used to collect data on availability and functionality of equipment, as well as general infrastructural characteristics, supplies and guidelines. Data collection also included geocoding of health facilities using Geographic Positioning System (GPS) devices.

2.5.1. Composition of data collection teams

The skills complement for the data collection teams (4 per team; excluding 1 driver) were as follows:

i. A team supervisor: Someone with adequate knowledge of healthcare and health services.

ii. Two nurses: Registered professional nurses or nurse midwives from the facilities in the regions who were available to participate in the assessment.

iii. One data collector: A person from the Strategic Information Department (SID).

iv. A driver recruited from the MOH.

2.5.2. Data collection process and data quality assurance

Data collection was carried out with due care to ensure optimal data quality scores. The following are some of the steps taken to ensure clarity of scope and roles for teams:

i. Team Supervisor contacted each facility to remind and confirm that the teams would be visiting in that week.

ii. Each day, the team including the supervisor, congregated at a designated point and the driver took the team to the relevant facility. Estimated duration for data collection was as follows:
   - Clinic: 0.5 days
   - Health Centres: 1 day
   - Regional Hospitals: 2 days
   - Referral and National Hospitals: 3 days

iii. Several teams merged for data collection at large facilities to expedite data collection.

iv. Each team member was provided with a tablet for backup purposes during data collection.

v. Once at the facility, the teams started the data collection process. The facility manager, and/or a suitable representative(s), was interviewed in order to complete the SARA tool and aspects of the DQR assessment. The facility manager was asked to provide relevant source materials and asked to take the interviewees to relevant sections of the facility.

vi. Based on the availability of multiple tablets, the supervisor and/or Team Leader reviewed the collected data and confirmed the most accurate facility record by identifying missing data or data inconsistencies daily.

vii. Each region was assigned a Data Manager who received collected data on a weekly basis.

viii. In the event that data was collected using paper-based data collection tools the team convened and re-captured the responses into the tablet immediately after the assessment. Additionally, for the sections of the questionnaires that were not digitized, a team of data collectors were responsible for capturing the data into the relevant programme loaded onto a desktop (e.g. in MS Excel).

ix. Team Leaders were responsible for ensuring that the teams are issued with the relevant paper-based data collection tools. Prior to leaving the facility, the Team Leader reviewed the paper-based tool for missing data or inconsistencies. To ensure high quality data, double entry was done.

x. Data Managers reviewed the data centrally on a weekly basis and any data errors or inconsistencies were communicated to the data collection teams. Where required, the teams had to make contact with the facility manager to clarify any issues.

2.6. Data management and analysis

Data analysis was led by the country team with technical guidance from WHO. A second layer of analysis was done by Health Systems Trust to verify the accuracy of the initial analysis as part of quality assurance. Once collected, data was consolidated into a single dataset and analysed for duplicates, incongruences, coding errors and missing entries. Multiple duplicates were noted in the original dataset which were caused primarily by the use of multiple tablets per site. Where possible without ambiguity, errors were corrected with the support of team supervisors that formed part of the analysis team. Data cleaning which involved deleting the irrelevant records was done in CSPro whereby facilities were all identified using auto generated unique codes.

Standard analyses and calculation of basic indicators prescribed by the WHO HFA methodology for SARA were carried out using the Excel® workbooks provided by the WHO. This ensured the production of basic summary results for Eswatini that are comparable with other countries. For calculation of indicators for which the standard tools could not accommodate, data was imported into Stata® Statistical software (StataCorp LP: College Station, TX) where these indicators could be calculated and analysed.

The results of all analyses are presented as a series of tables and graphs detailing the values of the different indicators and, when possible and meaningful, comparing these values across strata. The following categories of indicators were calculated and discussed:

1. General and service-specific readiness indicators.
2. Service availability indicators.
3. Data quality indicators.
4. Quality of care indicators.

The following chapters discuss findings of the Service Availability and Readiness Assessment. Results of the Data Quality Review, Quality of Care Assessment and Desktop Review are discussed in separate reports.

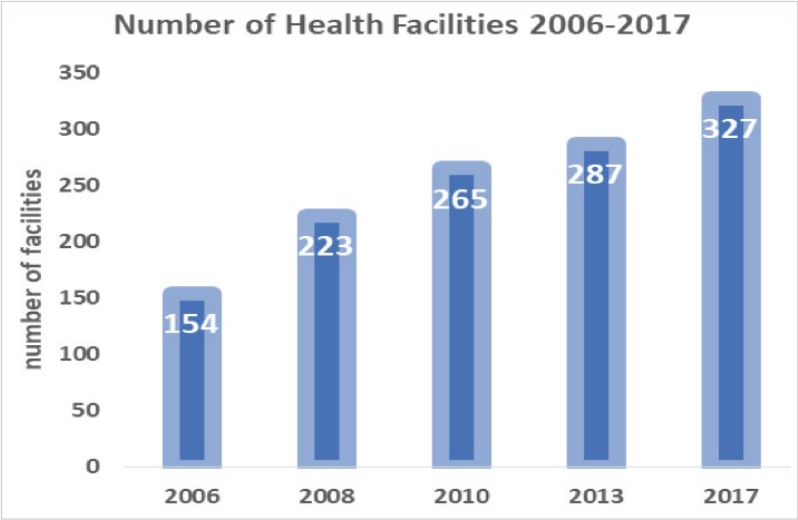
Distribution of Health Facilities

3.0. Introduction

This chapter presents the overall distribution of facilities in the country as of 2017 based on the validated SARA master facilities list. First, a list of facilities that existed in last Service Availability Mapping was compared to a new one that that included coordinates of health facilities that had never been captured. The distribution by type of facility, managing authority and rural/urban location is presented to show differences across regions.

Figure 3—1 shows a two-fold increase in the number of facilities in the last ten years for Eswatini from 154 health facilities in 2006 to 327 health facilities in 2017. This increase is a result of new facilities that were built in the country and others that were reopened.

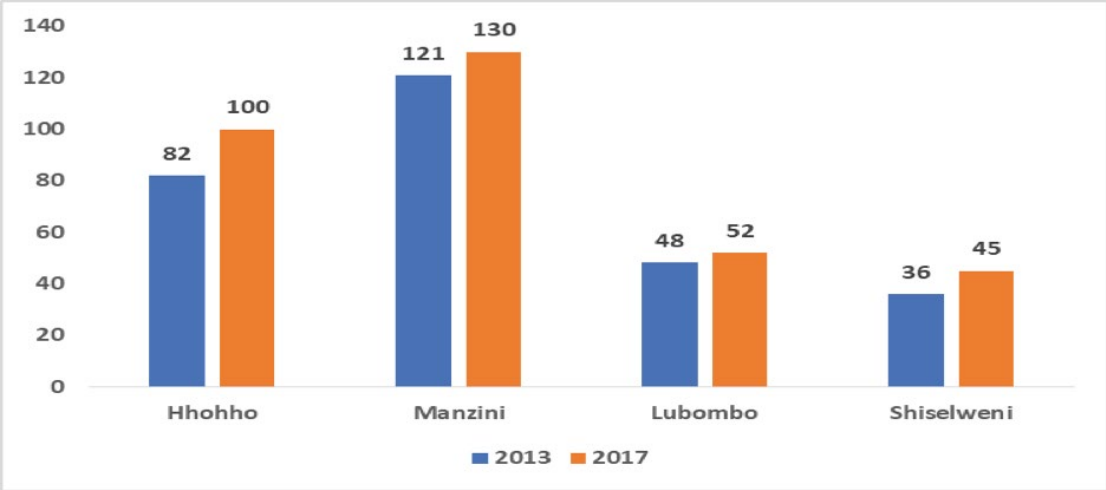
Figure 3—1: Trend of number of health facilities in Eswatini 2006-2017



3.1. Distribution of health facilities by region

Between 2013 and 2017, there was an increase in the number of health facilities across all regions. Health facilities remain mostly concentrated in the Manzini region. The distribution by regions revealed similar trends as in the previous four SAMs with most (n=130) facilities in Manzini followed by Hhohho (n=100), Lubombo (n=52) and Shiselweni (n=45). Despite these regional distributions, equity in access remains difficult to measure in the context of the geographic spread of facilities in these regions. Whereas Manzini had the most facilities, there is clustering of facilities along the urban corridor and sparseness in the rural areas as evident in anecdotal evidence. In addition, Manzini had a larger number of specialized clinics than all other regions.

Figure 3—2: Distribution of facilities by region, 2013-2017



3.2. Distribution of health facilities by facility type

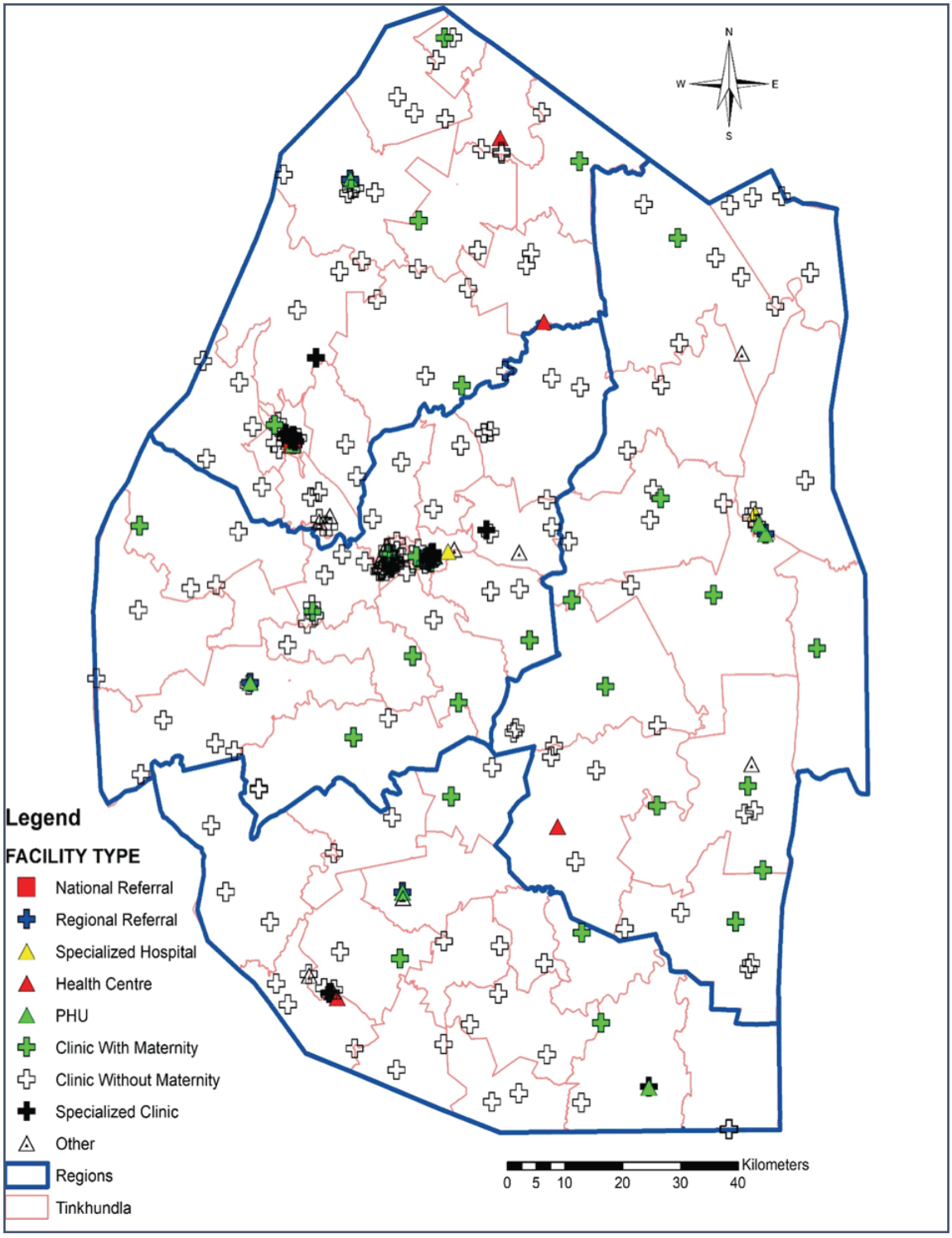
Between 2013 and 2017, the country added two new Public Health Units (PHUs), 6 clinics with maternity services, 10 clinics without maternity services, 4 specialized clinics and 20 'Other' health facilities. Of the total 327 health facilities in the country during the 2017 SARA survey, 9% (n=29) were clinics that provided maternity services, 61% were clinics without maternity services (n=202) and 16% were specialized clinics (Table 3–1).

Table 3-1: Distribution of health facilities by facility type

Facility type	Number of Facilities in 2013	Number of Facilities in 2017
National Referral Hospital	1	1
Regional Referral Hospital	5	5
Specialized Hospital	2	3
Health Centre	5	5
Public Health Unit (PHU)	6	7
Clinic with maternity	23	29
Clinic without maternity	192	203
Specialized Clinics	47	65
Private Hospitals	6	9
Total number of facilities	287	327

The geographical distribution of facilities by type and by region is depicted in Figure 3–3.

Figure 3—3: Geographical distribution of health facilities by type and region



3.3. Distribution of health facilities by facility ownership

As has been the case over the past SAM surveys, government has remained the major owner of health facilities in the country compared to other owners.The number of government owned health facilities increased from 115 in 2013 to 125 in 2017, while that of mission-based hospitals increased from 35 to 43. The number of private nurse owned facilities decreased from 20 in 2013 to 15 in 2017 while those owned by doctors increased from 65 to 74 (Table 3 – 2).

Table 3-2: Distribution of health facilities by managing authority, 2013-2017

Managing authority	Number of Facilities in 2013	Number of Facilities in 2017
Government	115	127
Mission	35	44
Industrial	31	33
Private (non-industrial) owned by nurse(s)	20	15
Private (non-industrial) owned by doctor(s)	65	80
NGO	21	28
Total number of facilities	287	327

Figure 3–4 shows the proportion of facilities by ownership across the four regions. Since 2008, the contribution by each type of ownership has generally been constant with Hhohho and Manzini regions having the highest number of private facilities compared to Shiselweni and Lubombo regions.

Figure 3—4: Proportion of Facilities by Ownership

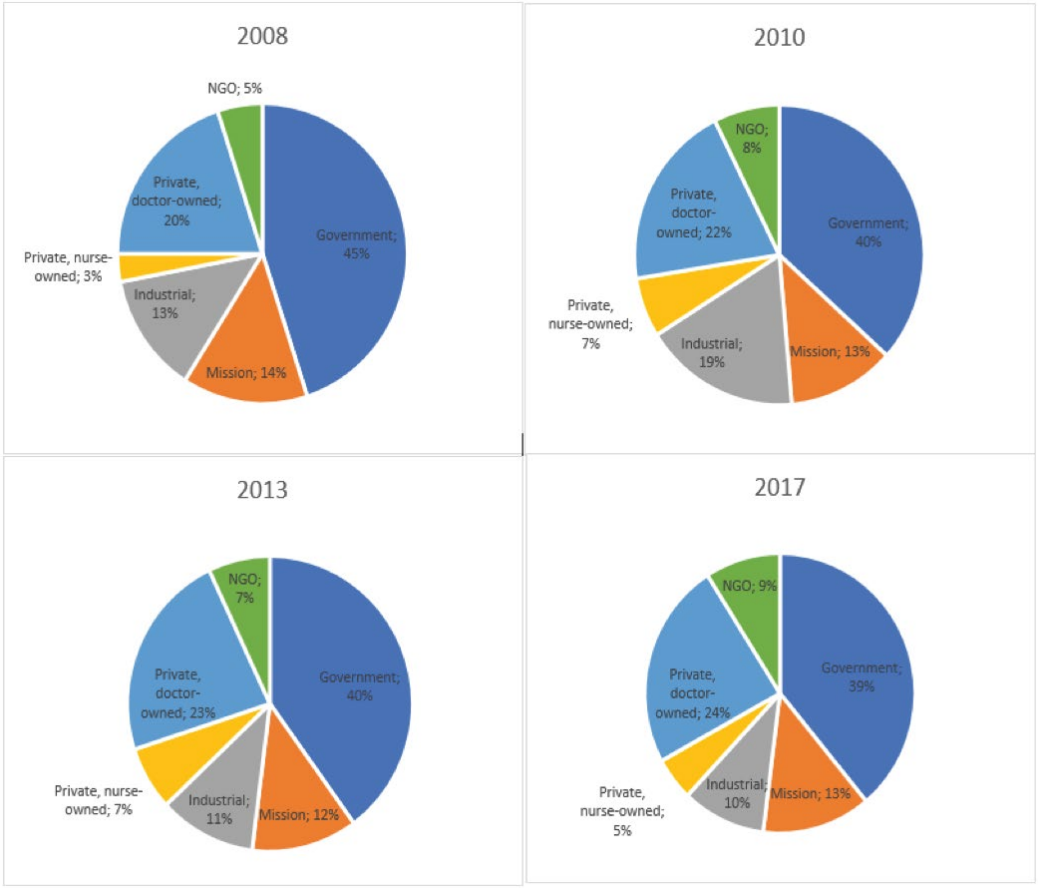
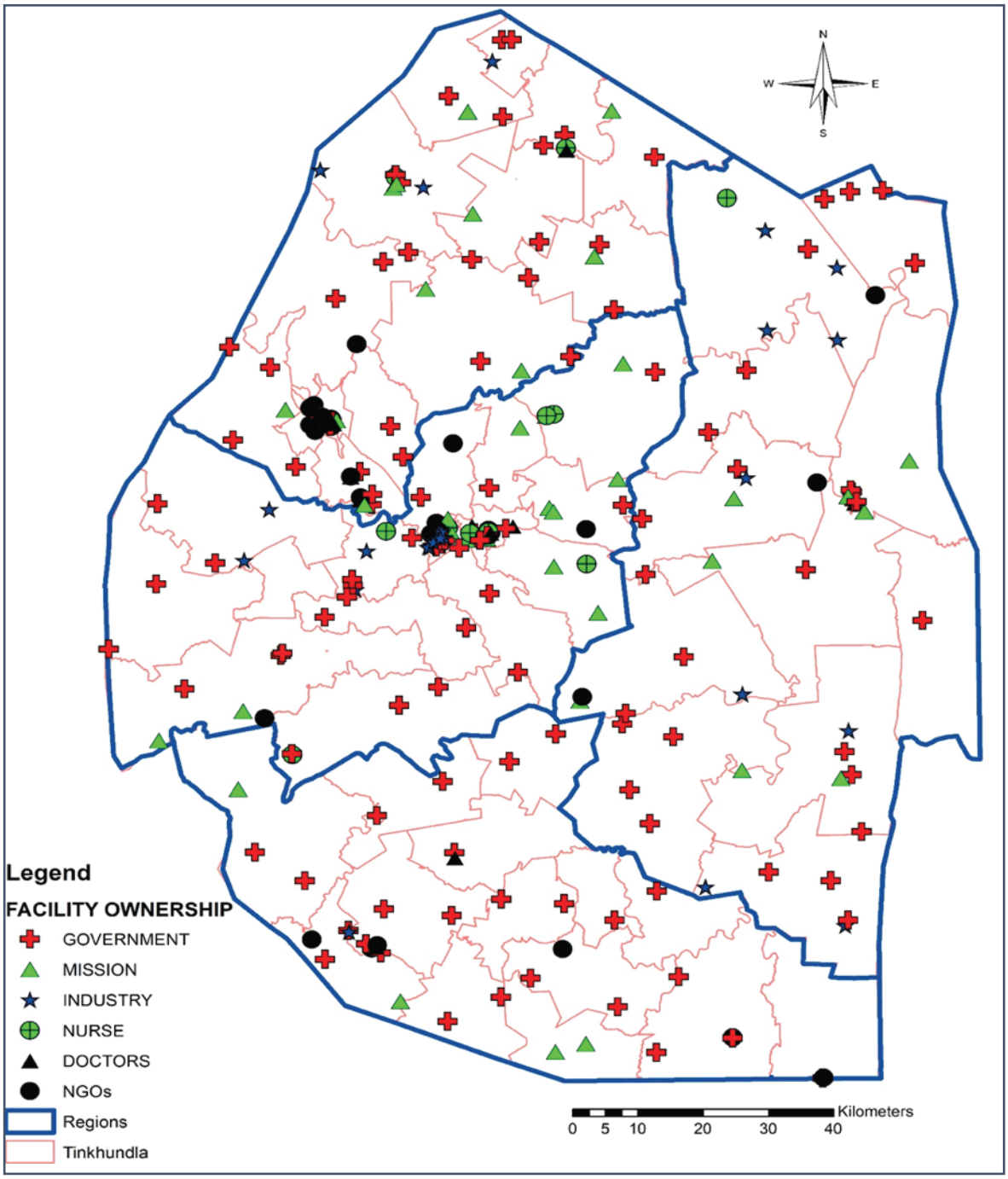


Figure 3—5: Facility Ownership by Geographic distribution



3.4. Action Areas

There is a need for measuring equity in access to health services especially in hard to reach facilities. This will help determine whether there is unmet need for some health services, thereby justifying efforts to build or expand facilities in less served regions.

General health services availability and readiness

4.0. Introduction

General Service Readiness (GSR) refers to the overall capacity of health facilities to provide general health services. This section discusses characteristics that health facilities should have for them to provide health care services in the country. GSR readiness was defined as the availability of selected components that are required to provide services in the following five domains: i) basic amenities, ii) basic equipment, iii) standard precautions for infection prevention, iv) diagnostic capacity and, v) essential medicines.

4.1. Availability of basic amenities

Basic amenities were assessed based on the availability of the following tracer items: a power source (grid or generator), communication equipment, consultation room(s), improved water source, adequate sanitation facilities, computer with internet access and emergency transportation.

Figure 4—1: Percentage of all facilities with basic amenities available, (N=327)

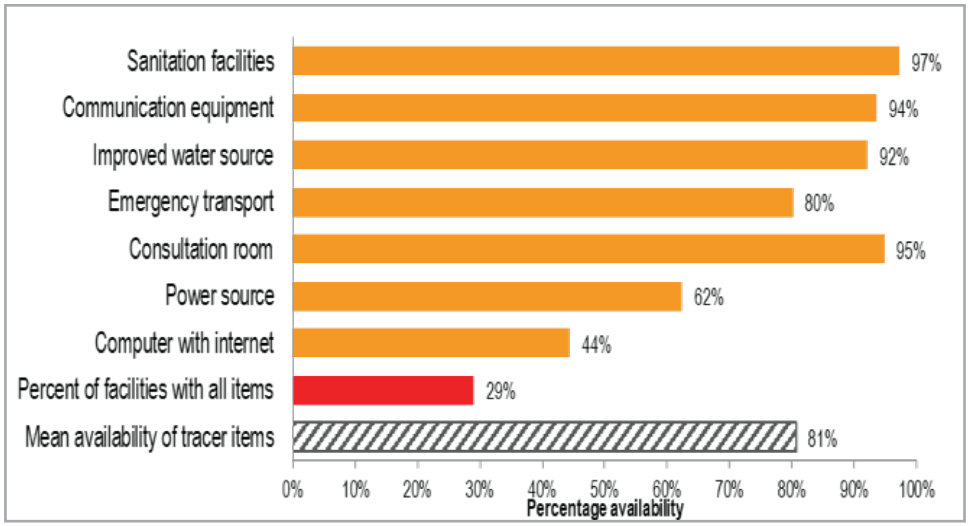


Figure 4 – 1 shows that the mean availability of tracer items for basic amenities was 81% across all facilities. This is the proportion of health facilities in the country that had the required basic amenities to provide health services. Only 29% of facilities were found to have all basic amenities. The majority of facilities had adequate sanitation facilities (97%), improved sources of water (92%), communication equipment in a functional state (94%), emergency transport (80%) and a consultation room (95%). Lower availability was generally recorded for reliable sources of power (62%) and presence of a computer with internet (44%).

Figure 4—2: Availability of basic amenities tracer items by region, (N=327)

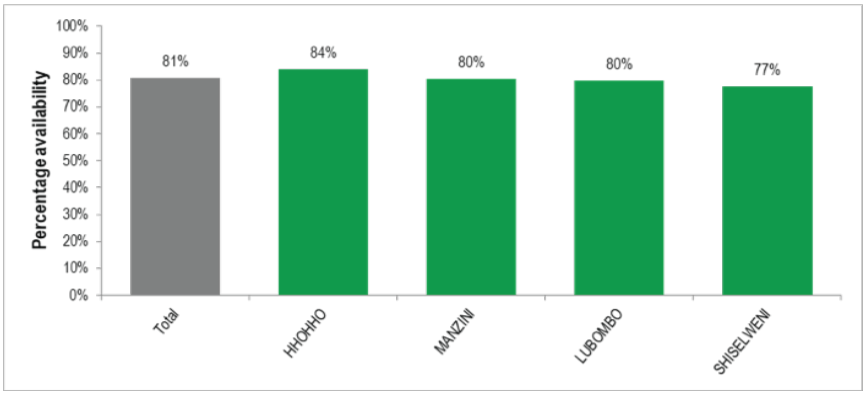


Figure 4 – 2 shows that general services readiness of facilities was almost similar across all regions with scores ranging between 77 and 84 percent.

Table 4 – 1 further shows the breakdown of general readiness by facility type and managing authority.

Table 4-1: Percentage of facilities with basic amenities available, by facility type and managing authority (N=327)

Facility type	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
National Referral Hospital	100%	100%	100%	100%	100%	100%	100%	100%	100%
Regional Referral Hospital	100%	100%	100%	100%	100%	80%	80%	60%	94%
Specialized Hospital	100%	100%	100%	100%	100%	67%	100%	67%	95%
Health Centre	60%	100%	100%	100%	100%	60%	100%	40%	89%
Public Health Unit (PHU)	71%	100%	100%	100%	100%	57%	100%	29%	90%
Clinic with maternity	42%	81%	94%	97%	97%	23%	74%	19%	72%
Clinic without maternity	57%	92%	95%	98%	92%	31%	84%	20%	78%
Specialized Clinics	80%	94%	94%	95%	94%	85%	65%	51%	87%
Managing authority									
Government	49%	92%	98%	99%	95%	24%	85%	13%	77%
Mission	50%	86%	98%	100%	98%	27%	80%	16%	77%
Industrial	82%	100%	91%	100%	94%	58%	94%	45%	88%
Private (non-industrial) owned by nurse(s)	60%	80%	80%	87%	87%	27%	60%	13%	69%
Private (non-industrial) owned by doctor(s)	80%	94%	94%	94%	90%	77%	68%	51%	85%

Higher-level facilities including National and Regional Referral Hospitals, as well as Specialized Hospitals, were on average more likely to have the necessary basic amenities when compared to lower-level health facilities. Half of government-owned facilities had no access to a reliable source of power and 24% had access to a computer with internet. This is however because reliable sources of power were defined as those for which power was not only used for running stand-alone appliances but also for other purposes including sources of light.

4.1.2. Areas for Action

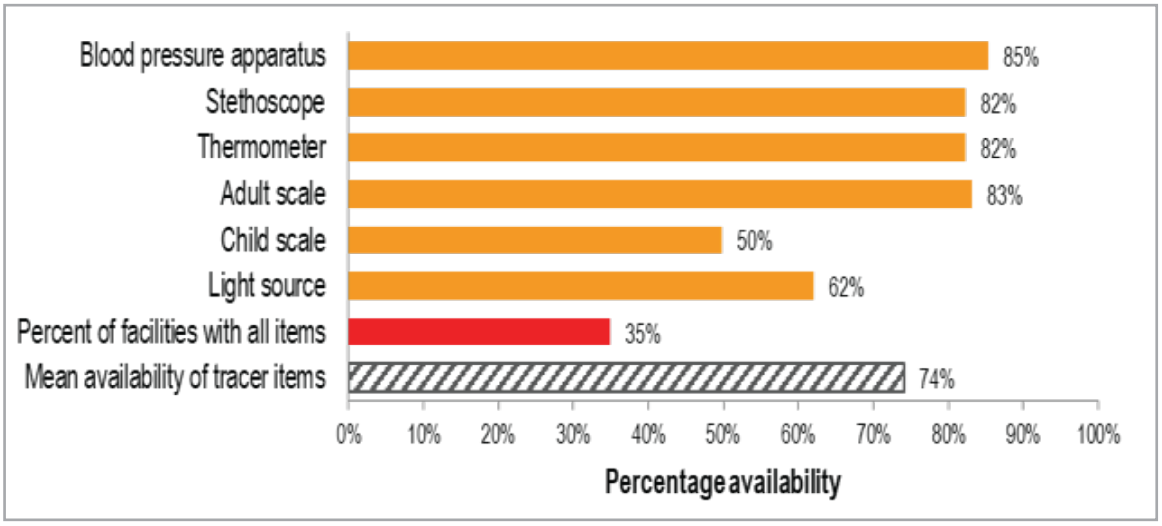
There is a need for:

1. Periodic equipment audits in all health facilities especially public facilities to ensure that equipment breakdowns and failures are detected timeously and refurbishments done.
2. Improving access to reliable sources of power source and internet access especially in public health facilities.

4.2. Availability of basic equipment

The assessment of basic equipment included measuring of availability of six types of equipment that are commonly used for health examinations. These included; a light source, a scale for measuring weight in children, a scale for measuring weight in adults, a thermometer, a stethoscope and blood pressure apparatus (Figure 4 – 3).

Figure 4—3: Percentage of all facilities with basic equipment available, (N=327)



The mean availability of tracer items for basic equipment in health facilities was 74% indicating that about a third of the country's health facilities have the basic equipment required for perform physical examination. Only 35% of all health facilities had all basic equipment available. Most (85%) health facilities had functional blood pressure machines, 83% had adult scales, 82% had stethoscopes and 82% had thermometers. Half of all facilities in the country had no child scales and a third had no lighting source. These patterns represent some progress in the realm of ensuring facilities have access to basic amenities needed to provide quality health services. Fewer facilities had blood pressure machines in 2017 compared to 2008 and 2010. The same applies for stethoscopes, thermometers and adult scales (Table 4 – 2)

Table 4-2: Percentage of all facilities with basic equipment available, comparison between 2008, 2010 and 2017

Equipment	2008	2010	2017
Blood pressure machine	95.5	97.4	85.0
Stethoscope	96.9	94.0	82.0
Thermometer	98.2	94.0	82.0
Adult scale	90.1	92.0	83.0
Child scale	70.9	100.0	50.0
Light source	43.0	52.8	62.0

Figure 4—4: Availability of basic equipment tracer items by regions, (N=327)

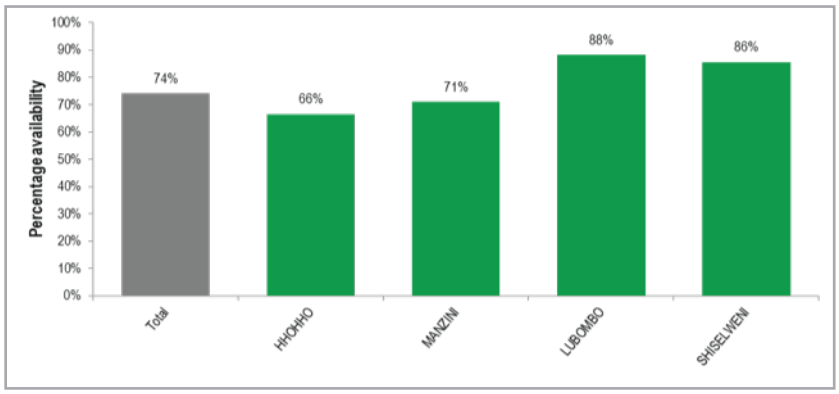


Figure 4 – 4 shows the general service readiness of facilities regarding basic equipment by region. Mean availability of tracers items is above 80% in all regions except in Manzini (66%) and Hhohho (71%). Sixty-five percent of facilities in Hhohho did not have child scales and 30% did not have a light source for use during physical examinations.

With the exception of specialized clinics that on average had low (39%) availability of basic equipment other types of health facilities had high (≥ 80%) scores (Table 4 – 3). Specialized clinics recorded less than 60% in any of the basic equipment that were assessed. In fact, the observed mean availability (74%) would be higher if we are to exclude clinics that are not meant to provide certain types of health care. For example, the low proportion of child scales is in specialized clinics because of most these do not provide services that would require such equipment.

Government and mission managed facilities on average had higher availability of basic equipment than other types of facilities. However, less than half of these facilities had all the equipment that were assessed. The most common basic equipment that was found to be absent across all types of facilities by management authority was a light source, for which facilities scored between 47% and 67%. There was still low availability (60%) of child scales in regional Referral Hospitals and Health Centre, both of which are facilities that are expected to provide care to children.

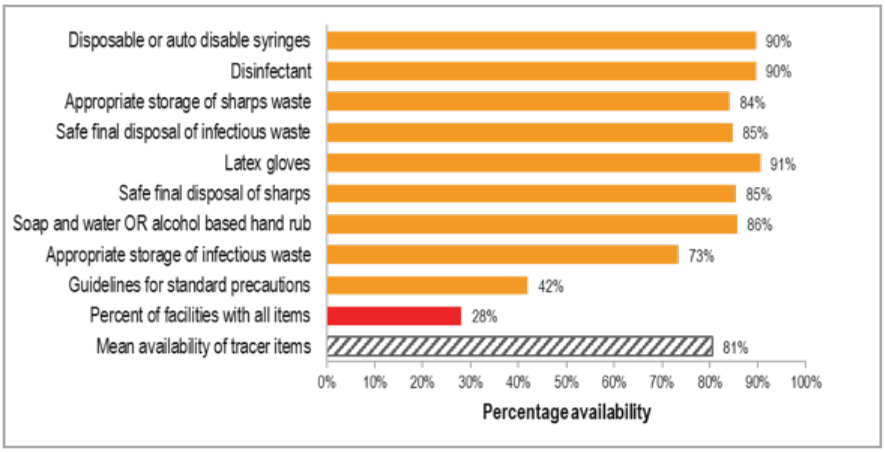
Table 4-3: Percentage of facilities with basic equipment tracer items available, by facility type and managing authority (N=327)

	Adult scale	Child scale	Thermometer	Stethoscope	Blood pressure apparatus	Light source	Percent of facilities with all items	Mean availability of tracer items
Facility type								
National Referral Hospital	100%	100%	100%	100%	100%	100%	100%	100%
Regional Referral Hospital	100%	60%	100%	100%	100%	80%	60%	90%
Specialized Hospital	100%	33%	100%	100%	100%	67%	33%	83%
Health Centre	100%	80%	100%	100%	100%	100%	80%	97%
Public Health Unit (PHU)	100%	86%	100%	100%	100%	86%	71%	95%
Clinic with maternity	94%	90%	97%	97%	97%	71%	68%	91%
Clinic without maternity	92%	56%	92%	90%	92%	59%	36%	80%
Specialized Clinics	43%	3%	38%	43%	52%	55%	3%	39%
Managing authority								
Government	95%	65%	95%	92%	94%	62%	45%	84%
Mission	95%	73%	95%	93%	98%	57%	45%	85%
Industrial	91%	39%	91%	91%	97%	61%	27%	78%
Private (non-industrial) owned by nurse(s)	67%	47%	80%	87%	87%	47%	27%	69%
Private (non-industrial) owned by doctor(s)	57%	25%	53%	57%	58%	67%	22%	53%

4.2.2. Areas for Action

1. There should be prioritization of child health services particularly the supply of equipment relevant to child monitoring in health facilities including child scales, especially in Hhohho region.
2. Targeted efforts should be put in ensuring that all facilities have a reliable source of light that can be used during medical examinations.

Figure 4—5: Percentage of facilities with standard precautions for infection prevention items available, (N=327)



4.3. Availability of standard infection control precaution

For infection control, the survey assessed the availability and functionality of basic items and measures that are required to prevent nosocomial injuries and infections. These included the mode of disposal of syringes, safe final disposal of sharps, availability of a disinfectant, waste storage, safe final disposal of waste, availability of latex gloves, availability of items for clean hand washing, appropriate storage of infectious waste and availability of standard infection control guidelines. The availability of infection prevention precaution (IPC) items in all facilities is presented in (Figure 4-5). Although only 28% of health facilities had all IPC items, availability among specific items was above 80% in all areas except appropriate disposal of infectious waste (73%) and availability of standard infection control guidelines (42%).

Figure 4—6: Availability of standard precautions for infection prevention tracer items by regions, (N=327)

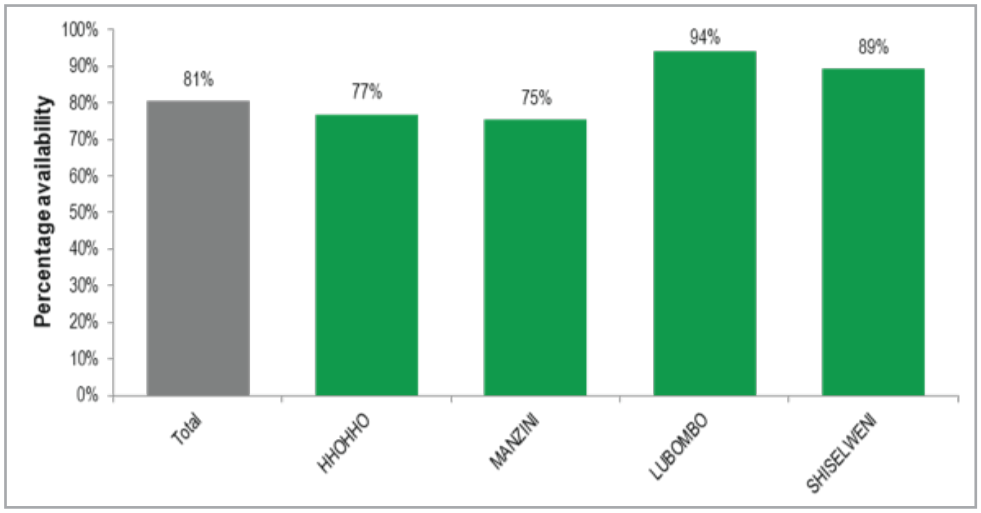


Figure 4 – 6 shows that the availability of tracer items for standard precautions for infection prevention was highest in Lubombo (94%), followed by Shiselweni (89%), and lower in Manzini (75%) and Hhohho (77%). Sixty-five percent of facilities in Hhohho and 75% in Manzini did not have appropriate measures of storing infectious waste. In addition, a quarter of facilities in Hhohho and Manzini regions had no standard guidelines for safety precautions.

Further analysis by facility type and ownership is presented in Table 4 – 4. The mean availability of IPC items was high (≥75%) across all levels of health facilities except specialized clinics. The National Referral hospital had very high

availability of all other IPC items but did not have guidelines for infection control. Availability of standard guidelines of infection control were on average low for most levels of health facilities, except Regional Referral Hospitals which generally scored very high (≥ 80%) in specific items but only 20% of them had all IPCs. Health Centres and PHUs recorded low availability of measures of storage of infectious waste (40% and 43% respectively). Government-managed health facilities generally had higher availability of standard IPCS items than other types of facilities. A large proportion (33%) of facilities that are industry-managed and private clinics managed by nurses (40%) and doctors (34%) do not have safe measures for storing infectious waste. There was low availability of standard guidelines of infection in types of health facility by management authority except government and mission-run facilities (59% and 61% respectively).

Table 4-4: Availability of standard precautions for infection prevention items by facility type, (N=327)

	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
Facility type											
National Referral Hospital	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	89%
Regional Referral Hospital	100%	100%	100%	80%	100%	100%	80%	80%	80%	20%	91%
Specialized Hospital	100%	100%	67%	67%	100%	100%	67%	67%	100%	67%	85%
Health Centre	100%	100%	60%	40%	100%	100%	80%	80%	60%	20%	80%
Public Health Unit (PHU)	86%	86%	57%	43%	100%	100%	57%	57%	86%	43%	75%
Clinic with maternity	94%	90%	94%	84%	87%	97%	87%	94%	61%	42%	87%
Clinic without maternity	88%	86%	88%	75%	88%	95%	86%	92%	44%	31%	82%
Specialized Clinics	68%	72%	69%	68%	91%	65%	89%	91%	17%	12%	70%
Managing authority											
Government	92%	91%	87%	77%	92%	99%	80%	87%	59%	39%	85%
Mission	86%	80%	91%	86%	98%	93%	91%	93%	61%	43%	87%
Industrial	88%	94%	88%	67%	88%	88%	100%	100%	33%	27%	83%
Private (non-industrial) owned by nurse(s)	80%	67%	87%	60%	73%	87%	87%	87%	20%	7%	72%
Private (non-industrial) owned by doctor(s)	73%	76%	75%	66%	85%	76%	86%	91%	14%	9%	71%

4.3.2. Areas for Action

There is a need for:

1. Monitoring the availability of standard infection control guidelines across all health facilities.
2. Improving the methods of storing infectious waste in Health Centers, Public Health Units, Industry-managed health facilities and private clinics.

4.4. Availability of diagnostic items (Diagnostic capacities)

Diagnostic capacities in the health facilities are critical for service delivery and readiness. 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 that are needed for each test depending on the level of the facility type. Facilities were assessed on their capacity to conduct the following 8 diagnostic tests on-site for: HIV, blood glucose, malaria, a syphilis (rapid test), haemoglobin, pregnancy, urine dipstick for protein, and urine dipstick for glucose. Figure 4 – 7 illustrates the availability of diagnostic capacity tracer items in facilities in the country. Only 29% of the country's health facilities could do all the 8 tests and facilities on average could do 5 of the 8 test. 60%. The majority (72%) of facilities had the capacity to diagnose HIV but only 53% could test for malaria, 54% for syphilis and 46% or haemoglobin.

Figure 4—7: Percentage of facilities with diagnostic capacity items available (N=327)

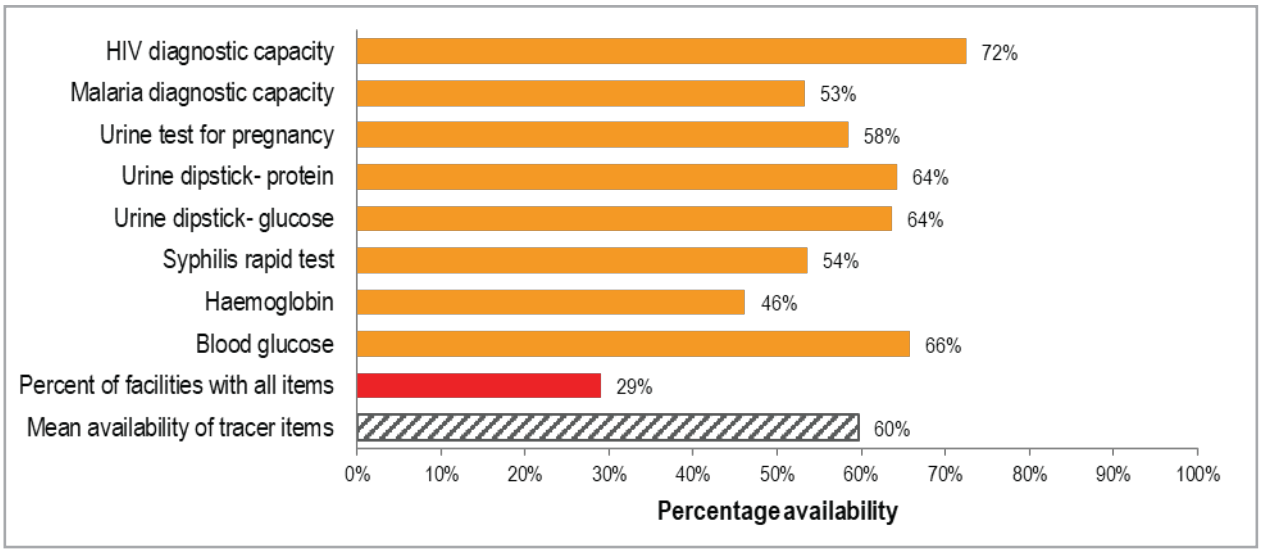
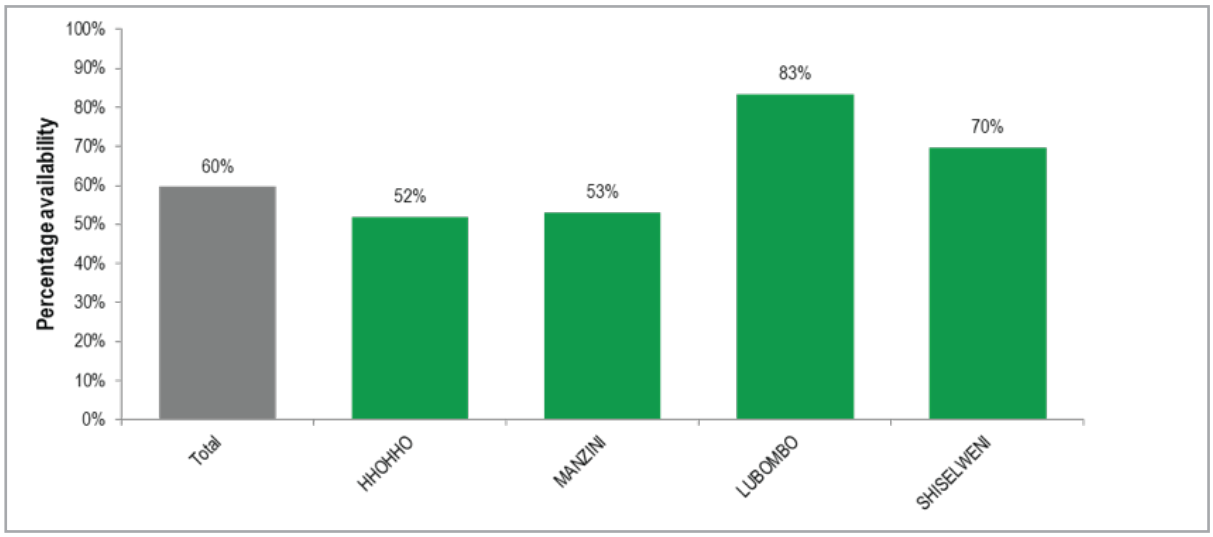


Figure 4 – 8 shows the availability of tracer items for diagnostic capacity disaggregated by region. On average, 83% of Lubombo health facilities had the tracer items for diagnostic capacity, the highest mean availability score among regions. Hhohho and Manzini regions had the least mean availability scores, 52% and 53%, respectively. The low percentage in Hhohho is more concerning because it has fewer specialized facilities than Manzini. Specific coverage is generally low in Hhohho including tests for haemoglobin (42%), blood glucose (59%), malaria (42%), (58%), pregnancy tests (46%), syphilis (44%) and HIV (67%).

Most of the other types of health facilities generally had high availability of diagnostics tests that were relevant to their target patients. For example, specialized hospitals and clinics on average had low capacity to do urine dipstick for protein and for pregnancy tests because these are not routine tests in their clients. There were concerning patterns observed in some levels of facilities – 40% of health centres could not test for haemoglobin, 40% for syphilis, and 20% for blood glucose. Similarly, half of the PHUs could not test for haemoglobin or syphilis, and a third for blood glucose. As a result of these patterns, only 40% of Health Centers and 29% of PHUs had the capacity to conduct all the tests that were assessed.

Figure 4—8: Availability of diagnostic capacity tracer items by regions, (N=327)



As expected, diagnostic capacity was higher in bigger and higher-level health facilities. For this reason, government and mission-run facilities were more likely to offer a variety of tests than small lower level health facilities. The National Referral Hospital had the capacity to diagnose all conditions that were assessed. Three of the five regional referral hospitals did not have urine dipsticks for pregnancy tests (Table 4 – 5). With the exception of industry-managed and private facilities, HIV tests were widely available in most types of health centres.

Table 4-5: Percentage of facilities with diagnostic capacity items available by facility type, (N=327)

	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
Facility type										
National Referral Hospital	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Regional Referral Hospital	100%	100%	100%	100%	100%	100%	100%	40%	40%	93%
Specialized Hospital	67%	100%	67%	67%	67%	100%	67%	33%	33%	71%
Health Centre	60%	80%	100%	100%	100%	100%	60%	80%	40%	85%
Public Health Unit (PHU)	57%	43%	86%	100%	71%	100%	86%	57%	29%	75%
Clinic with maternity	71%	87%	90%	94%	90%	94%	87%	90%	58%	88%
Clinic without maternity	50%	71%	56%	70%	71%	78%	58%	65%	30%	65%
Specialized Clinics	12%	31%	9%	17%	17%	34%	14%	18%	5%	19%
Managing authority										
Government	64%	78%	75%	81%	79%	94%	76%	65%	39%	76%
Mission	75%	77%	84%	86%	86%	91%	89%	80%	57%	84%
Industrial	36%	79%	42%	67%	67%	76%	39%	64%	27%	59%
Private (non-industrial) owned by nurse(s)	20%	47%	20%	53%	53%	40%	20%	60%	0%	39%
Private (non-industrial) owned by doctor(s)	14%	39%	19%	30%	32%	29%	14%	32%	9%	26%

4.4.2. Areas for Action

There is a need to:

1. Increase diagnostic capacity for testing for syphilis, blood glucose and haemoglobin levels especially in lower level public facilities like Health Centers and PHUs.
2. Improve urine dipstick pregnancy testing capacity at the three Regional Referral Hospitals that could not perform this test.
3. Prioritize facilities in Hhohho where coverage was low for most of the tests.

4.5. Availability of essential medicines

Essential medicines are those that satisfy the priority healthcare needs of the population. They are selected with due regard to public health relevance, evidence on efficacy and safety, and comparative cost-effectiveness. Essential medicines are expected to be available within the context of functioning health systems at all times, in adequate amounts, in the appropriate dosage forms, with assured quality and adequate information, and at a an affordable price that.

The essential medicines list consists of 24 tracer medicines which include: Amlodipine tablet or alternative calcium channel blockers, Amoxicillin syrup, Amoxicillin tablet, Ampicillin injection, Aspirin, Beclomethasone inhaler, a Beta blocker, Carbamazepine, Ceftriaxone, Enalapril tablet or alternative ACE inhibitor, Fluoxetine, Gentamicin, Glibenclamide, Haloperidol, Insulin, Magnesium sulphate, Metformin, Omeprazole or alternative, Oral rehydration solution, Oxytocin, Salbutamol inhaler, Simvastatin or other statin, and Thiazide, Zinc sulphate.

There is generally low availability of most essential drugs and less than 50% facilities had commonly used drugs (Figure 4-9). The lowest availability was observed for drugs used for mental health – only 2% of facilities had fluoxetine, 3% had haloperidol and 4% had carbamazepine. In fact the observed mean availability of essential drugs is higher if we exclude mental health drugs.

Availability of other essential drugs at health facilities mostly ranged between 15% and 50%. The most available drugs in items that were assessed were oral rehydration solutions (72%), aspirin (67%) and amoxycillin syrup (67%).

Figure 4—9: Percentage of Facilities with essential medicines, (N=327)

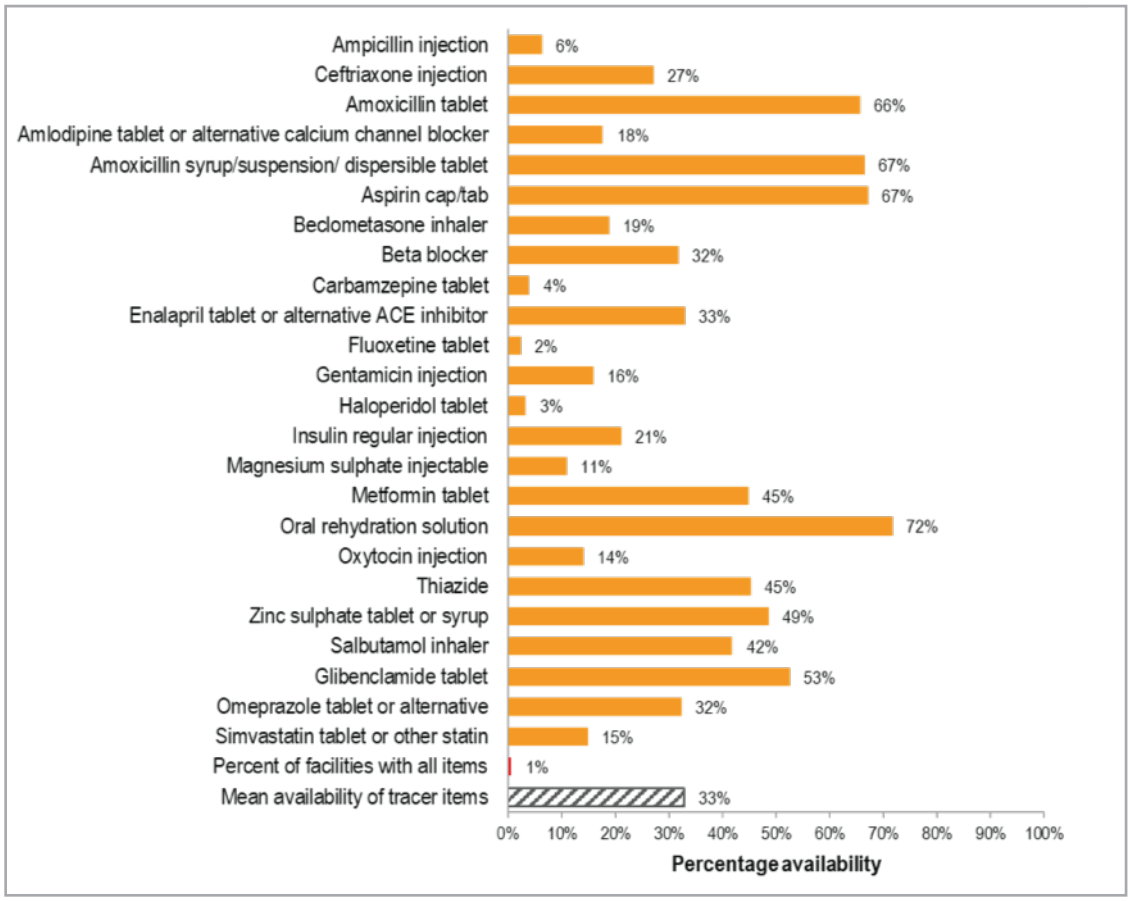
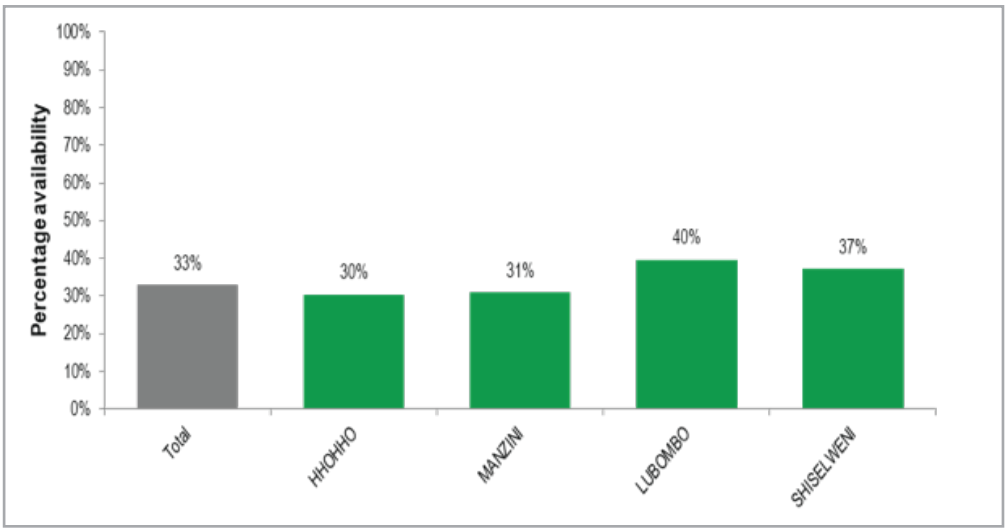


Figure 4 – 10 shows the availability of tracer items for essential medicines disaggregated by region. There was generally low availability of essential medicines in across the country – on average, the mean availability of essential drugs was 40% in Lubombo, 37% of Shiselweni, 30% in Hhohho and 31% in Manzini. Low availability in the latter two regions is mostly due to presence of a larger proportion of specialised clinics that do not provide some of the services that would require drugs on the essential drugs list.

Figure 4—10: Availability of essential medicine tracer items by regions, (N=327)



Availability of drugs by facility type was as follows:

National referral hospital: All drugs were available at the National Referral Hospital except calcium channel blockers, ampicillin injections and thiazide diuretics (Table 4 – 6 There was however stock of Ceftriaxone injections that can be used for treating some infections in the absence of ampicillin. It is also possible that other types diuretics were in stock at this hospital but not on the list of drugs that were assessed.

Regional Referral hospitals: There was good availability in Regional Referral Hospitals of a range of drugs for managing most conditions. These hospitals usually had alternatives for drugs that were not available. For example, beclomethasone inhalers were available in some hospitals that did not have salbutamol inhalers for asthma emergencies and vice versa. It is however possible that in these hospitals injectable options for these drugs were available but not included on the drugs that were assessed. Two of these hospitals did not have calcium channel blockers, three had no ampicillin injections, two did not have ceftriaxone injections and only two did not have statins for treating patients with hyperlipidaemias.

Table 4-6: Percentage of facilities with essential medicines items available, by facility type and managing authority (N=327)

	Amlodipine alternative	Amoxicillin syrup	Amoxicillin tablet	Ampicillin injection	Aspirin cap/tab	Beclometasone inhaler	Beta blocker	Carbamzepine tablet	Ceftriaxone injection	Enalapril or alternative	Fluoxetine tablet	Gentamicin injection	Glibenclamide tablet	Haloperidol tablet	Insulin regular injection	Magnesium sulphate iniectable	Metformin tablet	Omeprazole tablet or alternative	Oral rehydration solution	Oxytocin injection	Salbutamol inhaler	Simvastatin tablet or other statin	Thiazide	Zinc sulphate tablet or syrup
Facility type																								
National Referral Hospital	0	100	100	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	100
Regional Referral Hospital	60	100	100	40	100	80	100	100	60	80	60	100	100	100	100	100	100	100	100	100	60	40	40	60
Specialized Hospital	33	100	67	0	100	100	100	0	100	100	0	0	67	33	100	0	100	33	100	67	33	33	67	67
Health Centre	100	80	80	40	80	80	100	0	40	40	0	80	80	0	100	100	80	60	100	100	60	20	40	100
Public Health Unit (PHU)	0	57	43	0	43	57	0	0	0	0	0	0	14	0	43	14	0	29	86	43	57	29	0	86
Clinic with maternity	16	81	84	3	90	6	29	0	26	26	0	19	74	0	23	6	58	26	90	19	55	10	58	77
Clinic without maternity	16	77	75	4	78	16	34	0	29	36	0	13	61	0	18	6	50	37	84	8	48	15	54	53
Specialized Clinics	8	18	22	0	17	9	6	0	9	14	0	5	9	0	2	5	12	6	14	2	6	3	11	5
Managing authority																								
Government	13	74	69	2	83	22	23	3	14	24	2	8	68	4	25	13	43	28	87	24	46	11	33	66
Mission	11	82	73	7	82	9	25	5	27	30	2	27	43	5	9	9	39	23	93	9	52	14	64	77
Industrial	30	79	88	9	73	24	70	3	48	64	0	24	76	3	30	18	79	48	88	9	67	21	82	30
Private (non-industrial) owned by nurse(s)	13	67	73	20	67	20	33	0	47	40	0	20	53	0	13	0	60	53	73	0	53	27	60	40
Private (non-industrial) owned by doctor(s)	19	43	44	10	38	14	34	8	30	33	5	23	33	4	23	10	34	34	33	10	23	20	37	18

Health Centres: There is also low availability of some essential antibiotics in health centers – only 40% of them have ampicillin and ceftriaxone. No health centre had stocks of fluoxetine and carbamazepine drugs on the list for mental health conditions. All health centers however had calcium channel blockers and beta blockers and 40% had angiotensin converting inhibitors, all of which are used for managing heart conditions. In addition, most health centre have insulin (100%), Metformin (80%) and Glibenclamide (80%) for managing diabetes.

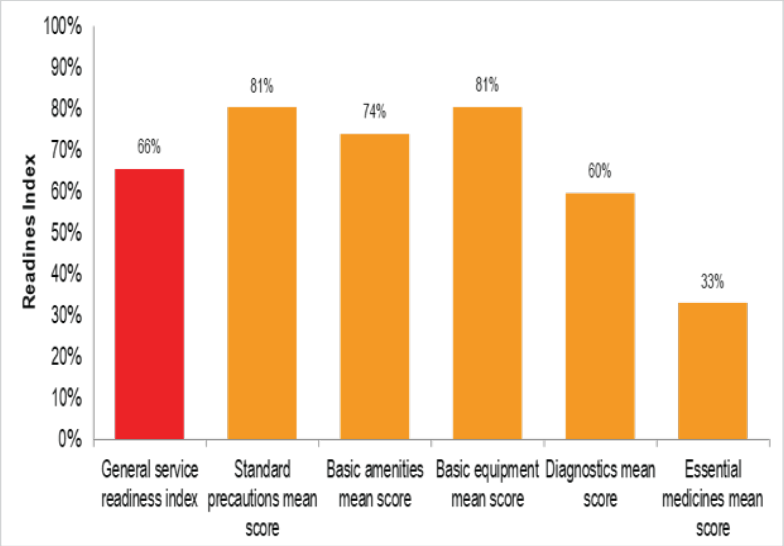
Public Health Units: There was low availability of most drugs at PHUs, including those that are commonly used for outpatient visits. Only half these facilities had aspirin tablets, half had amoxicillin tablets, and two thirds had amoxicillin syrup. Half these centers had beclomethasone inhalers and slightly more (63%) had salbutamol inhalers for asthma. No PHU had Metformin for managing diabetes but 13% of units had insulin and 13% had Glibenclamide. There was low availability of drugs for managing heart conditions at PHUs – none had calcium channel blockers, none had beta blockers and only 13% had thiazide diuretics. There was however good availability of a few drugs that are commonly used in primary health care. For example, 88% had oral rehydration solution and three quarters had zinc sulphate tablets or syrups.

4.5.2. Areas for action:

There is a need to:

1. Ensure constant stock of all essential drugs that may not have alternatives such as calcium channel blockers, at the National Referral Hospital
2. Improve the availability of drugs for mental health conditions at health centers.
3. Improve the availability of drugs for mental health conditions, diabetes and heart conditions at PHUs.

Figure 4—11: Overall service readiness score and per domain scores for Eswatini health facilities, (N=327)

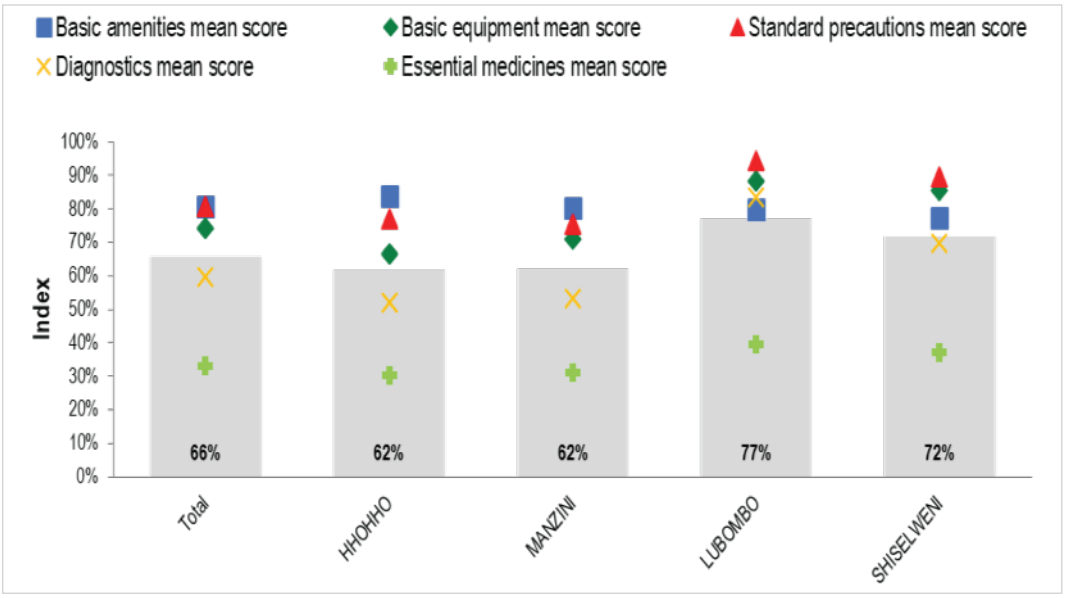


4.6. Overall general health services readiness

Figure 4 – 11 shows the general service readiness index across all five domains for the country. The overall general health services' readiness was 66 percent and the most dominant domains were standard precautions for infection prevention (81%) and the basic equipment domain (81%). The essential medicines domain was the lowest preforming in terms of service readiness with a score of 33%.

The regional disaggregation shown in Figure 4 -12 reveals that the Lubombo region had the highest general service readiness index (77%) followed by the Shiselweni region at 72%. Hhohho and Manzini regions were the lower readiness, each at 62%.

Figure 4—12: Overall general service readiness index and domain scores by region (N=327)



Sexual and reproductive health

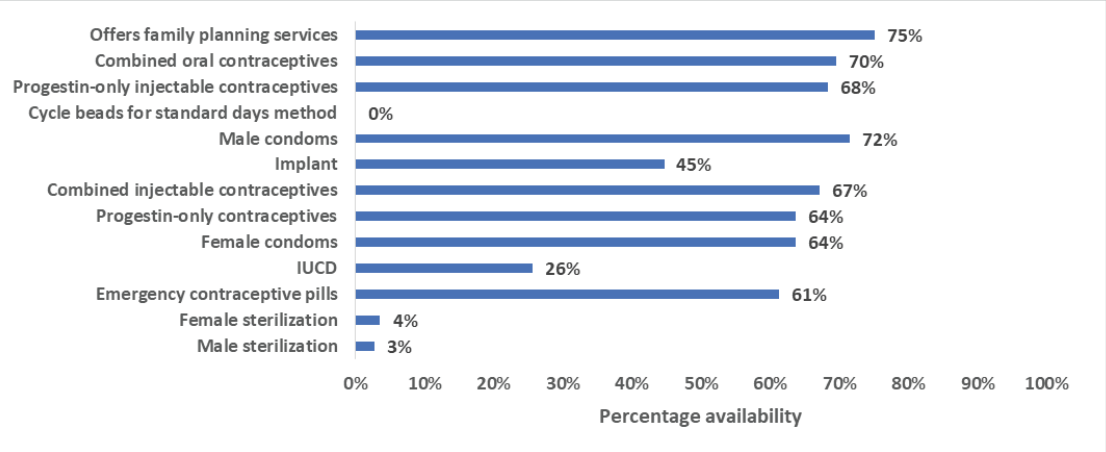
5.0. Introduction

Sexual and Reproductive Health (SRH) is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system, its functions, and processes including having a positive and respectful approach to sexuality and sexual relationships, and an appreciation of the importance of having pleasurable and safe sexual experiences (SRH policy, 2013). The SRH components that this section will focus on are: maternal and neonatal health services (MNH) which includes antenatal care (ANC), obstetric emergencies, family planning (FP) and adolescent youth health services. This analysis is based on the 253 facilities that provide family health care services.

5.1. Availability of Family Planning Services

The availability and accessibility of family planning services in health facilities is fundamental in reducing the unmet need for family planning and unintended pregnancies particularly for vulnerable populations. According to the EHCP all levels of care should provide FP services. Figure 5 – 1 shows the proportion of facilities that offer specific types of family planning services.

Figure 5—1: Facilities offering specific types of family planning services (N=253)



Seventy-five percent (75%) of the 253 facilities that were surveyed provided family planning services. Most facilities offered both oral and injectable contraception options. Both male and female sterilization were provided in less than 5% of the facilities.

Figure 5—2: Facilities providing family planning services by region (N=253)

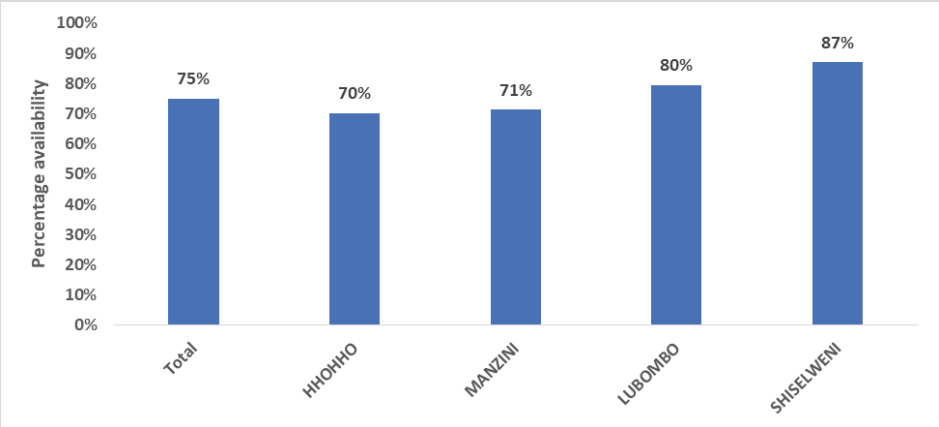


Figure 5 – 2 shows the proportion of facilities that offered family planning services by region. Shiselweni region had the highest percentage of facilities providing these services (87%) followed by Lubombo (80%). Hhohho and Manzini had the lower availability at 71% and 74% respectively.

Table 5 – 1 shows the proportion of facilities with family planning tracer items disaggregated by facility type and managing authority. Coverage of specific services at Regional Referral Hospitals was mostly between 20 and 40%. Specialized hospitals, Health Centres and PHUs generally had higher availability of FP items than all other types of facilities. Specialized clinics had the lowest availability of all family planning items compared to all other facility types as they provide specific services e.g. child health services. Availability of family planning services was generally high for government owned facilities (83%) followed by NGO owned facilities (79%) and lower in privately owned facilities (62%).

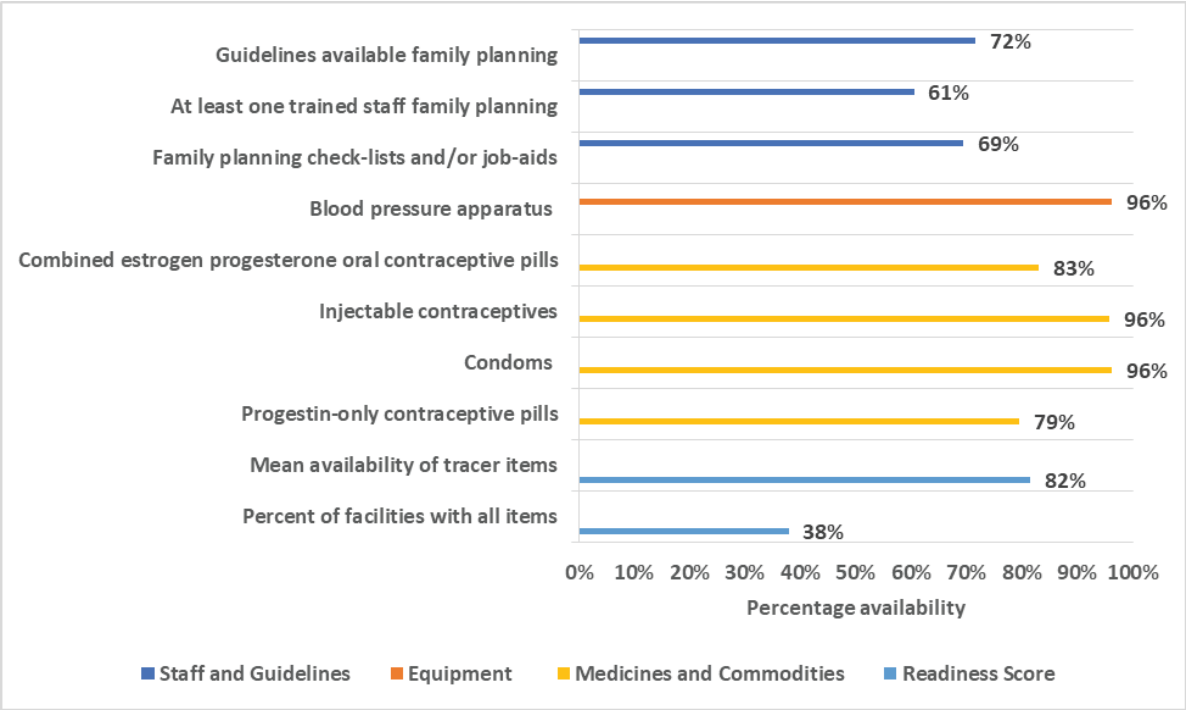
Table 5-1: Availability of family planning services available by facility type and managing authority (N=253)

Category	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
Facility type														
National Referral Hospital	100	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%	1
Regional Referral Hospital	60%	40%	40%	20%	40%	40%	40%	20%	40%	0%	40%	20%	60%	5
Specialized Hospital	100%	0%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	0%	1
Health Centre	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	0%	5
Public Health Unit (PHU)	88%	88%	88%	88%	88%	75%	88%	88%	75%	0%	75%	13%	13%	8
Clinic with maternity	87%	82%	82%	82%	86%	86%	82%	32%	57%	0%	82%	0%	0%	28
Clinic without maternity	75%	69%	62%	68%	69%	72%	62%	20%	40%	0%	60%	1%	0%	186
Specialized Clinics	60%	20%	20%	20%	0%	20%	20%	40%	40%	0%	0%	0%	20%	5
Private Hospitals	71%	71%	50%	64%	57%	64%	57%	36%	50%	0%	57%	21%	36%	14
Managing authority														
Government	83%	78%	77%	79%	80%	80%	78%	38%	61%	0%	72%	1%	3%	115
Mission	71%	63%	66%	66%	68%	71%	63%	18%	37%	0%	66%	3%	3%	38
Industrial	68%	60%	48%	56%	60%	68%	52%	12%	20%	0%	44%	0%	0%	25
Private (non-industrial) owned by nurse(s)	71%	64%	57%	64%	64%	71%	50%	14%	21%	0%	71%	0%	0%	14
Private (non-industrial) owned by doctor(s)	62%	51%	30%	43%	41%	46%	30%	16%	24%	0%	32%	11%	16%	37
NGO	79%	79%	67%	71%	71%	75%	71%	21%	46%	0%	63%	4%	0%	24
Total	**76%**	**69%**	**64%**	**68%**	**69%**	**72%**	**64%**	**26%**	**44%**	**0%**	**62%**	**3%**	**4%**	**255**

5.1.2. Readiness for family planning services

Figure 5 – 3 shows the proportion of facilities with tracer items for family planning among those that were found to be offering family planning services. Tracer items that were assessed included FP guidelines, checklists and job-aids, trained staff, blood pressure apparatus, condoms, injectable contraceptives and progestin-only contraceptive pills.

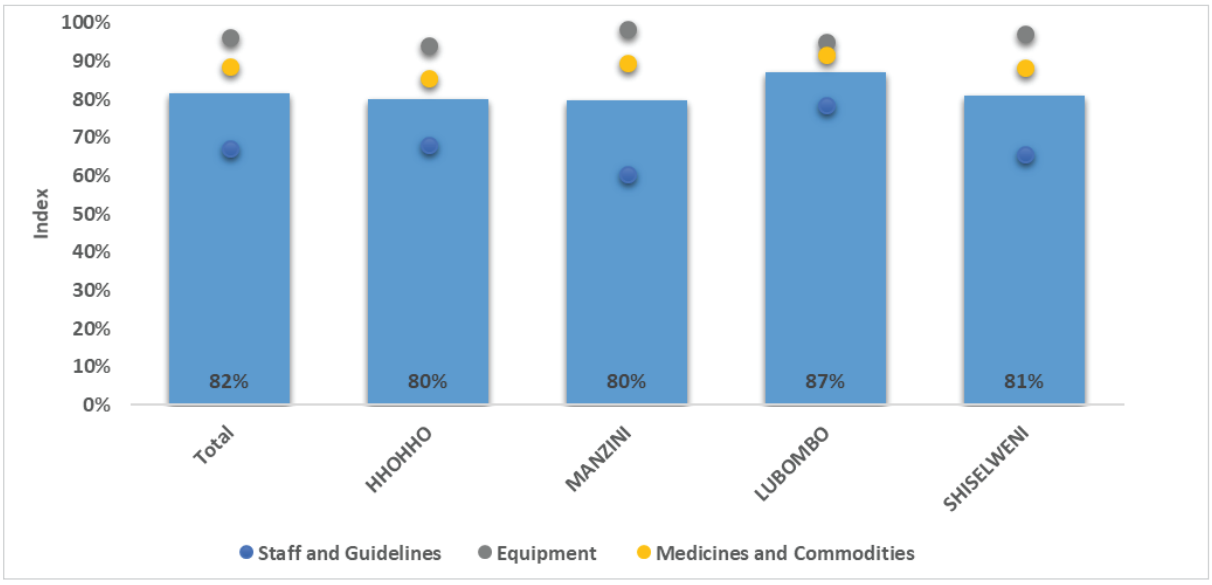
Figure 5—3: Proportion of facilities that have tracer items for family planning services among those that provide this service (N=190)



The mean readiness score for family planning services was 82% and only 38% had all items for family planning services available. Most facilities were ready to FP options but fewer reported having the appropriate trainings and guidelines.

By regional disaggregation, the highest readiness score was recorded in Lubombo region (88%) followed by Shiselweni region (80%) while Hhohho and Manzini regions were the less ready, both recording 79% (Figure 5 – 4). Readiness by specific domain was consistent with the general readiness patterns with facilities more ready to provide equipment and family planning options but less so in staff training and guidelines domain.

Figure 5—4: Proportion of facilities that have tracer items for family planning services by region (N=190)



5.1.3. Areas for Action

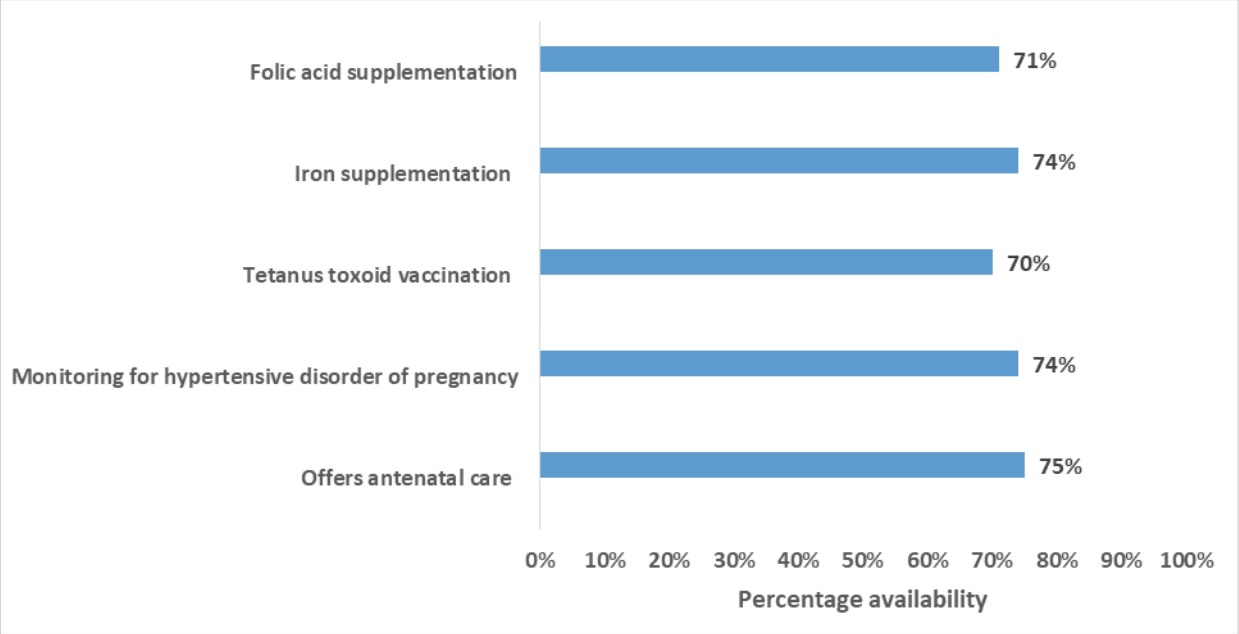
Despite the high availability of FP services and readiness of facilities to provide these services, there is a need for:

1. Setting higher targets for both availability and readiness. This will in part require improving the availability of trained staff and guidelines at health facilities.
2. Investing in the availability of long-term reversible methods of family planning.
3. Providing FP services at the National Referral Hospitals and all Regional Referral Hospitals, given the large number of people that access health services at these facilities.

5.2. Availability of antenatal care (ANC) services

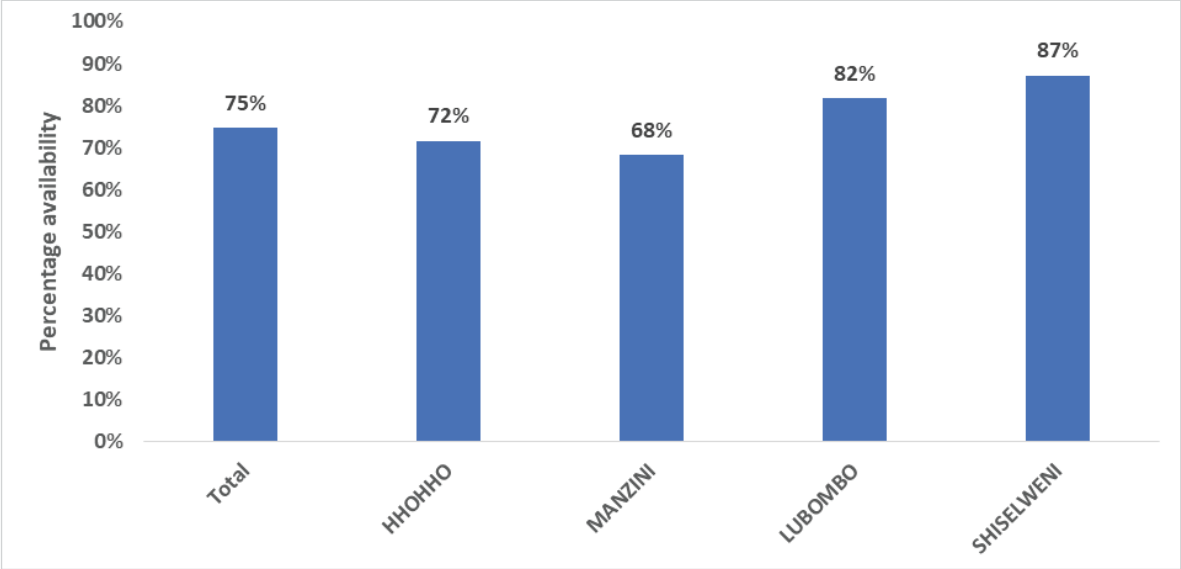
Antenatal care (ANC) is preventive healthcare for pregnant women. Its goal is to provide regular check-ups that allow health workers to treat and prevent potential health problems throughout the course of the pregnancy while promoting healthy lifestyles that benefit both mother and child. The 2017 SARA survey assessed the availability of antenatal care and the interventions provided for pregnant women including; iron supplements, tetanus toxoid vaccination, folic acid supplements, as well as monitoring of hypertensive disorders of pregnancy. Figure 5 – 5 shows the proportion of facilities that had antenatal care services. Seventy-five percent (N=189) of facilities were found to be providing ANC services and availability of all ANC services was 75%.

Figure 5—5: Availability of antenatal care services (N=253)



By regional disaggregation Lubombo and Shiselweni had the higher ANC availability (82% and 80% respectively) than Hhohho (70%) and Manzini (71%) Figure 5 – 6.

Figure 5—6: Proportion of facilities providing ANC services by region (N=253)



According to the Essential Health Care Package, ANC should be provided from clinic level to the highest level of care. Findings from the SARA survey as presented in Table 5 – 2 shows that PHUs, Health Centres and clinics with maternity have 100% coverage. There National Referral Hospital does not provide ANC, and this care is available at only 3 of 5 Regional Referral Hospitals. Government and mission run health facilities provided a wider range of ANC services than other types of facilities.

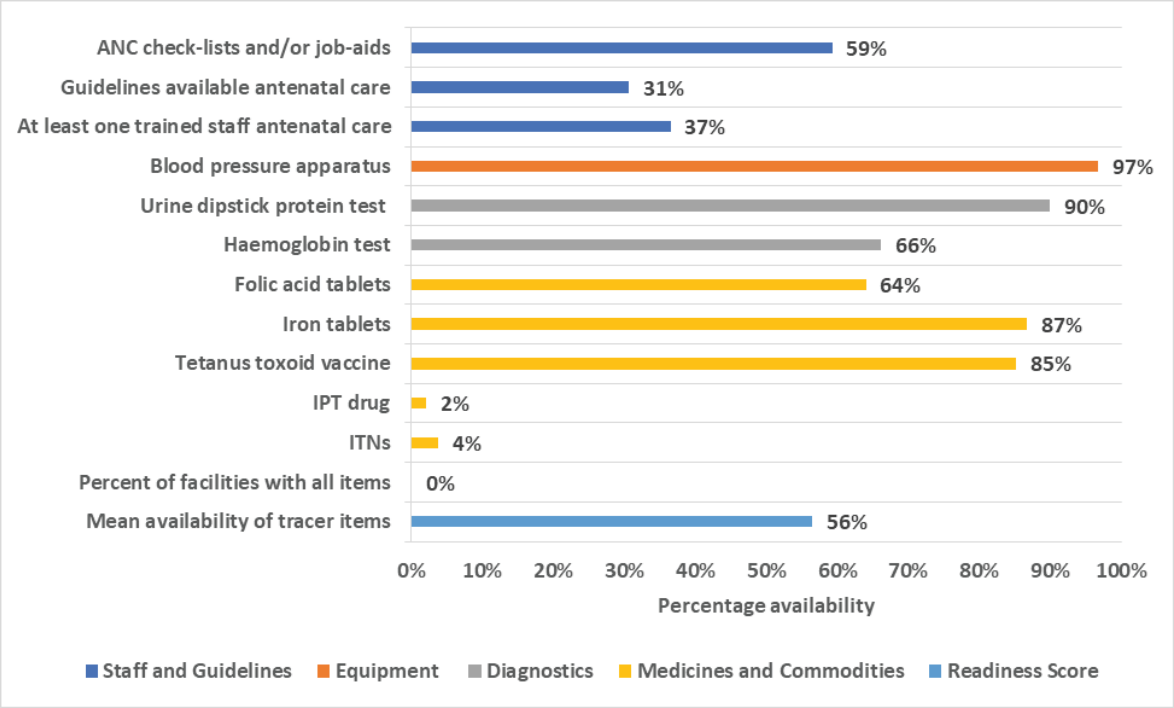
Table 5-2: Percentage of facilities with antenatal services available by region, facility type, ownership and location (N=253)

	Offers antenatal care	Iron supplementation	Folic acid supplementation	IPTP	Tetanus toxoid vaccination	Monitoring for hypertensive disorder of pregnancy	Total number of facilities
Facility type							
National Referral Hospital	0%	0%	0%	0%	0%	0%	1
Regional Referral Hospital	60%	60%	60%	20%	20%	60%	5
Specialized Hospital	0%	0%	0%	0%	0%	0%	1
Health Centre	100%	100%	100%	100%	100%	100%	5
Public Health Unit (PHU)	100%	100%	100%	86%	100%	100%	7
Clinic with maternity	100%	93%	93%	67%	93%	93%	30
Clinic without maternity	71%	70%	66%	40%	65%	70%	194
Specialized Clinics	50%	50%	50%	25%	50%	50%	4
Private Hospitals	100%	100%	100%	86%	100%	100%	7
Managing authority							
Government	79%	79%	76%	53%	76%	79%	117
Mission	93%	93%	88%	73%	93%	93%	41
Industrial	48%	48%	45%	32%	45%	48%	31
Private (non-industrial) owned by nurse(s)	57%	57%	57%	0%	36%	57%	14
Private (non-industrial) owned by doctor(s)	66%	63%	61%	18%	53%	66%	38
NGO	83%	83%	83%	58%	83%	83%	12

5.2.1. Readiness for antenatal care services

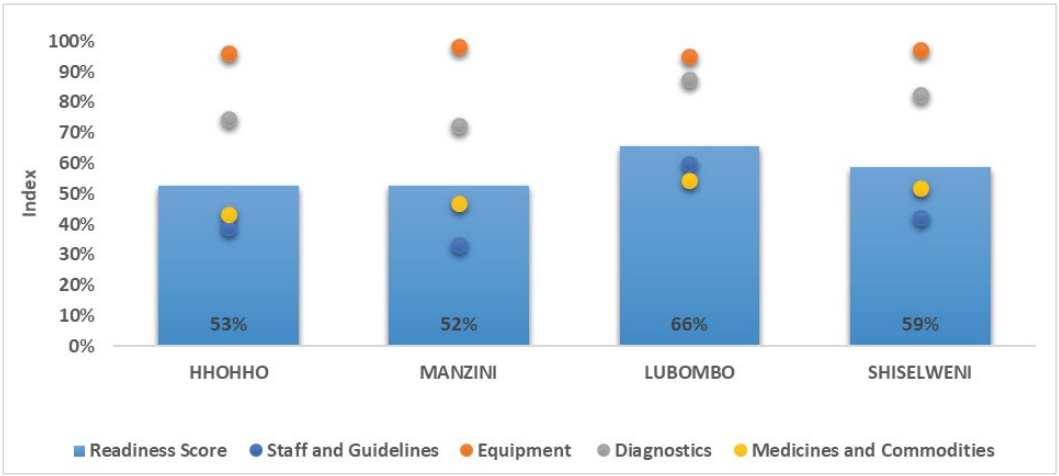
Facility readiness to provide ANC services is measured by whether they have the following tracer items; trained personnel, guidelines and job aids, blood pressure machines, urine sticks, haemoglobin tests, folic and iron tablets and tetanus toxoid vaccines. Figure 5 – 7 shows the percentage of facilities that have tracer items for antenatal care services. The mean readiness score for antenatal care services was 56% and none of the facilities providing antenatal care services were found to have all the tracer items at the time of the assessment. Most facilities were found to have equipment (97%), medicines and commodities (80%) and diagnostics (79%) that are required to for ANC. Fewer facilities (44%) however had the necessary staff training and guidelines for ANC services.

Figure 5—7: Proportion of facilities with tracer items for antenatal care services (N=189)



The highest readiness score for antenatal care services was recorded in Lubombo region (80%), followed by Shiselweni region (72%), while Hhohho and Manzini region were less ready with 64% and 63% respectively (Figure 5 – 8). Equipment and diagnostics domains had the highest scores.

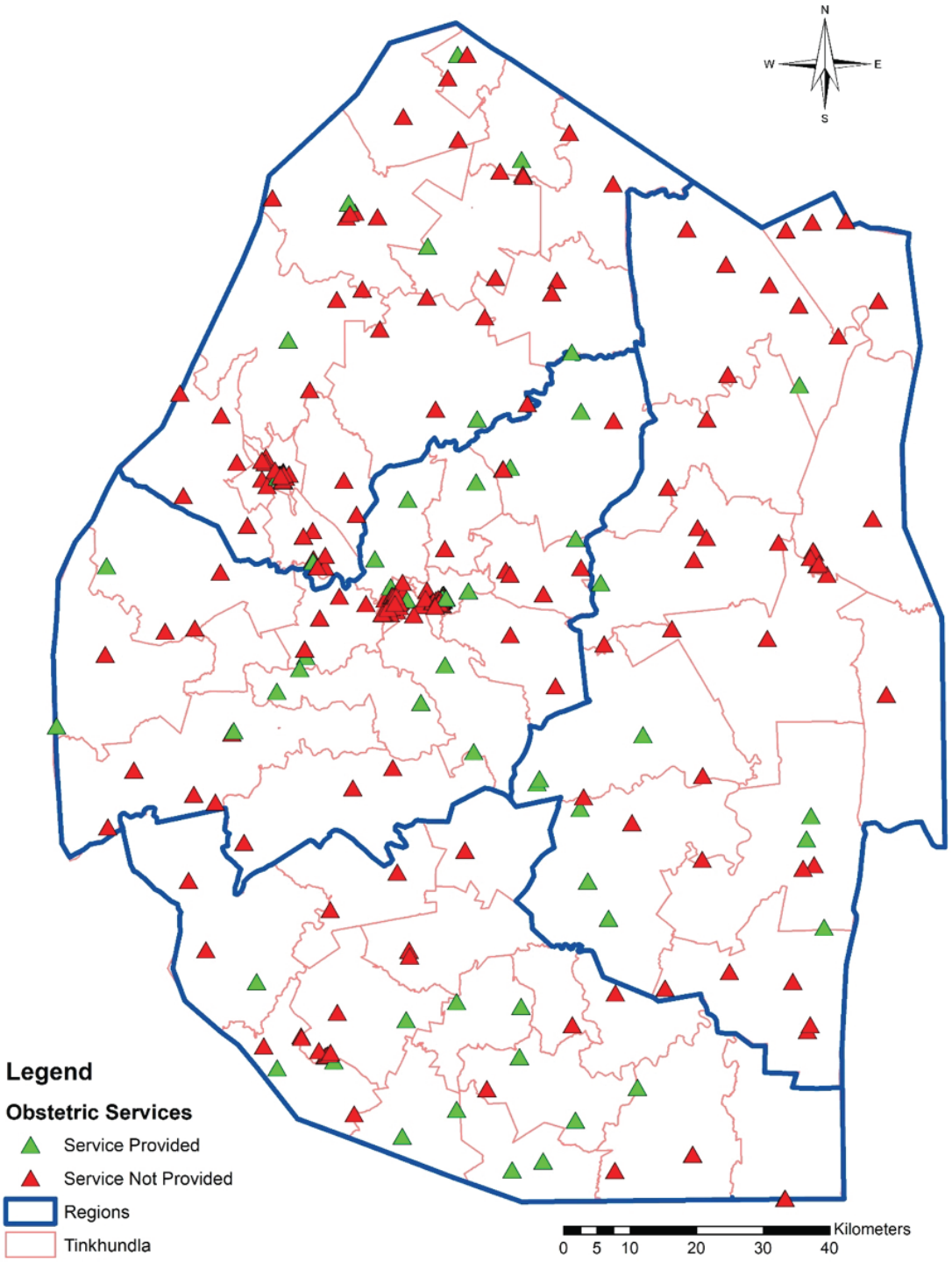
Figure 5—8: Readiness to provide antenatal care services by region (N=189)



5.2.3. Areas for Action

There is need for:

1. In-service trainings of health care workers in the provision of ANC services especially in Manzini and Hhohho regions.
2. Equipping all health facilities with updated guidelines for providing ANC services.
3. Syphilis tests , X-Ray imaging services and sonography.



Communicable Diseases

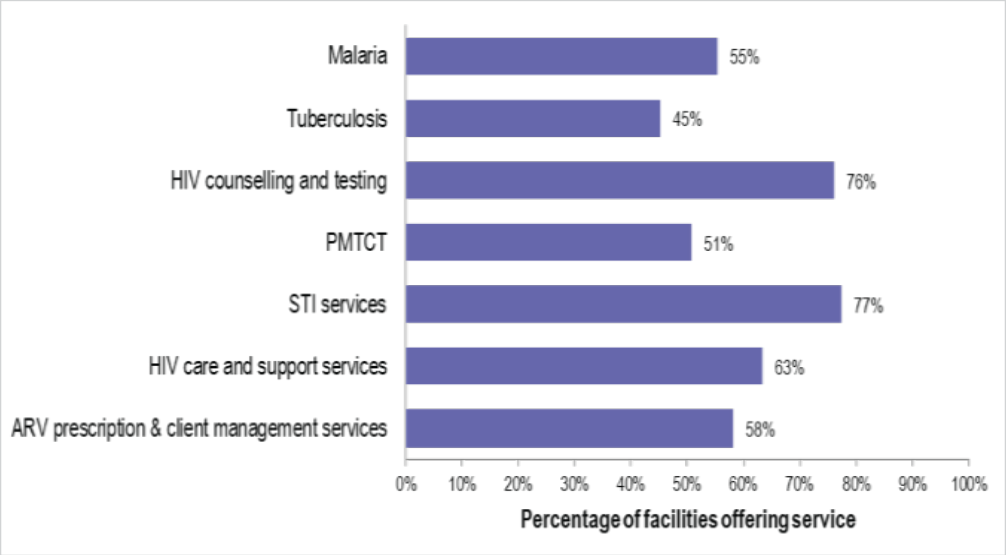
6.0. Introduction

Services for combating communicable diseases are important for the Swaziland context where communicable diseases still account for most of the morbidity and mortality. Readiness for communicable diseases services considers availability and tracer items for the following services; malaria treatment, TB screening and treatments, HIV counselling and testing, prevention of mother to child transmission (PMTCT), sexually transmitted diseases prevention and treatment services (STI), HIV care and support services and ARVs prescription and client management services.

6.1. Availability of communicable disease services

Of the 327 health facilities countrywide, 77% were found to be providing STI services, (76%) were found to be providing HIV counselling and testing services and 208 (63%) were providing HIV care and support services. Malaria diagnosis and treatment services are available in 55% of facilities, TB services in 45% of facilities and PMTCT services in 51%.

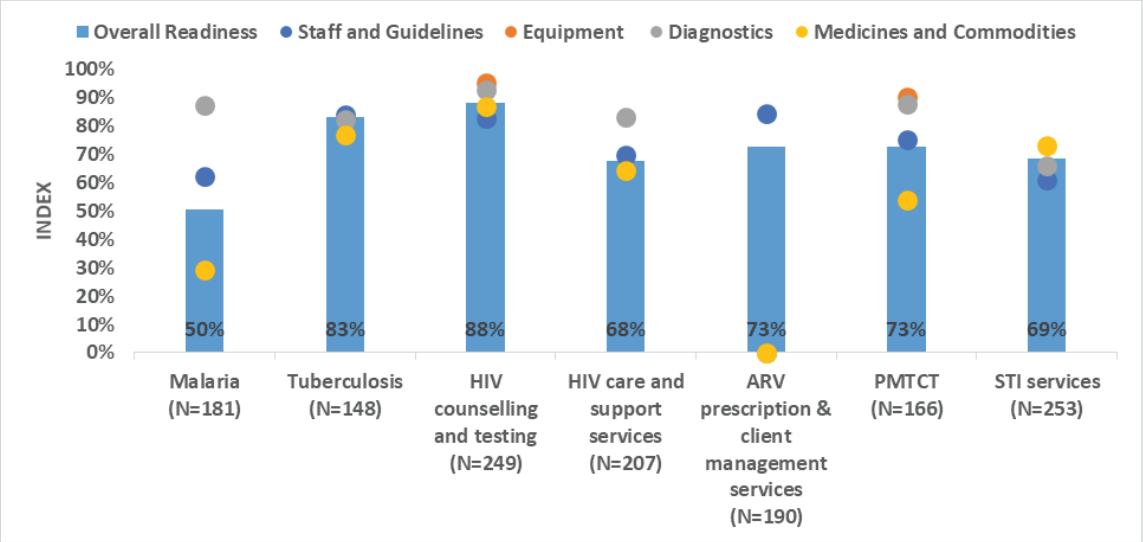
Figure 6—1: Percentage of facilities offering communicable disease services (N=327)



6.2. Readiness to provide communicable disease services

The overall readiness score was highest for provision of HIV counselling and testing services (88%) and TB services (83%). The lowest availability was found for provision of malaria services (50%) and STI services (69%). The low availability in for these two categories is mostly due to deficiencies in medicines and commodities as well as in trained staff and guidelines HIV diagnostics were available in 94% of surveyed facilities (Figure 6 – 2).

Figure 6—2: Overall readiness to provide communicable disease services



6.3. Malaria

6.3.1. *Availability of malaria services*

Swaziland is working to become the first mainland sub-Saharan country in Africa to eliminate malaria, an endeavour that remains a priority in the national development agenda and the national health policy. The National Malaria Control Programme is committed to eliminating malaria by 2020. The control of malaria in Swaziland is based on four thematic areas: (1) case management, (2) vector control, (3) surveillance, and (4) health promotion. In 2017, half of the 327 health facilities offer malaria diagnosis and treatment services (Figure 6 – 3). Diagnostic testing is also only available in half of the facilities with most facilities using rapid diagnostic kits as the preferred method of testing.

Figure 6—3: Percentage of facilities providing malaria services (N=327)

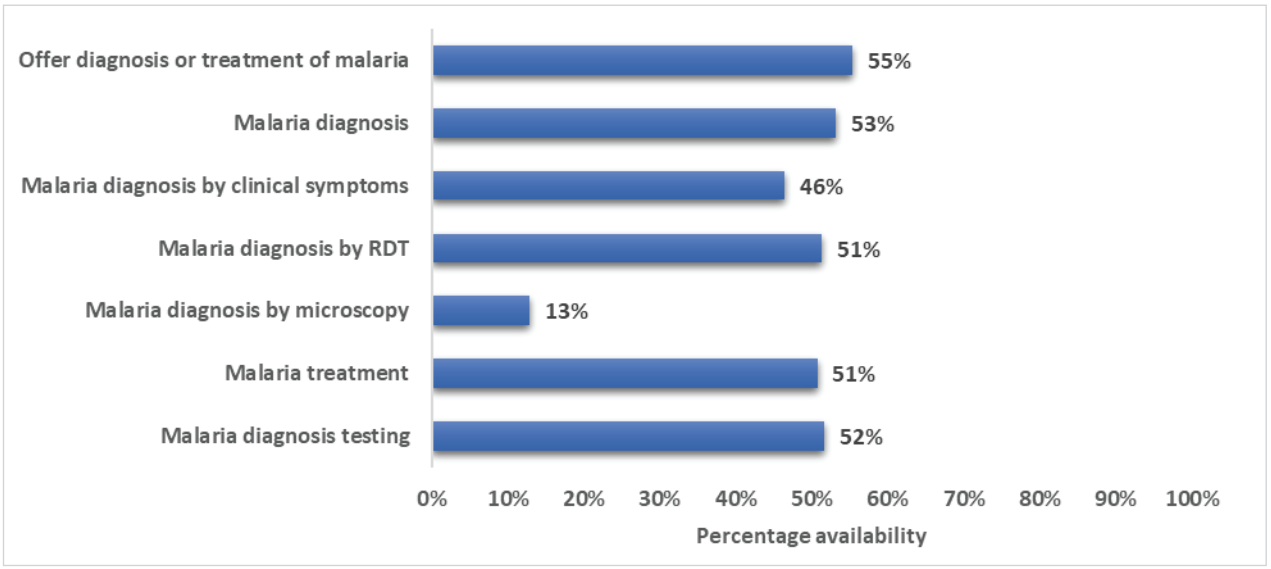
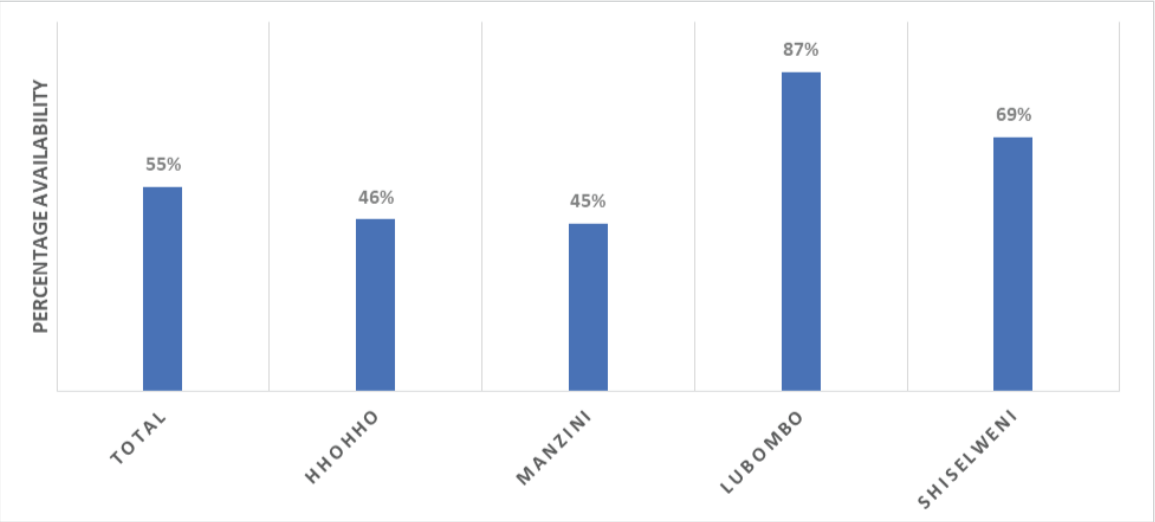


Figure 6—4: Proportion of facilities that offer malaria services, by region (N=327)

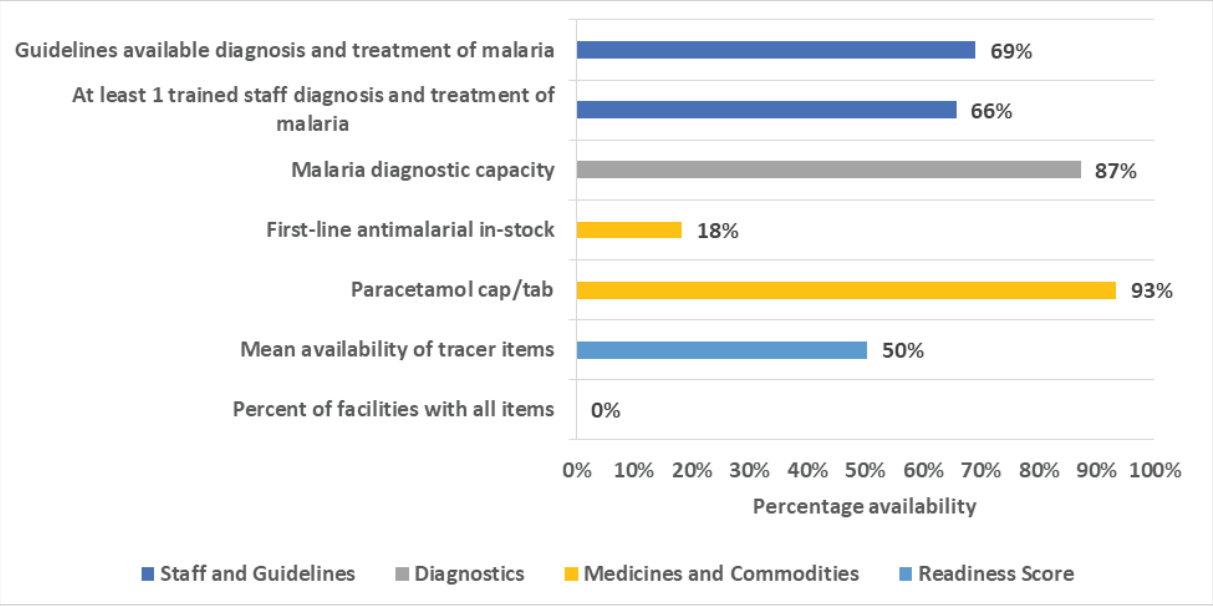


Disaggregated by region, Lubombo region's facilities were the most ready to provide malaria services (87%), followed by Shiselweni region (69%) while Manzini and Hhohho regions had the least percentage of facilities offering malaria services (45% and 46%, respectively (Figure 6 – 4).

6.3.2. *Readiness for malaria services*

Figure 6- 0-5 shows the proportion of facilities that had tracer items for malaria services as a proportion of all facilities that were providing malaria services at the time of the survey.

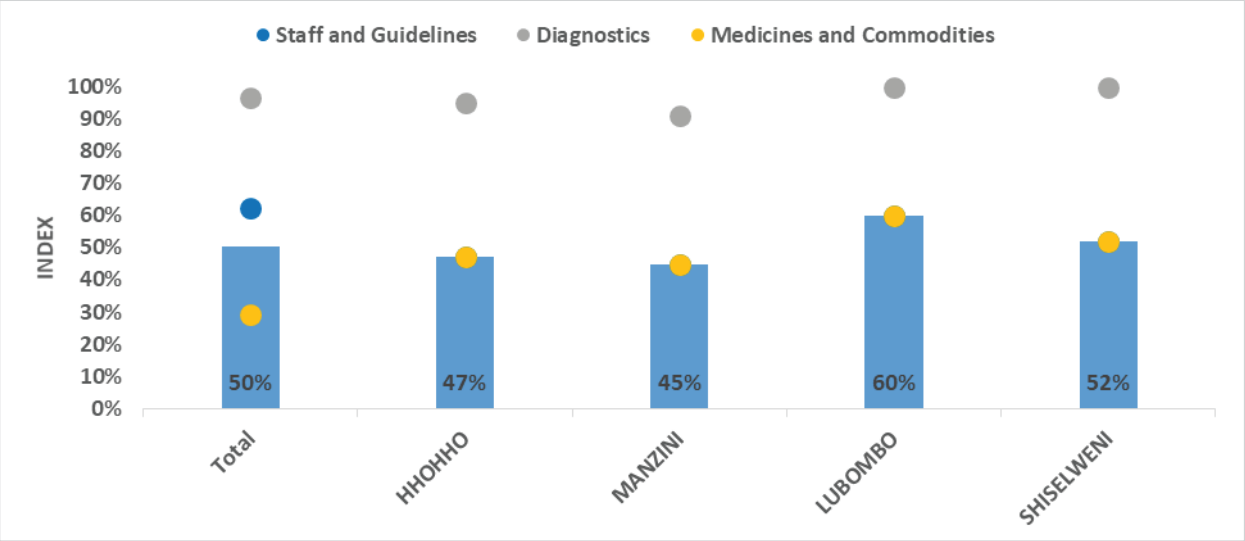
Figure 6—5: Percentage of facilities with tracer items for malaria services among facilities that provide this service (N=181)



The mean availability of malaria tracer items was 50% in facilities providing malaria services indicating that among facilities offering malaria services only half the facilities were ready to provide the service. Most facilities had the capacity to diagnostic malaria (87%) but only 18% had first line malaria medication in stock. Two thirds of facilities had a trained person in diagnosing and treating malaria, and a similar proportion had guidelines for diagnosis and treatment.

Readiness to provide malaria services is generally low across all regions (Figure 6 – 6), with Lubombo region most ready (55%), followed by Shiselweni region (47%), Hhohho region (46%) and Manzini region (45%). Lubombo had higher availability than other regions because it had higher scores in all domains when compared to the other regions. However, only 27% of 45 facilities in Lubombo had first-line drugs for malaria. In fact, less than a third of facilities that offer malaria services had first line medication for the disease.

Figure 6—6: Percentage of facilities that have tracer items for malaria services among facilities that provide this service, by region (N=181)



The National Referral Hospital did not have first-line therapy for malaria and so were two of the regional referral hospitals. The same hospitals also did not have guidelines for managing malaria. One of the four Health Centres did not have the first-line therapy and no PHU provides this treatment.

6.3.3. *Action Areas*

Despite the progress made in reducing the burden of disease due malaria, more concerted effort is needed to address several issues:

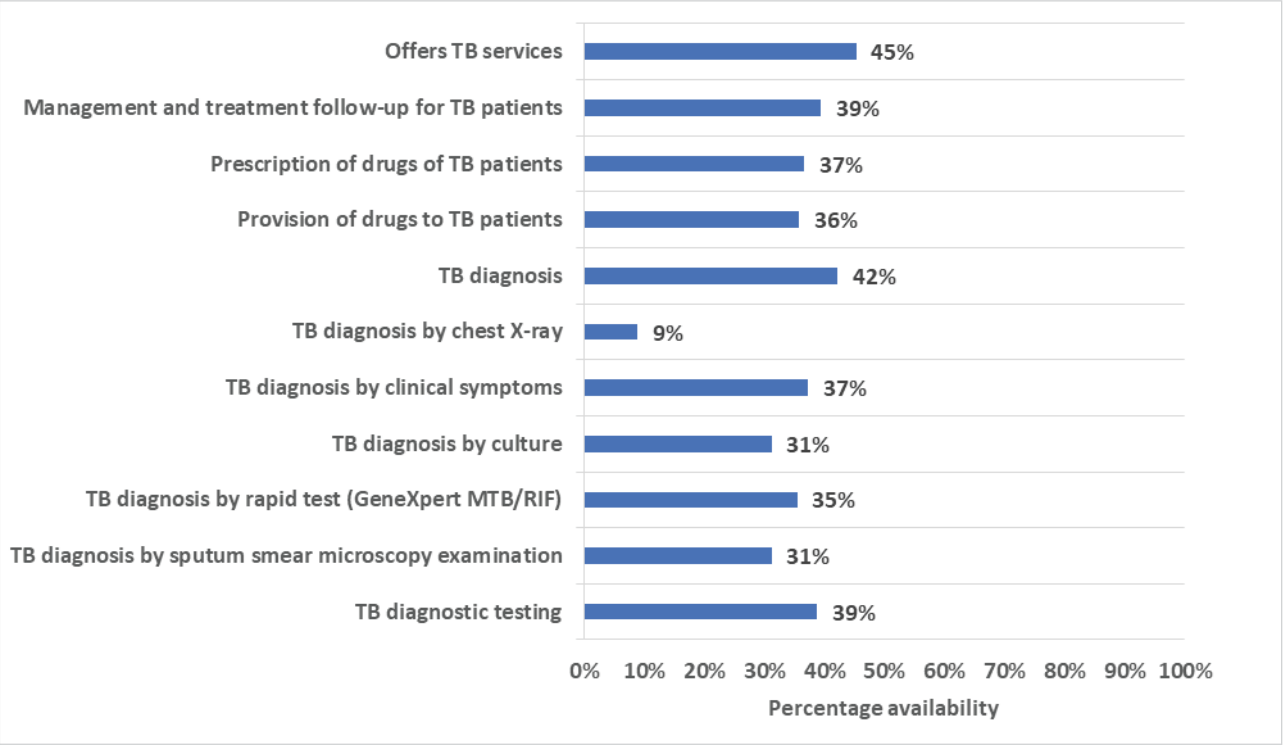
1. There is a need to increase the proportion of public facilities that can provide both diagnosis and treatment of malaria. One possible option is to facilitate PHU to begin offering RDTs and first-line malaria treatment options for the disease.
2. The Malaria Control Program should establish a constant supply of antimalarial drugs at all public and if possible private not for profit facilities in the country.
3. There is a shortage of trained staff and of availability of guidelines at more half of the health facilities that potentially hampers their readiness to provide malaria services.

6.4. Tuberculosis

6.4.1. Availability of tuberculosis (TB) services

Tuberculosis (TB) is a global problem that still claims a lot of lives despite the availability of life saving drugs. According to WHO, Swaziland is amongst 30 high TB/HIV burdened countries globally. This is a serious challenge considering that people with TB/HIV co-infection are six times more likely to die during treatment. The 2017 SARA survey found that 45% of facilities countrywide were providing TB services (Figure 6 – 7) and that 42% were providing TB diagnostics services. Thirty-nine percent used at least one of several testing options to diagnose TB. Thirty-seven percent of facilities can offered prescription of TB drugs and 36% provided TB drugs.

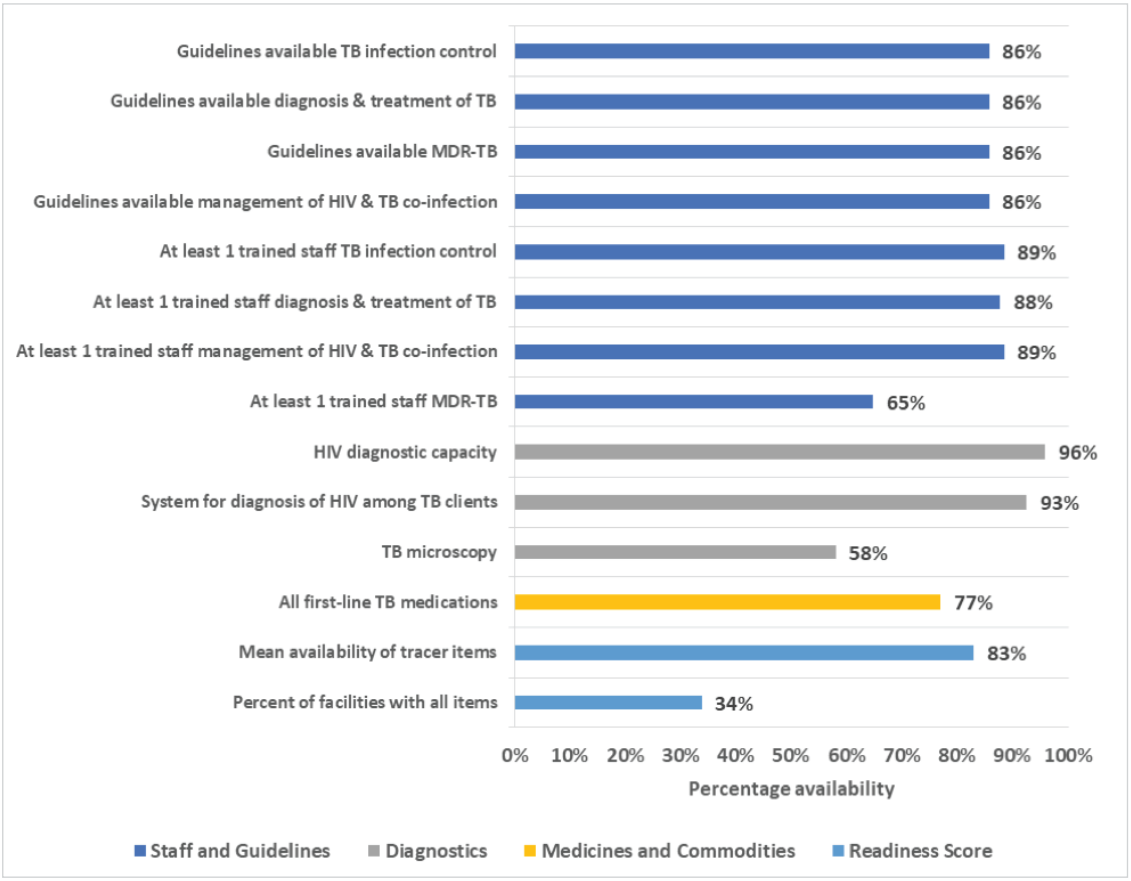
Figure 6—7: Proportion of facilities providing tuberculosis services (N=327)



6.4.2. Readiness for tuberculosis services

Figure 6 – 8 shows the percentage of facilities that had tracer items for tuberculosis services as a proportion of all facilities that were providing malaria services at the time of the survey.

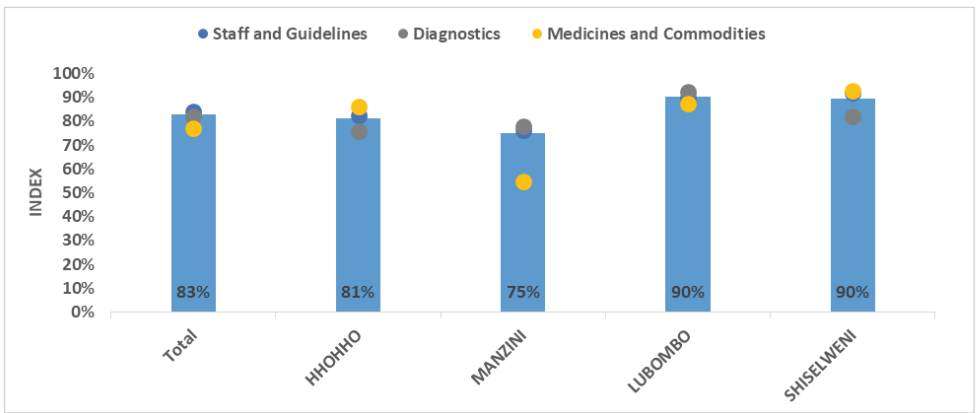
Figure 6—8: Percentage of facilities that have tracer items for malaria services among facilities that provide this service (N=148)



The mean availability of tuberculosis tracer items was 83% in facilities providing tuberculosis services indicating that among facilities offering tuberculosis services 83% were ready to provide the service. Only 34% of facilities all the required items for providing this care. Facilities were generally ready in the all domains. Although only 58% of the facilities could offer microscopy for TB diagnosis, it is possible that these facilities had other options for diagnosis.

Figure 6 – 9 shows readiness for provision of tuberculosis services by regional disaggregation. Readiness ranged from a lowest in Manzini region (75%) and highest in Shiselweni region (90%). Lower readiness in Manzini region is mostly because only 55% of facilities that offered TB services has the necessary medicines and commodities.

Figure 6—9: Proportion of facilities with tracer items for tuberculosis services among those that provide this service, by region (N=148



6.4.3. Areas for Action

Despite the high availability and readiness for TB services, more progress can be made by:

1. Addressing the regional disparities in access to TB services especially in Manzini and Hhohho regions.
2. Improve testing of TB across the country especially in public health facilities. One potential area for consideration is training health workers at PHUs in the use of rapid diagnostic testing for TB.
3. More training in in the management of MDR TB, starting with facilities that currently offer TB services and subsequently at other/new sites.

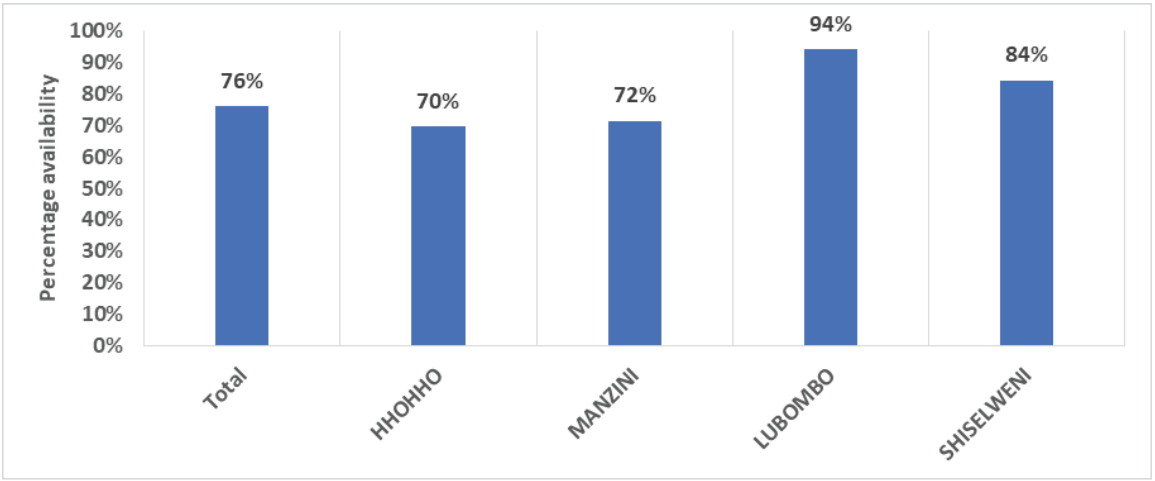
6.5. Human Immune Virus (HIV)

6.5.1.1. Availability of HIV testing and counselling (HTS) services

HIV testing and counselling services help people learn their HIV status. Those who test positive also get to know options for long term care and treatment. In addition to serving as a gateway to HIV prevention, care, support and treatment services, HIV testing and counselling provides individuals with the opportunity to access information about prevention measures, including options for safe sexual behaviours. Similarly, HIV testing services (HTS) are an entry point to Prevention of Mother to Child transmission (PMTCT). Improving coverage of HTS is one of the strategic objectives of the Kingdom of Eswatini. Services in this area include provider-initiated testing and counselling, stand-alone voluntary testing and counselling, home testing as well as mobile and outreach testing in the community.

Figure 6 – 10 shows the proportion of facilities that were offering HIV counselling and testing services by region. Seventy-six percent of the 327 health facilities in Swaziland were found to be providing HTS services. HTS service provision ranged from low values of 70% in Hhohho and 72% in Manzini region to higher ones of 94% in Lubombo region and 83% in Shiselweni region. These services were available at facilities in the country irrespective of level, except in 10% of clinics with maternity, 15% of clinics without maternity and 68% of specialized clinics. All Public Health Units were found to provide these services.

Figure 6—10: Percentage of facilities that offer HIV counselling and testing services, by region (N=327)



6.5.1.2. *Readiness for HIV Testing and Counselling Services*

Figure 6 – 11 shows the percentage of facilities that had tracer items for HIV counselling and testing services as a proportion of all facilities that were providing HIV services at the time of the survey. The mean availability of HIV testing and counselling tracer items in facilities providing HIV services was 88% indicating that among facilities offering HIV services 88% were ready to provide HIV testing and counselling. Only 61% had all the necessary items for providing HTS.

Figure 6—11: Percentage of facilities that have tracer items for HIV counselling and testing services among facilities that provide this service (N=249)

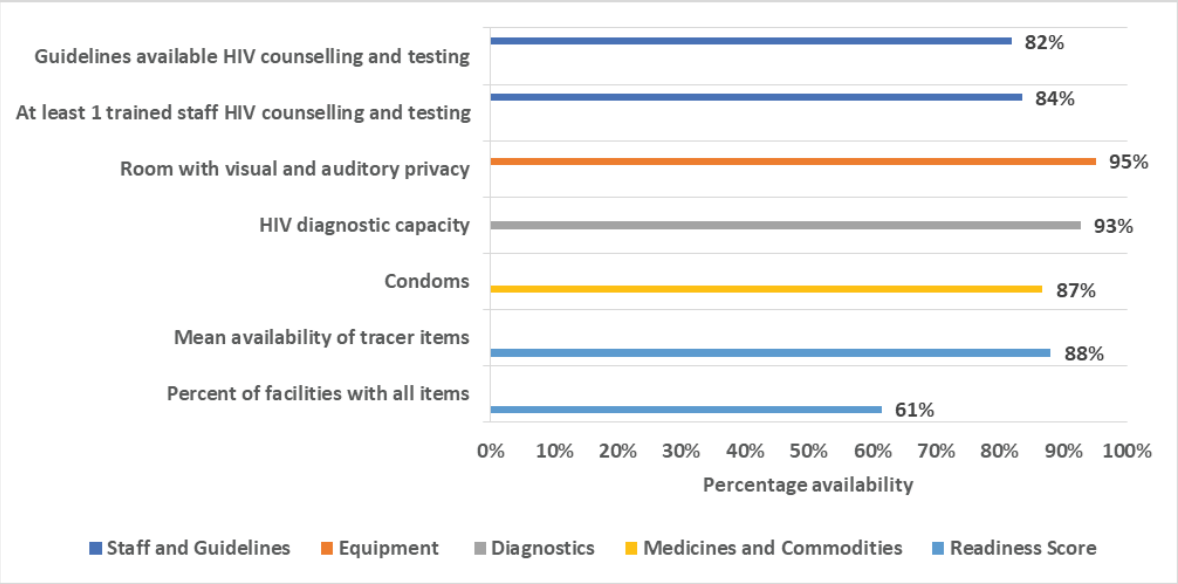
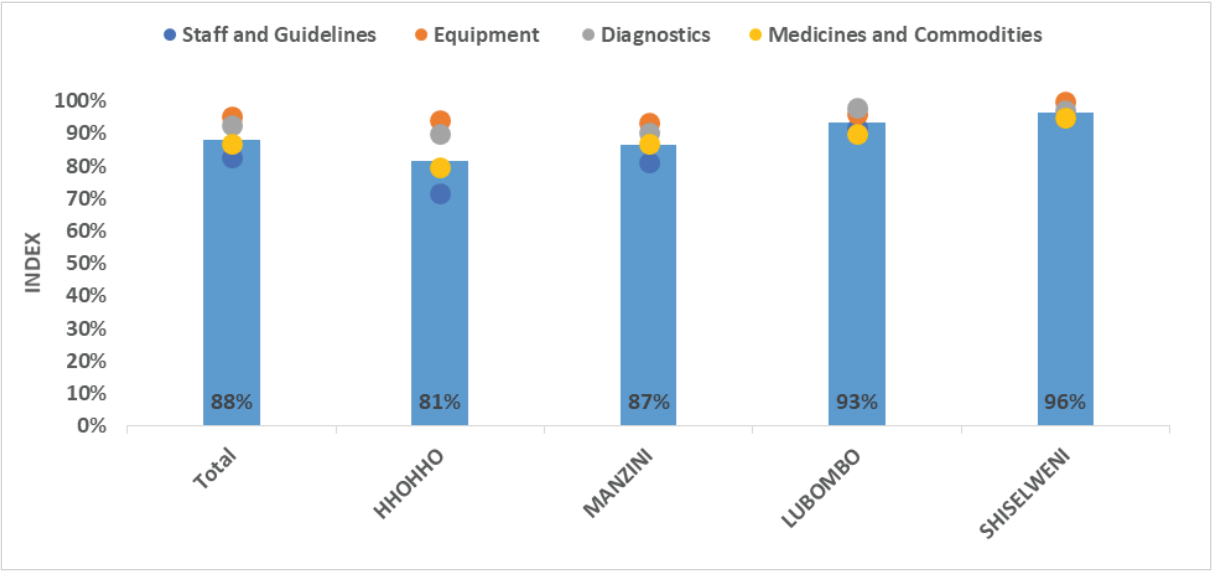


Figure 6 – 12 shows the readiness scores for provision of HIV counselling and testing services by regional disaggregation. Readiness was generally high (>80%) in all regions. Lower readiness in Hhohho (81%) and Manzini (87%) regions was mostly due to less readiness in trained staff and guidelines for HIV counselling and testing.

Figure 6—12: Percentage of facilities that have tracer items for HIV counselling and testing services among facilities that provide this service, by region (N=249)



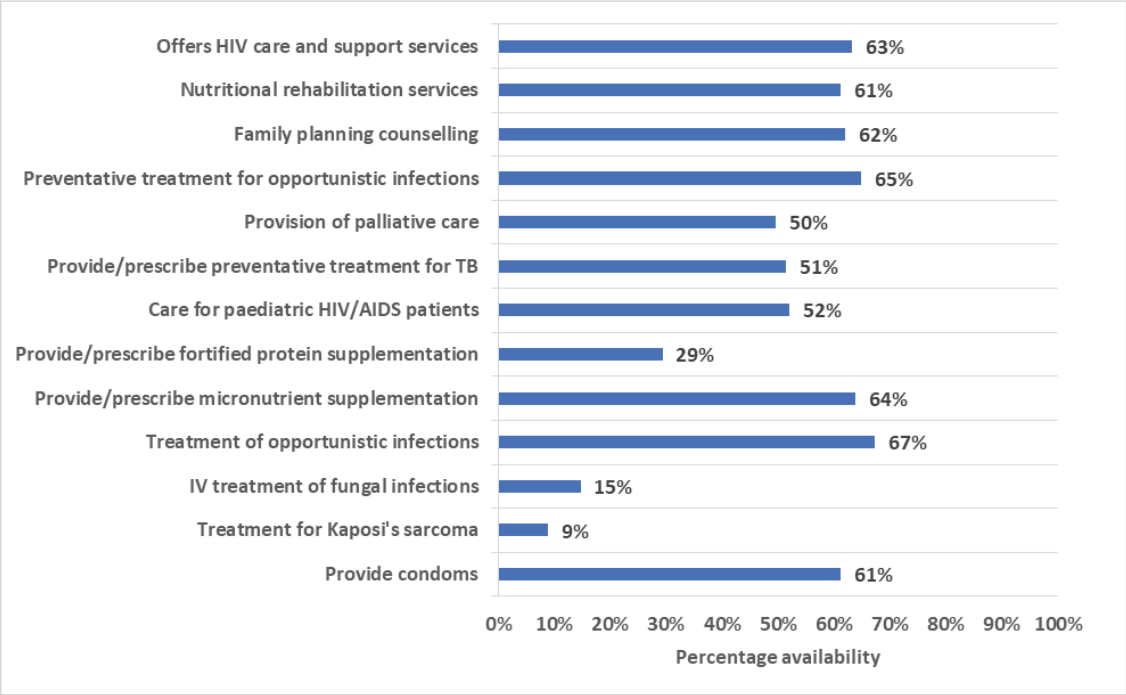
6.5.1.3. Action areas

The country has achieved high proportions of facilities that offer HTS services. Efforts should made to increase the proportion of facilities that offer all HTS services.

6.5.2.1. Availability of HIV care and support services

Tracer items required for service delivery of HIV/AIDS care and support service readiness include; trained staff and guidelines; diagnostic services for TB among HIV clients and commodities like condoms and Cotrimoxazole, among others. Sixty-three percent of the 327 health facilities in Swaziland were providing HIV care and support services with majority offering treatment of opportunistic infections (65%), preventative treatment of opportunistic infections (65%), family planning counseling (62%), as well as micronutrient supplementation (62%). The least available services under HIV care and support were treatment of Kaposi's sarcoma (9%), intravenous treatment of fungal infections (15%) and provision of fortified protein supplementation (29%). In addition, only 59% of the facilities provided care for pediatric HIV patients (Figure 6 – 13).

Figure 6—13: Percentage of facilities that offer HIV/AIDS care and support services, (N=327)



6.5.2.2. Readiness for HIV Care and Support

Figure 6 – 14 shows the percentage of facilities that had tracer items for HIV care and support services as a proportion of all facilities that were providing HIV services at the time of the survey. Sixty-eight percent of the 207 facilities providing HIV services had the necessary tracer items for providing this care. Most facilities could readily offer palliative care (93%) Cotrimoxazole (93%), condoms (90%) and had trained staff on clinical management of HIV/AIDS (86 %). Fewer had IV treatment for fungal infections (9%), guidelines for palliative care (42%) and intravenous solution with infusion sets (47%).

Figure 6—14: Percentage of facilities that have tracer items for HIV care and support services among facilities that provide this service (N=207)

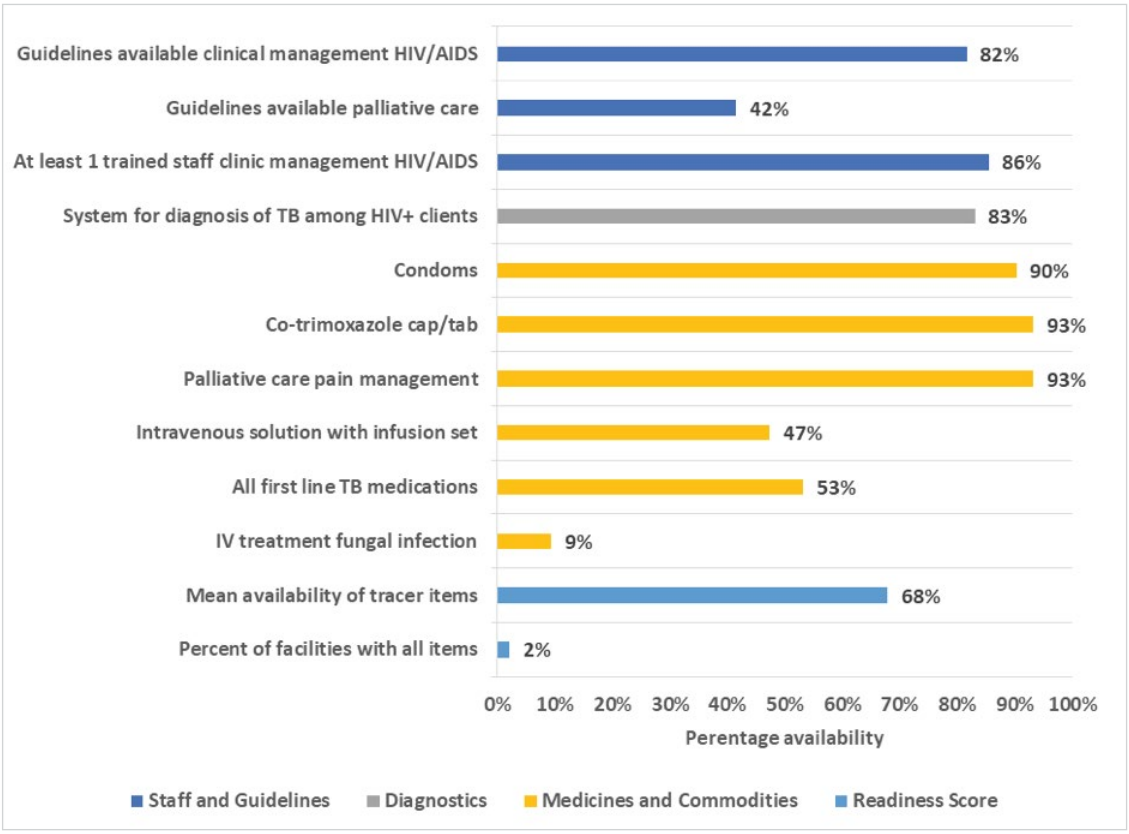
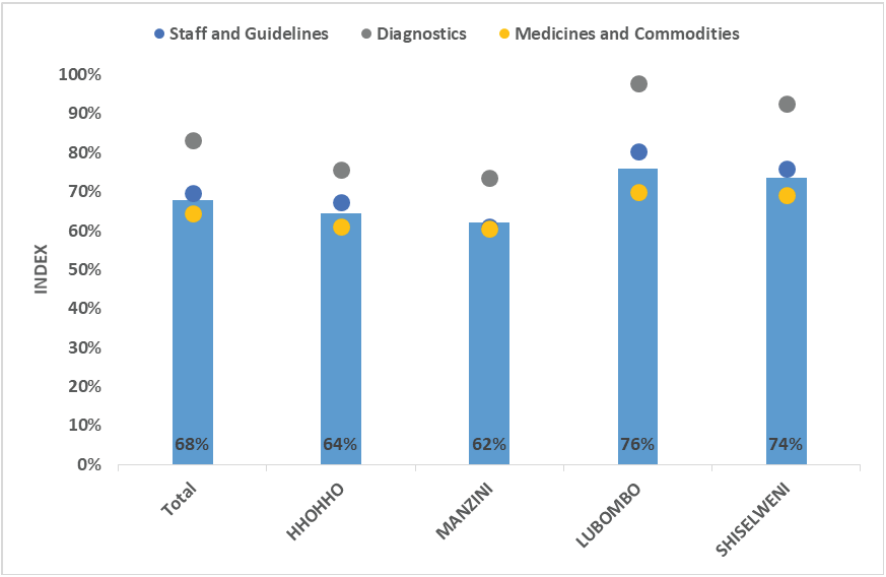


Figure 6 – 15 shows facility readiness to provide HIV care and support services by regional disaggregation. The highest readiness score was recorded in Lubombo region (76%) followed by Shiselweni region (74%), while Manzini and Hhohho regions had the lowest scores, at 62% and 64% respectively. Facilities in Manzini and Hhohho consistently has less readiness in all assessed domains when compared to the other two regions.

Figure 6—15: Percentage of facilities that have tracer items for HIV care and support services among facilities that provide this service, by region (N=207)



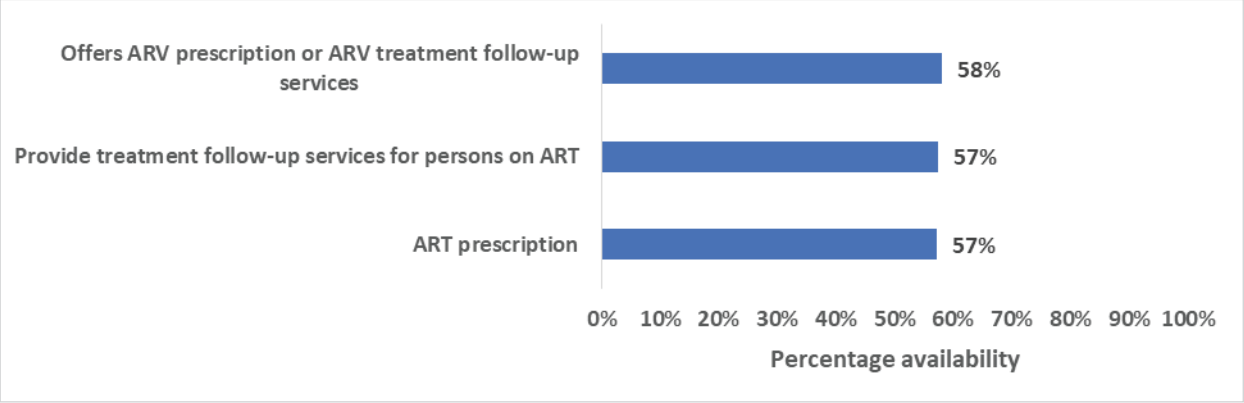
6.5.2.3. *Areas for action*

1. An overall of 68% facilities that were ready to offer HIV care and support services imply that there is a missed opportunity in a third of facilities to link patients to HIV treatment and care services.
2. Efforts should be made to increase access to HIV paediatric care especially at lower level public facilities.
3. Prioritization should also be given to increasing access to treatment options for opportunistic infections for late stage HIV such as Kaposi Sarcoma and fungal infections.
4. More training is also required in the use of and adherence to standard protocols and guidelines.
5. Prioritization should also be given to improving the readiness of facilities in Manzini and Hhohho regions especially those that provide some HIV care and support services but had low readiness.

6.5.3.1. *Availability of Antiretroviral treatment (ART) services*

Tracer items assessed for service availability and readiness of ART services includes; i) availability of trained staff on ART prescription and management, ART guidelines, diagnostic capacity for full blood count, CD4 or viral load, renal function test (serum creatinine testing or other), liver function test (ALT or other), and three first line antiretroviral drugs. Overall, 58% of the country's health facilities were providing ART services including treatment initiation services (58%), as well as follow-up treatment refills for clients already on ART (Figure 6 – 16). These services are available in at all facilities in the country irrespective of level, except in 16% of clinics with maternity, 38% of clinics without maternity and 85% of specialized clinics. Most government facilities (80%) offer ART services as compared to 75% of mission and 45% industry facilities.

Figure 6—16: Availability of ART services in the country (N=327)



6.5.3.2. *Readiness for antiretroviral treatment (ART) services*

Figure 6 – 17 shows facilities that had tracer items for ART services as a proportion of all facilities that were providing HIV services at the time of the survey. The mean availability of ART tracer items was 85% indicating that the ART treatment services were readily available in most facilities that offer them. Most facilities had ART care and treatment guidelines (88%), most could do complete blood counts, liver function tests and renal function test (all 86%). The majority (86%) of facilities also had at least 3 first line ARV drugs. Readiness was high in government (84%), mission (88%), and industry facilities (90%) but lower in private facilities run by nurses (67%), and those run by doctors (85%). By facility level, the National Referral Hospital could readily provide all the services. Readiness scores for other facilities were as follows: 90% at Regional Referral Hospitals, 85% for Health Centres and 68% for PHUs.

Figure 6—17: Proportion of facilities with tracer items for ARV services among facilities that provide this service (N=190)

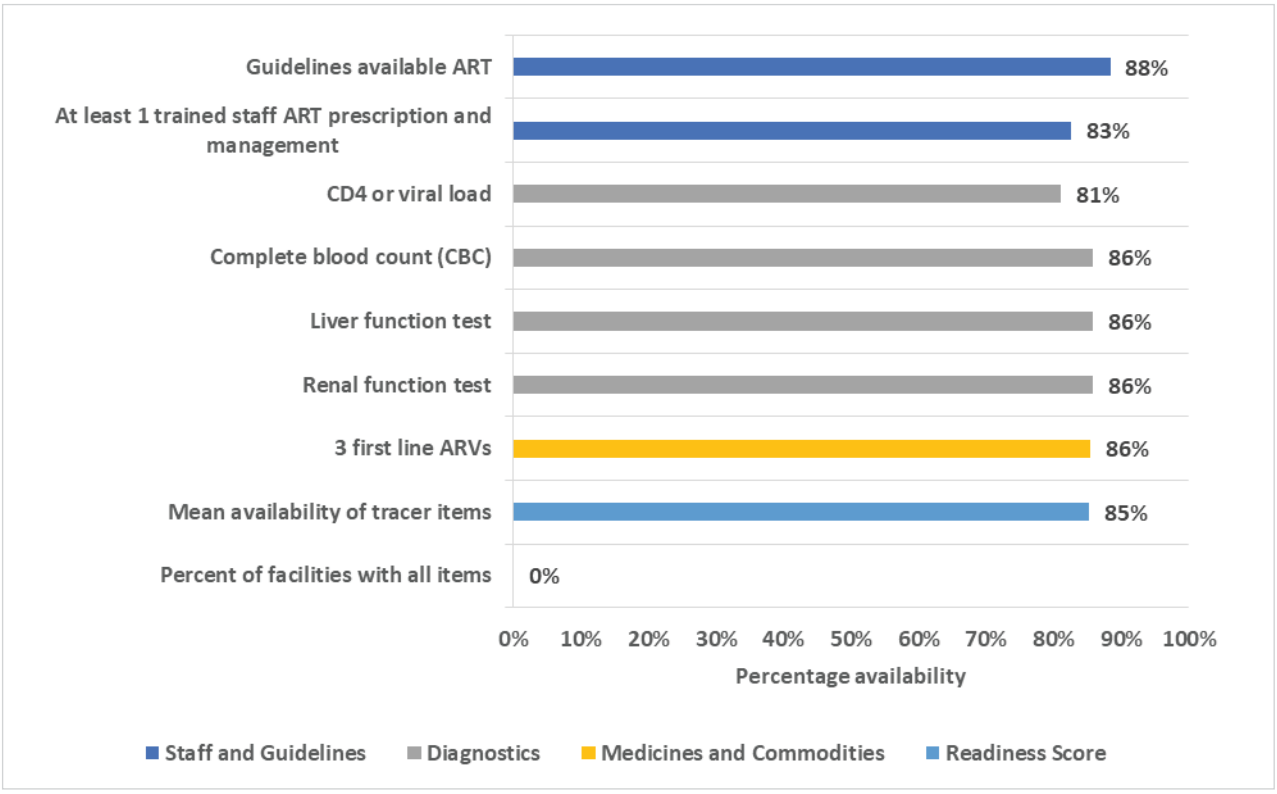
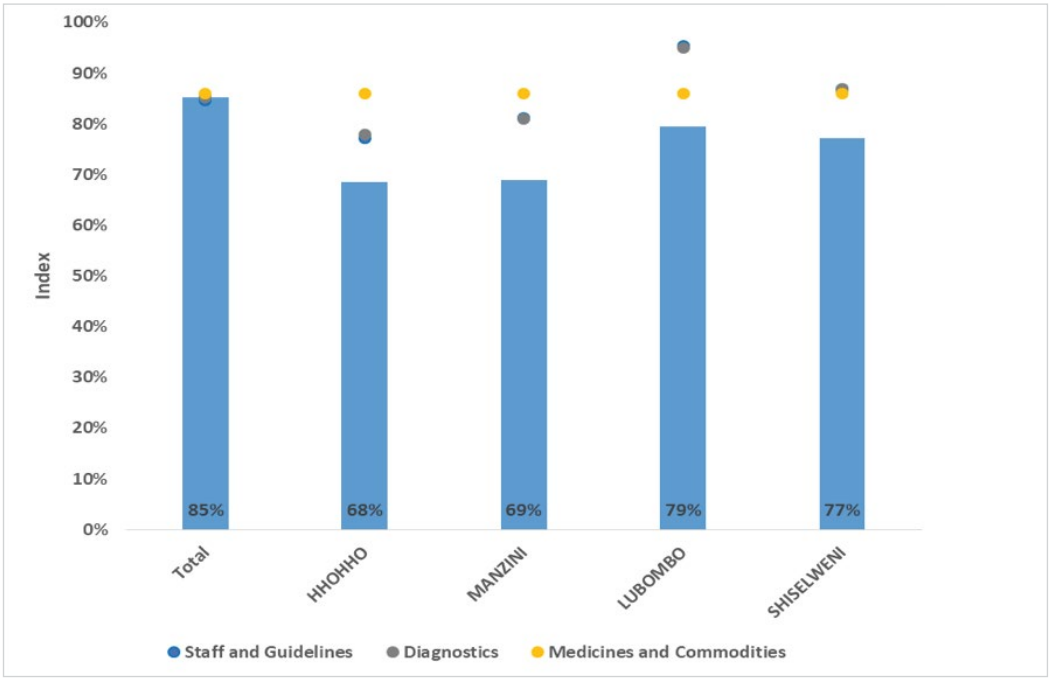


Figure 6 – 18 shows the readiness to provide ART services by regional disaggregation. The highest readiness was recorded in Lubombo region (95%) followed by Shiselweni region (87%) while Hhohho and Manzini regions had the lowest scores, at 78% and 81% respectively.

Figure 6—18: Proportion of facilities with tracer items for ARV services by region (N=190)



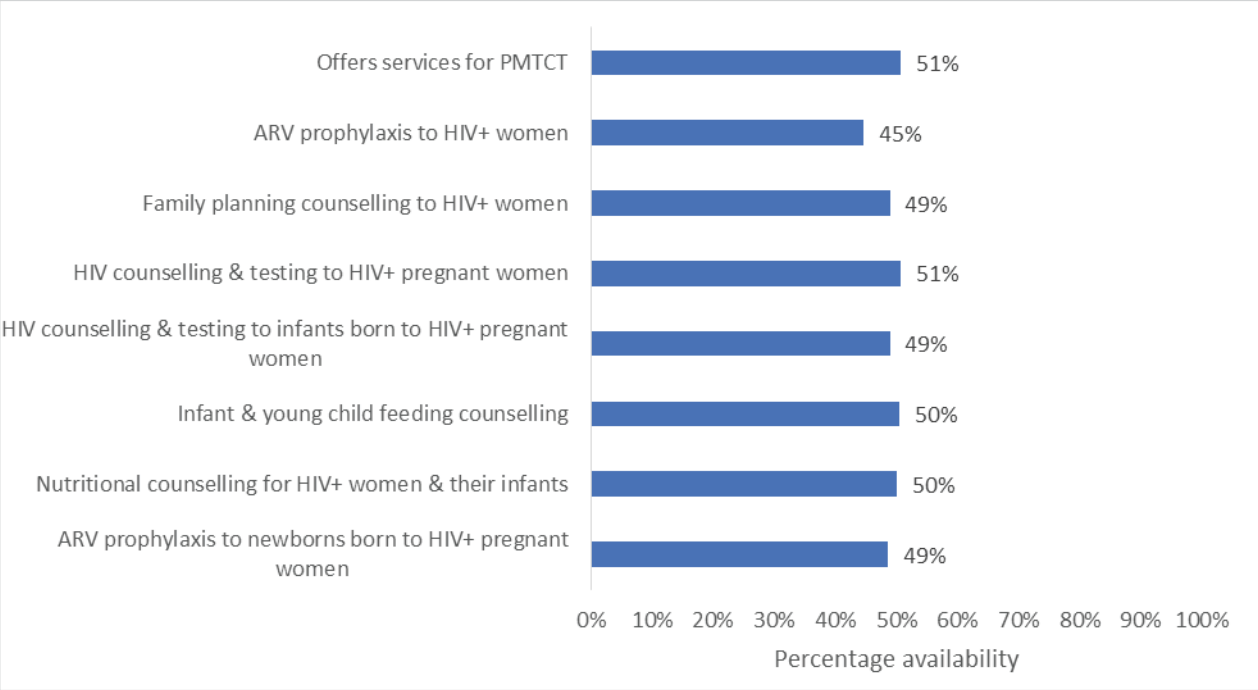
6.5.3.4. Areas for Action

There high availability of ARV services across the country and readiness of facilities to offer these services. One area for improvement is to improve readiness of PHUs to provide ARV services.

6.5.4.1. Availability of Prevention of mother to child transmission (PMTCT) services

Tracer items assessed for service availability and readiness of PMTCT services includes; trained staff on PMTCT, infant and young child feeding options, family planning options for HIV positive women, HIV diagnostic capacity for adults, dried blood spot (DBS) filter paper for diagnosing HIV in newborns, availability of medicines such Zidovudine (AZT) syrup, Nevirapine (NVP) syrup and Maternal ARV prophylaxis. Half of the country's health facilities were providing specific PMTCT services Figure 6 – 19. These services were not available at the National Referral Hospital and one of the regional referral hospitals. They are however available at all Health Centers and all PHUs. Availability is higher in mission hospitals (82%), than in government (69%) and industry run (33%) facilities.

Figure 6—19: Percentage of facilities that offer PMTCT services (N=327)



6.5.4.2. Readiness for prevention of mother to child transmission services

Figure 6 – 20 shows facilities that had tracer items for PMTCT services as a proportion of all facilities that were providing PMTCT services at the time of the survey. The mean availability of PMTCT tracer items was 73% in facilities providing this service. This is the proportion of facilities that readily offered PMTCT services among those that reported them to be available. Almost all facilities had HIV diagnostic capacity for adults and 90% had at least one staff trained on infant and young child feeding. The least available tracer service was Dry Blood Spot (DBS) for diagnosing new-born HIV (2%) and only one percent (1%) of the facilities were found with all the required tracer items available.

None of the regional referral hospitals, of health centres and of PHUs the capacity to DBS diagnosis. Two of the four regional referral hospitals that provide PMTCT services do not have a trained staff member in infant and young child feeding, and not all health centres and PHUs provide the full range of prophylactic options to HIV pregnant mothers are the children.

Figure 6—20: Percentage of facilities that have tracer items for PMTCT services among facilities that provide this service (N=166)

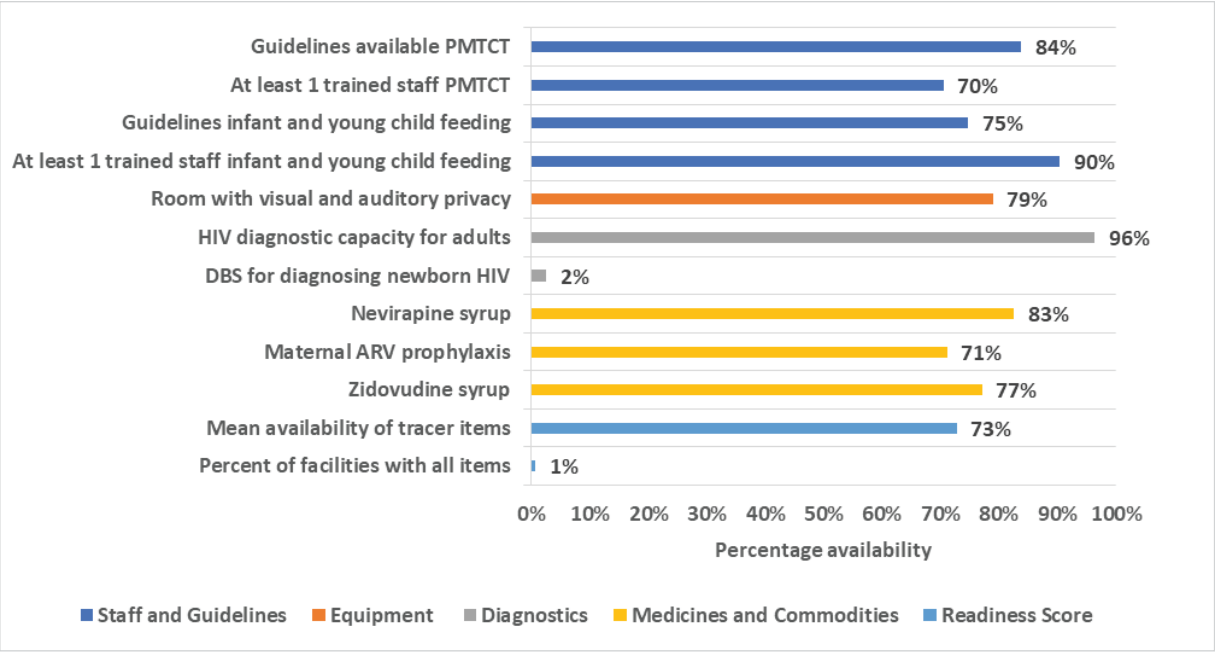
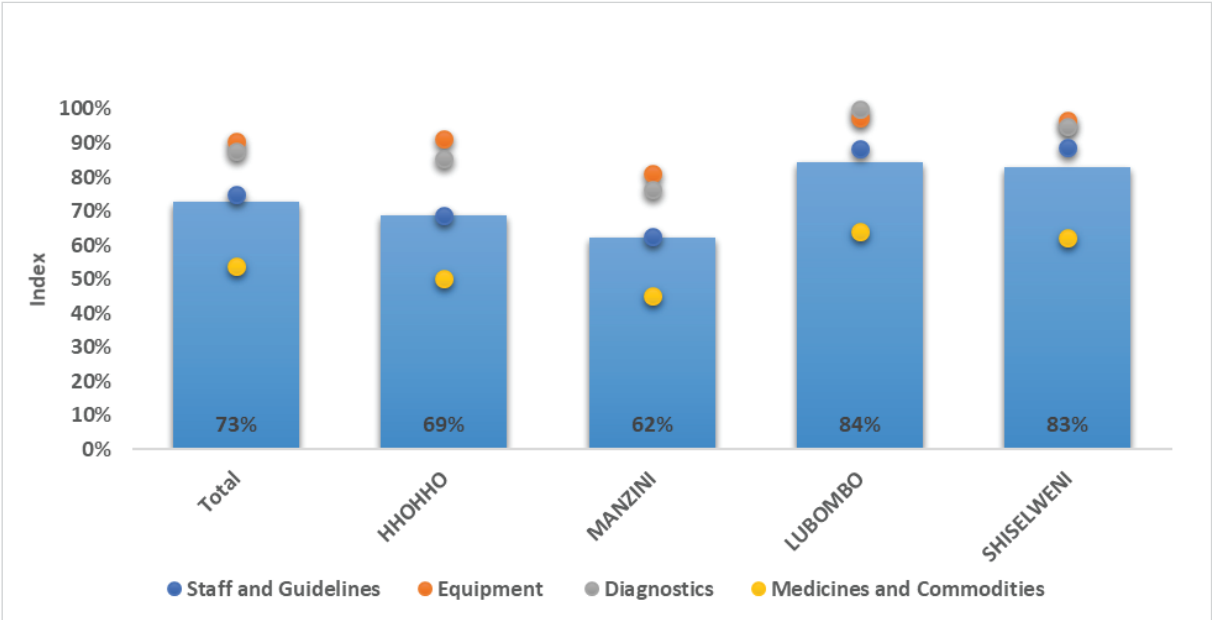


Figure 6 – 21 shows the readiness to provide PMTCT services by regional disaggregation. Higher readiness was recorded in Lubombo region (84%) and Shiselweni (83%) regions, while Hhohho and Manzini regions were less ready with 69% and 62% respectively. Lower readiness in Manzini and Hhohho regions was mostly due to lower scores in the domains of staff and guidelines, as well as medicines and commodities. For example, 42% of facilities in Manzini and 29% of those in Hhohho did not have guidelines for infant feeding. Similarly, 40% of facilities in Hhohho and 465 of those in Manzini did not have trained staff in PMTCT.

Figure 6—21: Percentage of facilities that have tracer items for PMTCT services among facilities that provide this service, by region (N=166)



6.5.4.2. *Areas for Action*

There are several possible areas for intervening with the goal of improving the availability of PMTCT services in the country and the readiness of health facilities to provide these services. These include:

1. Making PMTCT services available at the National Referral Hospital at the Regional Referral Hospital that currently does not offer these services.

2. Reducing the regional disparities in readiness to provide PMTCT services by improving access to trained staff and guidelines in Manzini and Hhohho regions.

3. Increasing the number of facilities that can offer DBS diagnosis of HIV among new-borns.

4. Ensuring that all public facilities including Health Centres and PHUs have the full range of treatment prophylactic ARV treatment options for both pregnant mothers and new born babies.

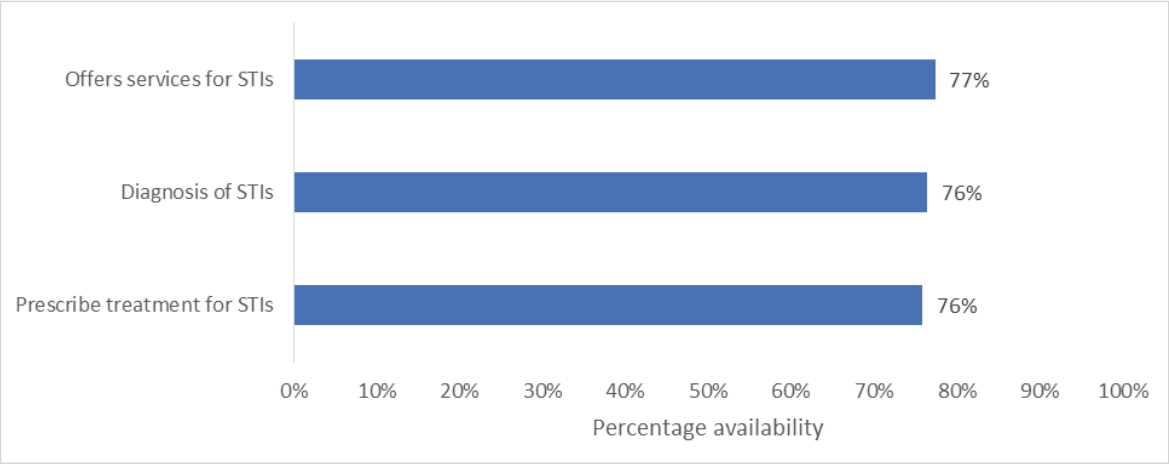
6.6. Sexually Transmitted Infections (STI) Services

Tracer items assessed for service availability and readiness of STI services include availability of trained staff on STI diagnosis and treatment, guidelines for diagnosis and treatment of STIs, syphilis rapid testing, condoms, metronidazole, ciprofloxacin, and ceftriaxone.

6.6.1. *Availability of sexually transmitted infections (STIs) services*

Overall, 77% of the country's health facilities were providing STI services. These services were available at the National Referral Hospital, all Regional Referral Hospitals, all specialized hospitals and all Health Centers. Availability of these services was however lower in PHUs (71%).

Figure 6—22: Percentage of facilities that offer STI services (N=327)



6.6.2. *Readiness for sexually transmitted infections services*

Figure 6 – 23 shows facilities that had tracer items for STI services as a proportion of all facilities that were providing STI services at the time of the survey. The mean availability of STI tracer items was 69% in facilities providing this service. This is the proportion of 253 facilities with the necessary tracer items to provide STI services. Most facilities had condoms (90%) and metronidazole (85%) but only a third had injectable ceftriaxone (35%). A third of these facilities could not perform syphilis testing, and a similar proportion did not have staff trained in diagnosis and treatment of STIs. In addition, 40% of facilities that offer STI services do not have guidelines for diagnosis and treating STIs. Only nine percent (9%) of the facilities were found with all the tracer items available.

Figure 6—23: Proportion of facilities that have tracer items for STI services among facilities that provide this service (N=258)

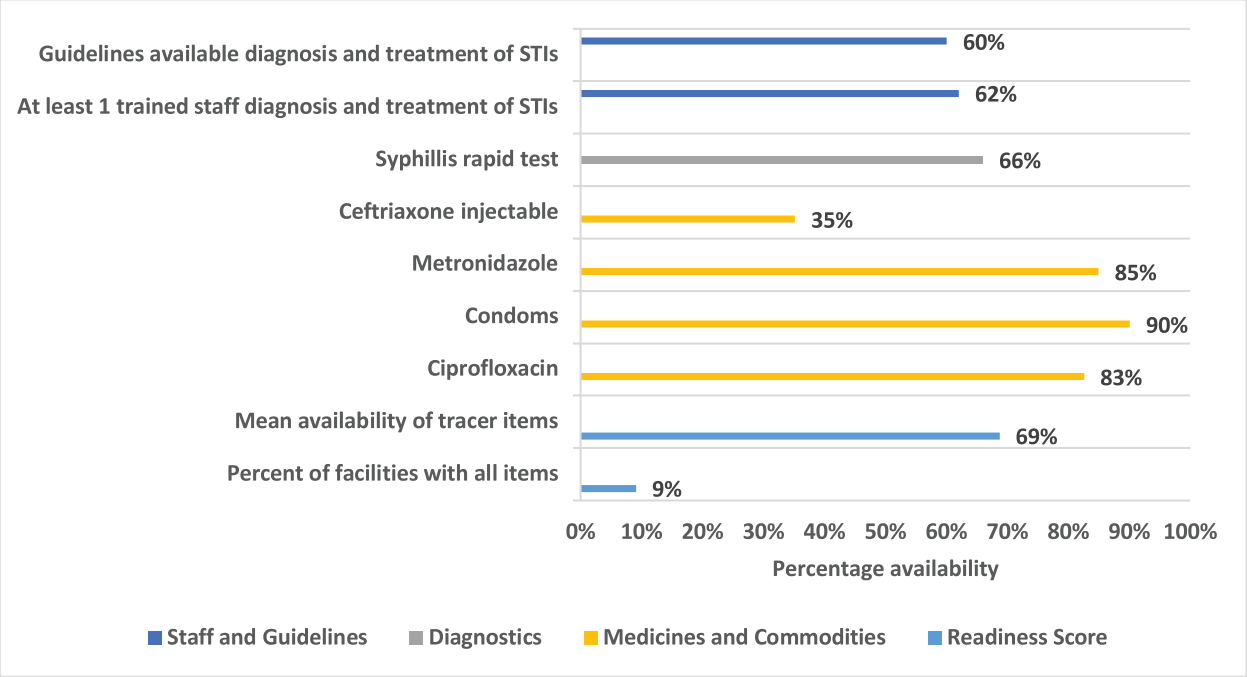
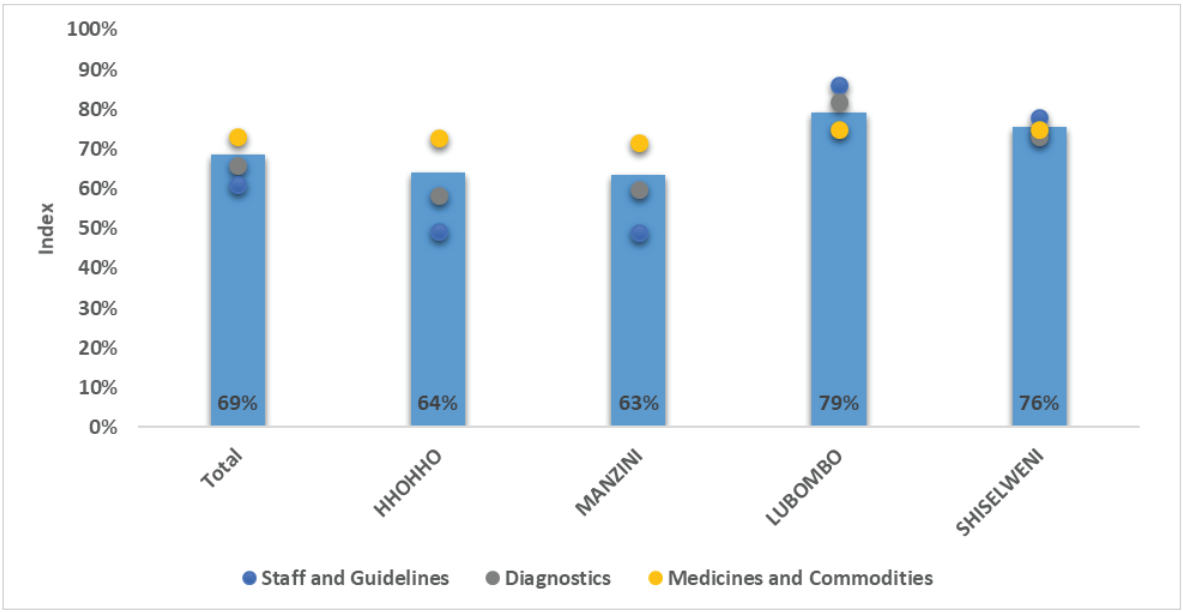


Figure 6 – 24 shows the readiness to provide STI services by regional disaggregation. The highest readiness score was recorded in Lubombo region (79%) followed by Shiselweni region (74%) while Hhohho and Manzini regions had the lower readiness scores, at 64% and 63% respectively. Low values in the latter regions were due to less readiness to in diagnostics as well as staffing and guidelines.

Figure 6—24: Readiness to provide for STI services, by region (N=258)



6.6.3. *Areas of action*

1. There is a missed opportunity of accessing STI services at some PHU.
2. There is low readiness of facilities to provide syphilis testing services. This presents a challenge to HIV prevention efforts given the higher risk of HIV in patients with STIs.
3. More staff training is need in STI management and in the use of STI guidelines especially in Manzini and Hhohho facilities, which had low readiness to provide STI services.
4. There is also a need for improved access to STI treatment options like injectable ceftriaxone in Manzini and Hhohho regions.

Non-Communicable Diseases

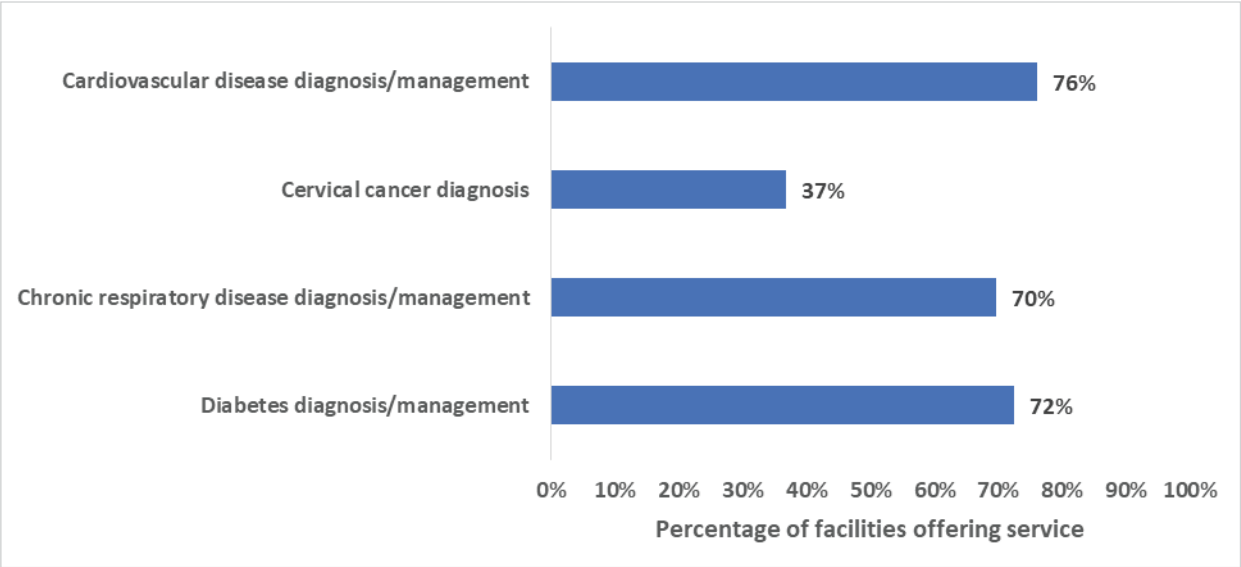
7.0. Introduction

Services for combating non-communicable diseases are important for the Swaziland context where non-communicable diseases are increasingly causing more morbidity and mortality. Availability and readiness for non-communicable diseases services considers services for; cardiovascular diseases, cervical cancer, chronic respiratory disease and diabetes.

7.1. Availability of non-communicable diseases

Of the 327 health facilities countrywide, 76% were providing cardiovascular disease services, 72% offered diabetes services, 70% offered chronic respiratory disease services, and 37% offered cervical cancer diagnosis services (Figure 7 – 1).

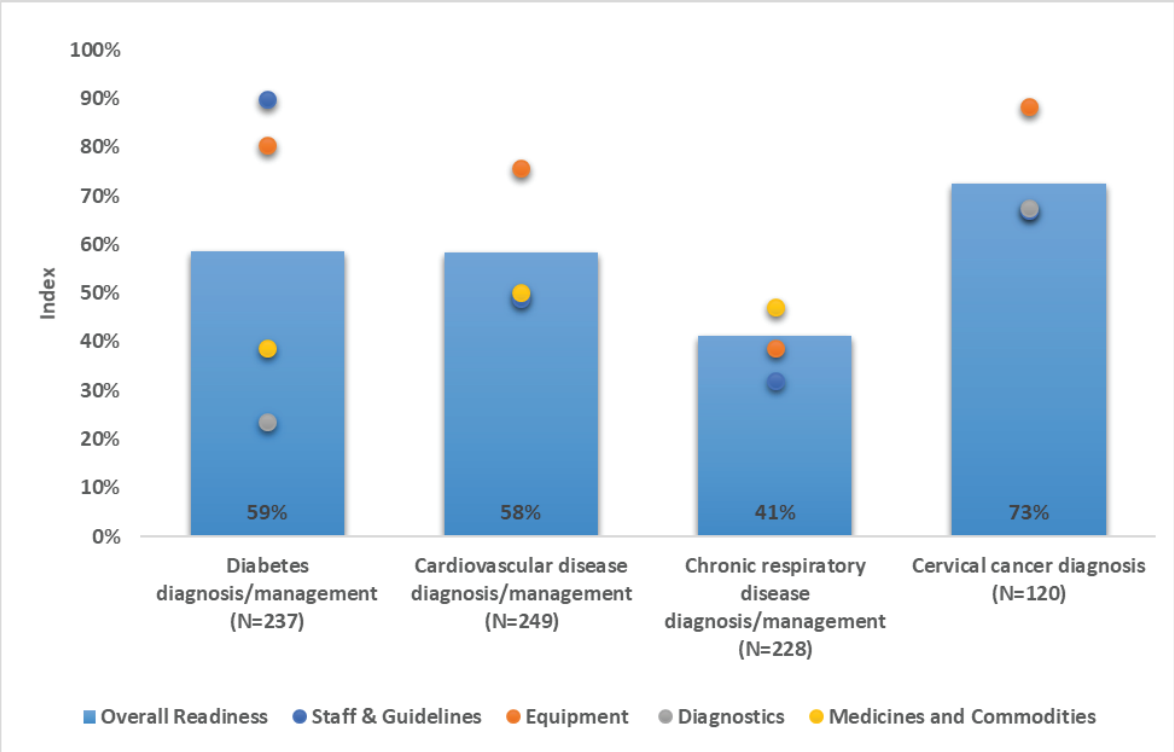
Figure 7—1: Availability of non-communicable disease services (N=327)



7.2. Readiness for provision of non-communicable diseases

There was generally low readiness of facilities to provide NCD services ranging from a high value of 73% for cervical cancer services to a low one of 41% for chronic respiratory diseases (Figure 7 – 2). Most facilities did not have the necessary staff training and guidelines, diagnostics, as well as medicines and commodities to provide NCD services.

Figure 7—2: Readiness to provide non-communicable disease services



7.3. Diabetes services

Tracer items assessed for service availability and readiness of diabetes services includes; availability of trained staff on diabetes diagnosis and treatment, guidelines for diabetes diagnosis and treatment. Others include apparatus for measuring blood pressure, weight, height, blood glucose, urine dipstick for protein, and urine dipstick for ketones. Medication tracer items include metformin, Glibenclamide, insulin, glucose 50% and gliclazide.

7.3.1. Availability of diabetes services

Overall, 72% of the country's health facilities were providing diabetes services. Diabetes services were available at the National Referral Hospital, all Regional Referral Hospitals, all Health Centres and in half of PHUs (Table 7 – 1) Availability was highest in government facilities (87%), in private facilities managed by nurses (87%) and in mission facilities (80%). The lowest availability was noted for private facilities managed by doctors (43%)

Table 7-1: Percentage of facilities that offer diabetes services, by facility type and managing authority (N=327)

Facility type	
National Referral Hospital	100%
Regional Referral Hospital	100%
Specialized Hospital	100%
Health Centre	100%
Public Health Unit (PHU)	57%
Clinic with maternity	94%
Clinic without maternity	83%
Specialized Clinics	22%
Managing authority	
Government	87%
Mission	80%
Industrial	82%
Private (non-industrial) owned by nurse(s)	87%
Private (non-industrial) owned by doctor(s)	43%

7.3.2. Readiness to provide diabetes services

Figure 7 – 3 shows the facilities with tracer items for diabetes services as a proportion of all those that were providing diabetes services at the time of the survey. The mean availability of diabetes tracer items was 61% in facilities providing this service indicating that the service was readily available in almost two thirds of the total number of facilities that offer it. Only 1 facility had all recommended tracer items for treating diabetes. Facilities generally had the equipment and tools for diagnosis s but did not have trained staff and guidelines as well as in the medicines and commodities. Less than a third of facilities (30%) of facilities had at least one trained staff in diabetes diagnosis and treatment, and a similar proportion had guidelines for this care. Regarding medication, only a quarter of facilities had injectable glucose, a similar proportion had insulin and most of the facilities did not have commonly used oral hypoglycaemic drugs.

Figure 7—3: Percentage of facilities that have tracer items for diabetes services among facilities that provide this service (N=237)

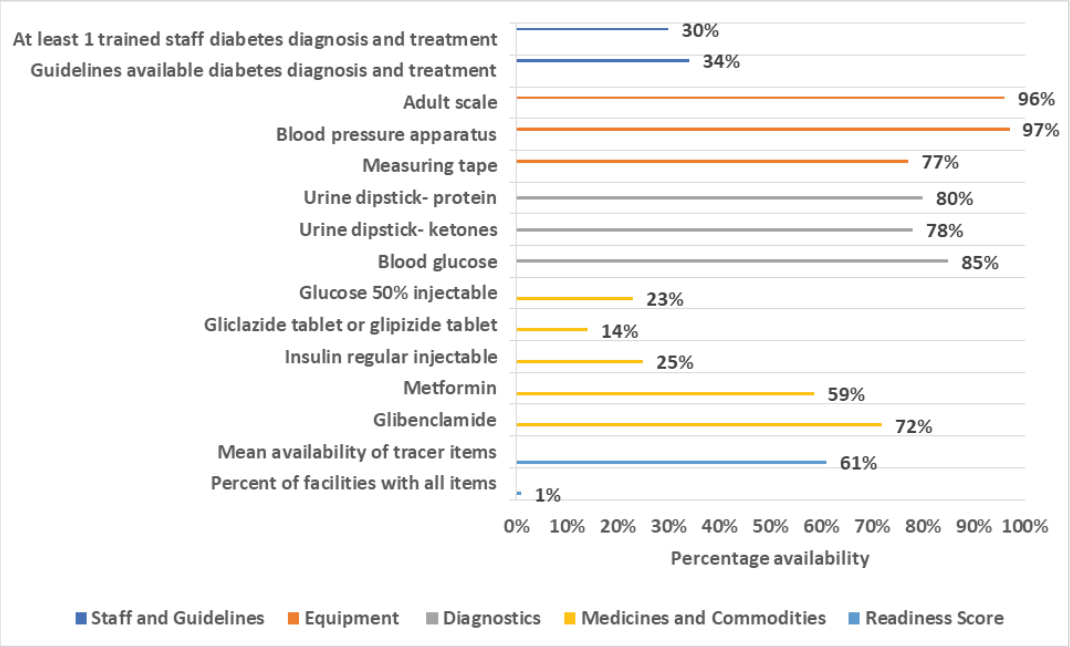
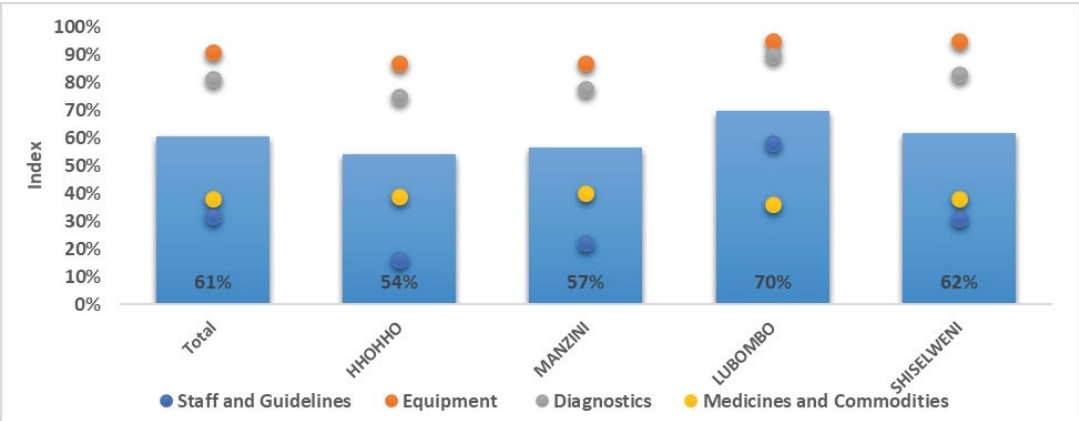


Figure 7 – 4 shows the readiness scores for provision of diabetes services by regional disaggregation. Readiness was generally low in all regions with scores ranging from 54% in Hhohho to 70% in Lubombo.

Figure 7—4: Readiness to provide diabetes services by region (N=237)



Readiness was generally higher among larger facilities like the National Referral Hospital (85%) Regional Referral Hospitals (80%) and in Health Centres (83%) than in PHUs (60%) and clinics (Table 7 – 2). Industry owned facilities were on average more ready (66%) to provide diabetes services than government (59%) and mission (57%) facilities.

Table 7-2: Percentage of facilities that have tracer items for diabetes services by facility type and managing authority (N=230)

	Guidelines available diabetes diagnosis and treatment	At least 1 trained staff diabetes diagnosis and treatment	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
Facility type																
National Referral Hospital	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	85%	1
Regional Referral Hospital	40%	60%	100%	100%	60%	100%	100%	100%	100%	100%	100%	20%	50%	0%	80%	5
Specialized Hospital	67%	100%	100%	100%	67%	100%	67%	67%	100%	67%	100%	33%	83%	33%	82%	3
Health Centre	80%	80%	100%	100%	100%	80%	100%	100%	80%	80%	100%	0%	80%	0%	83%	5
Public Health Unit	50%	75%	100%	100%	100%	75%	100%	100%	0%	25%	25%	0%	63%	0%	60%	4
Clinic with maternity	38%	34%	100%	97%	86%	90%	97%	93%	59%	76%	24%	7%	36%	0%	63%	29
Clinic without maternity	27%	24%	96%	95%	75%	81%	76%	75%	57%	69%	21%	15%	25%	0%	56%	169
Specialized Clinics	14%	7%	100%	86%	71%	93%	50%	50%	43%	29%	7%	0%	11%	0%	43%	14
Managing authority																
Government	41%	40%	96%	96%	81%	86%	84%	82%	45%	73%	26%	5%	40%	1%	59%	111
Mission	26%	17%	100%	100%	86%	89%	97%	94%	46%	51%	11%	3%	21%	0%	57%	35
Industrial	26%	30%	96%	93%	70%	89%	74%	74%	93%	89%	37%	41%	28%	0%	66%	27
Private-owned by nurse(s)	15%	8%	100%	77%	69%	54%	62%	62%	69%	62%	15%	23%	12%	0%	49%	13
Private-owned by doctor(s)	6%	21%	94%	97%	68%	76%	59%	62%	76%	74%	53%	44%	13%	0%	59%	34

7.3.3. Areas for Action

Efforts to improve the availability of diabetes services at health facilities and their readiness to provide these should focus on:

1. Increasing levels of trained staffing in the management of diabetes and the use of recommended diabetes treatment guidelines.
2. Ensuring regular stock of medicines and commodities especially insulin and oral hypoglycaemias.
3. Increasing the proportion of PHUs that have all tracer items that are required to provide diabetes services.

7.4. Cardiovascular services

Tracer items required for service delivery of basic cardiovascular diseases include; guidelines for diagnosis and treatment of chronic cardiovascular conditions, staff trained in diagnosis and management of chronic cardiovascular conditions, stethoscopes, blood pressure apparatus, adult scales, oxygen, ACE inhibitors), thiazide diuretics, beta blockers calcium channel blockers, aspirin and metformin.

7.4.1. Availability of cardiovascular services

Overall, 76% of the country's health facilities were providing cardiovascular services. The services were available at the National Referral Hospital, all Regional Referral Hospitals, all Health Centres and in half of PHUs (Table 7 – 3). Availability was highest in industry facilities (94%), government facilities (91%), mission facilities (86%), and in private facilities managed by nurses (80%). Lowest availability was noted for private facilities managed by doctors (43%).

Table 7-3: Percentage of facilities that offer cardiovascular disease services (N = 249)

Facility type		
National Referral Hospital	100%	1
Regional Referral Hospital	100%	5
Specialized Hospital	100%	3
Health Centre	100%	5
Public Health Unit (PHU)	57%	7
Clinic with maternity	97%	31
Clinic without maternity	89%	203
Specialized Clinics	22%	65
Managing authority		
Government	91%	127
Mission	86%	44
Industrial	94%	33
Private (non-industrial) owned by nurse(s)	80%	15
Private (non-industrial) owned by doctor(s)	43%	79

7.4.2. Readiness to provide cardiovascular services

Figure 7 – 5 shows the percentage of facilities that had tracer items for cardiovascular services as a proportion of all facilities that were providing cardiovascular (CVD) services at the time of the survey. The mean availability of cardiovascular tracer items was 58% in facilities providing this service indicating that the service was readily available in only half of facilities that offer CVD services. Facilities generally scored poorly in all domains except equipment for diagnosing CVD Only a quarter of facilities had staff trained in diagnosing and managing CVD conditions and facilities on average did not have most of drugs that are commonly used to treat CVD conditions. Only three percent (3%) of the facilities were found with all the tracer items available.

Figure 7—5: Percentage of facilities that have tracer items for cardiovascular disease services among facilities that provide this service (N=249

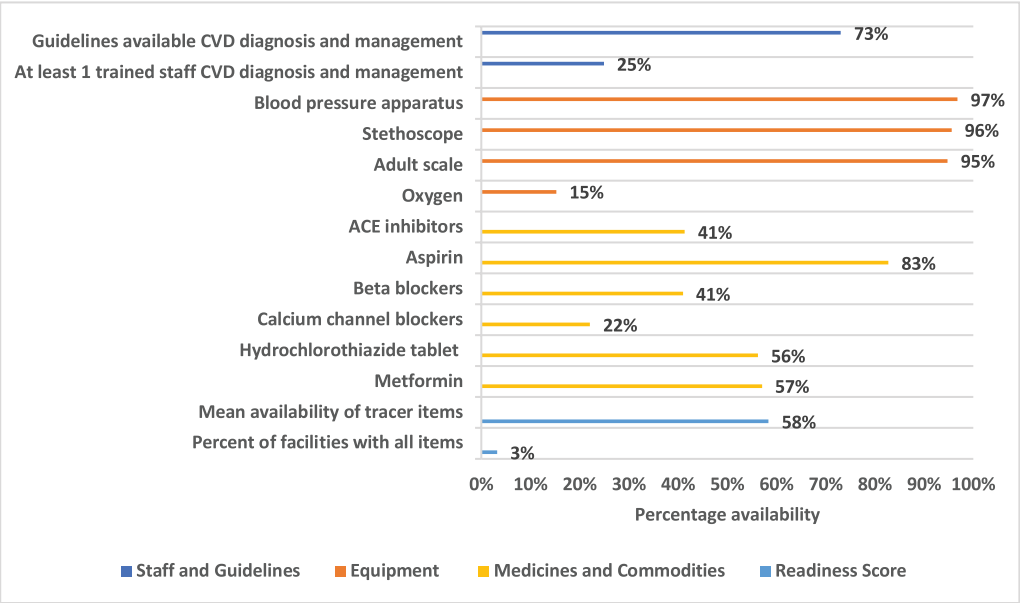
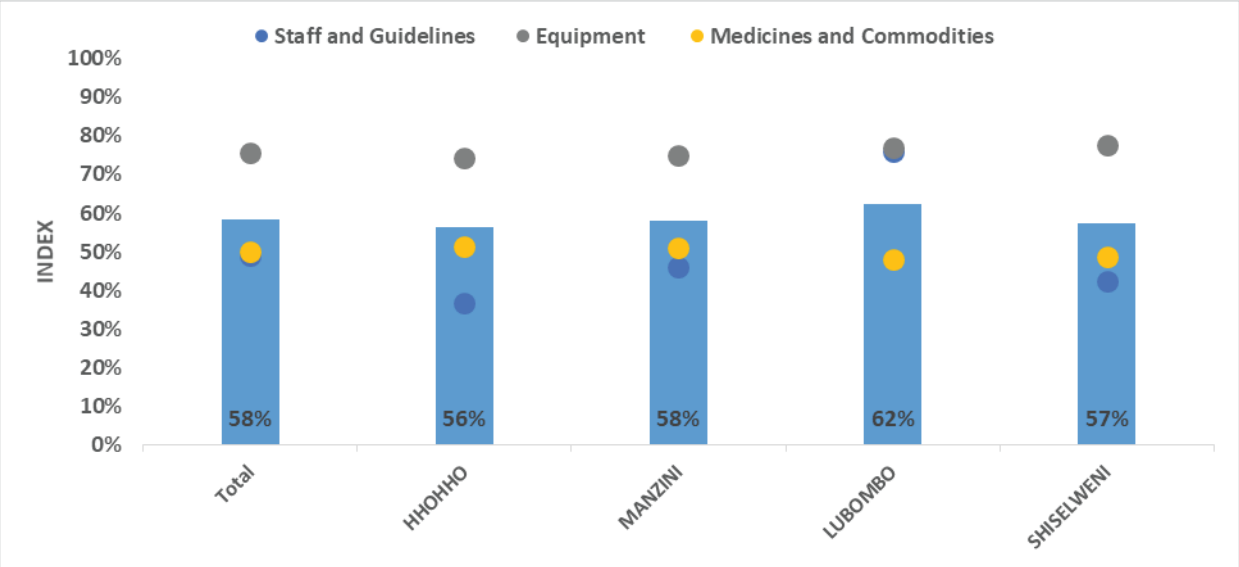


Figure 7 – 6 shows the readiness scores for provision of CVD services by regional disaggregation. Readiness was generally similar in all regions with scores ranging from 56% in Hhohho to 62% in Lubombo. Lower readiness was mostly due to deficiencies in staffing and guidelines, as well as in availability of medicines and commodities across all regions.

Figure 7—6: Readiness to provide cardiovascular services by region (N=249)



Shortages in these domains were also observed in both public and private facilities (Table 7 – 4). For example, the National Referral Hospital scored 67% for medicines and commodities and 0% for trained staff and guidelines. Regional Referral Hospitals (85%) and Health Centres (86%) were on average more ready to provide CVD services. PHUs had the lowest readiness (42%) among all types of health facilities.

Table 7-4: Percentage of facilities that have tracer items for cardiovascular disease services among facilities that provide this service, by region (N=249)

Category	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
Facility type															
National Referral Hospital	0%	0%	100%	100%	100%	100%	100%	0%	100%	0%	100%	100%	0%	67%	1
Regional Referral Hospital	80%	60%	100%	100%	100%	100%	80%	40%	100%	60%	100%	100%	20%	85%	5
Specialized Hospital	100%	67%	100%	100%	100%	67%	100%	67%	100%	33%	100%	100%	33%	86%	3
Health Centre	80%	60%	100%	100%	100%	100%	40%	40%	100%	100%	80%	80%	20%	82%	5
Public Health Unit (PHU)	75%	50%	100%	100%	100%	25%	0%	0%	0%	0%	50%	0%	0%	42%	4
Clinic with maternity	87%	33%	100%	100%	97%	10%	27%	60%	30%	17%	93%	60%	0%	59%	30
Clinic without maternity	72%	21%	94%	96%	94%	7%	40%	58%	38%	18%	83%	54%	1%	56%	180
Specialized Clinics	43%	0%	93%	100%	86%	7%	43%	29%	21%	21%	43%	43%	0%	44%	14
Managing authority															
Government	78%	30%	95%	96%	97%	11%	25%	34%	25%	13%	88%	45%	2%	53%	116
Mission	89%	16%	100%	100%	100%	11%	32%	68%	29%	13%	89%	42%	3%	57%	38
Industrial	74%	32%	90%	97%	90%	29%	68%	87%	74%	32%	74%	84%	3%	69%	31
Private (non-industrial) owned by nurse(s)	42%	17%	100%	100%	75%	0%	42%	67%	33%	17%	75%	67%	0%	53%	12
Private (non-industrial) owned by doctor(s)	59%	21%	97%	94%	97%	29%	74%	82%	76%	41%	76%	76%	12%	69%	34

7.4.3. Areas for Action

Interventions for addressing the low availability of CVD services and readiness of facilities to provide this care include:
1. Improving the proportion of trained staff at public facilities including the National Referral Hospitals and PHUs.
2. Ensuring regular stocks of all commonly used CVD drugs in public facilities.

7.5. Chronic respiratory diseases (CRD) services

Tracer items required for service delivery for chronic respiratory disease (CRD) management include; guidelines for diagnosis and management of CRD, staff trained in diagnosis and management of CRD, stethoscopes, peak flow meters, pacers for inhalers, oxygen, salbutamol inhalers, beclomethasone inhalers, prednisolone, hydrocortisone and injectable epinephrine.

7.5.1. Availability of chronic respiratory diseases services

Overall, 70% of the country's health facilities were providing chronic respiratory diseases services. Table 7 – 5 shows the percentage of facilities providing chronic respiratory disease services by facility type and managing authority. Availability was generally high in government (84%), mission (80%) and industry facilities (83%) but low in privately owned nurses' facilities (45%).

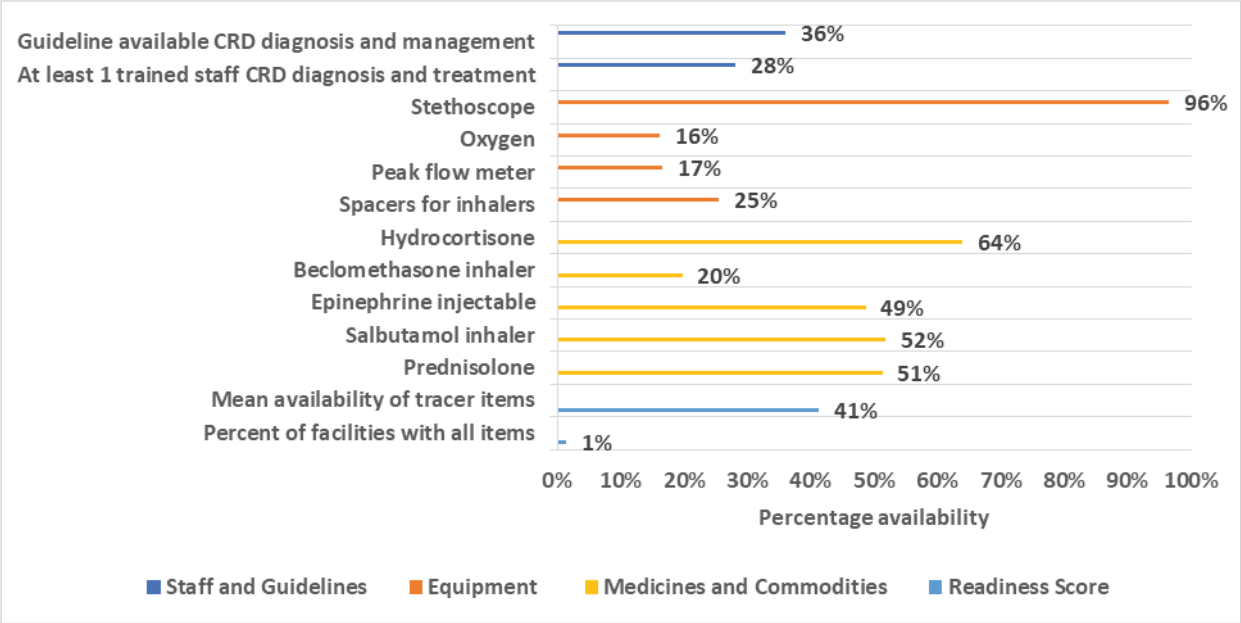
Table 7-5: Percentage of facilities that offer chronic respiratory disease services (N=327)

	Offers chronic respiratory disease diagnosis and/or management	Total number of facilities
Facility type		
National Referral Hospital	100%	1
Regional Referral Hospital	100%	5
Specialized Hospital	100%	3
Health Centre	80%	5
Public Health Unit (PHU)	43%	7
Clinic with maternity	94%	31
Clinic without maternity	81%	203
Specialized Clinics	17%	65
Managing authority		
Government	83%	127
Mission	80%	44
Industrial	91%	33
Private (non-industrial) owned by nurse(s)	67%	15
Private (non-industrial) owned by doctor(s)	43%	79

7.5.2. Readiness for chronic respiratory disease services

Figure 7 – 7 shows facilities that had tracer items for chronic respiratory disease services as a proportion of all facilities that were providing this service at the time of the survey.

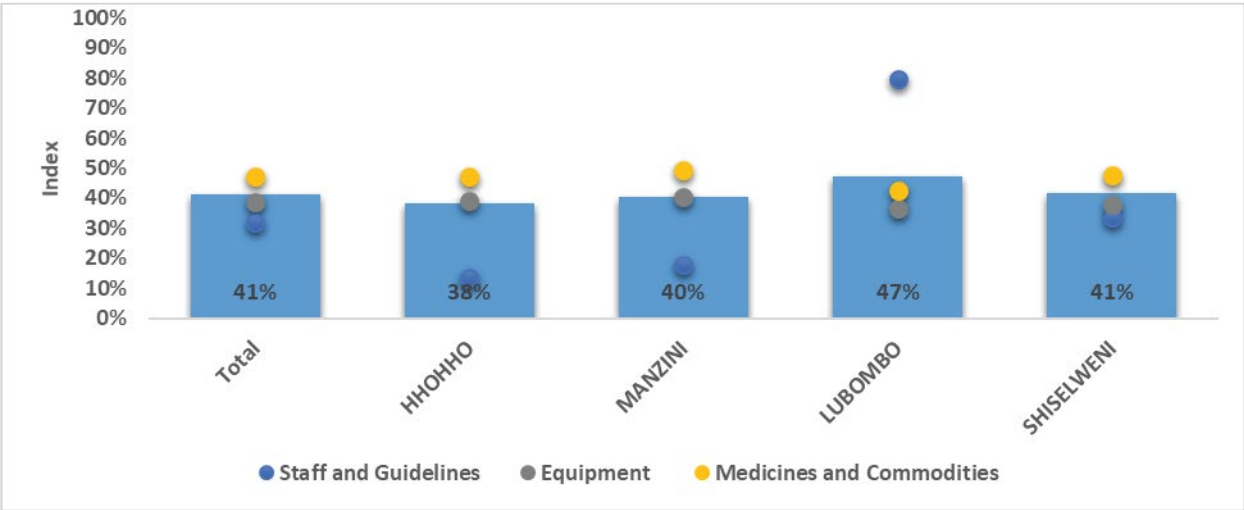
Figure 7—7: Percentage of facilities that have tracer items for chronic respiratory disease service among facilities that provide this service (N=228)



The mean availability of chronic respiratory disease tracer items was 41% indicating that these services were only be readily available in less than half of the total number of facilities that offer them. Low readiness was mostly in smaller health facilities like PHUs and private clinics. Readiness values for the National Referral Hospital, Regional Referral Hospital and Health Centres were 82%, 73%, and 77% respectively but only 39% at PHUs. Among facilities with high levels of readiness, lower scores were mostly recorded for guidelines for managing CRD and having trained staff to manage these conditions.

Figure 7 – 8 shows the readiness scores for provision of chronic respiratory disease services by regional disaggregation. Readiness was generally low in all regions with scores ranging from 38% in Hhohho region to 47% in Lubombo region. Regions had low readiness in all domains with the exception of scored fairly in staffing and guidelines.

Figure 7—8: Readiness to provide chronic respiratory disease services by region (N=228)



7.5.3. Areas for action:

1. Increasing the availability of CRD services will require improving the capacity of PHUs to provide this care.
2. Interventions to improve readiness of public facilities to provide CRD services will necessitate training more staff to address these conditions and in using clinical guidelines for managing CRD

Table 7- 7-6: Percentage of facilities that have tracer items for chronic respiratory disease services among facilities that provide this service, by region (N=228)

Category	Guideline available CRD diagnosis and	At least 1 trained staff CRD diagnosis and	Stethoscope	Peak flow meter	Spacers for inhalers	Oxygen	Salbutamol inhaler	Beclomethasone inhaler	Prednisolone	Hydrocortisone	Epinephrine injectable	Percent of facilities with all tracer	Mean availability of tracer items	Total number of facilities
Facility type														
National Referral Hospital	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	82%	1
Regional Referral Hospital	20%	60%	100%	60%	60%	100%	60%	80%	100%	60%	100%	0%	73%	5
Specialized Hospital	67%	33%	100%	33%	67%	67%	33%	100%	67%	33%	33%	33%	58%	3
Health Centre	75%	75%	100%	50%	50%	100%	50%	75%	100%	75%	100%	50%	77%	4
Public Health Unit (PHU)	67%	33%	100%	33%	0%	33%	33%	0%	0%	100%	33%	0%	39%	3
Clinic with maternity	48%	38%	100%	10%	17%	10%	55%	3%	28%	76%	55%	0%	40%	29
Clinic without maternity	35%	25%	95%	12%	22%	8%	51%	14%	52%	61%	44%	0%	38%	165
Specialized Clinics	9%	18%	100%	27%	27%	9%	27%	36%	45%	45%	27%	0%	34%	11
Managing authority														
Government	96%	10%	24%	11%	43%	14%	32%	57%	45%	3%	37%	106	96%	10%
Mission	100%	11%	26%	11%	54%	6%	43%	60%	74%	0%	41%	35	100%	11%
Industrial	90%	23%	17%	30%	73%	27%	83%	77%	60%	0%	49%	30	90%	23%
Private (non-industrial) owned by nurse(s)	100%	20%	20%	0%	60%	30%	70%	70%	10%	0%	36%	10	100%	20%
Private (non-industrial) owned by doctor(s)	97%	29%	41%	29%	50%	29%	79%	74%	44%	0%	45%	34	97%	29%

7.6. Cervical Cancer Services

Tracer items required for service delivery for the cervical cancer services include: trained staff and guidelines, staff trained in cervical cancer prevention and control, a speculum and acetic acid.

7.6.1. Availability of cervical cancer services

Overall, Availability of these services is higher in larger government run facilities like the National Referral Hospital, Regional Referral Hospitals and Health Centers (all 100%), than in PHUs (43%), clinics with maternity (58%) and clinics without maternity (39%), Table 7- 0-7)

Table 7- 0-1: Percentage of facilities that offer cervical cancer services, facility type, managing authority and location (N=327)

	Offers cervical cancer diagnosis	Total number of facilities
Facility type		
National Referral Hospital	100%	1
Regional Referral Hospital	80%	5
Specialized Hospital	33%	3
Health Centre	100%	5
Public Health Unit (PHU)	43%	7
Clinic with maternity	58%	31
Clinic without maternity	39%	203
Specialized Clinics	5%	65
Managing authority		
Government	47%	127
Mission	41%	44
Industrial	24%	33
Private (non-industrial) owned by nurse(s)	27%	15
Private (non-industrial) owned by doctor(s)	25%	79

7.6.2. Readiness to provide cervical cancer services

Figure7- 0-9 shows facilities that had tracer items for cervical cancer services as a proportion of all facilities that were providing cervical cancer services at the time of the survey. The mean availability of cervical cancer tracer items was 73%. This is the proportion of 120 facilities which reported having cervical cancer services that had the necessary tracer items. Fifty-eight percent of the facilities had guidelines for cervical cancer prevention and control, 76% had trained staff in this area, 88% had a speculum for examining women but 68% had acetic acid for identifying potential cervical cancer lesions.

Figure 0—1: Percentage of facilities that have tracer items for cervical cancer services among facilities that provide this service (N=120)

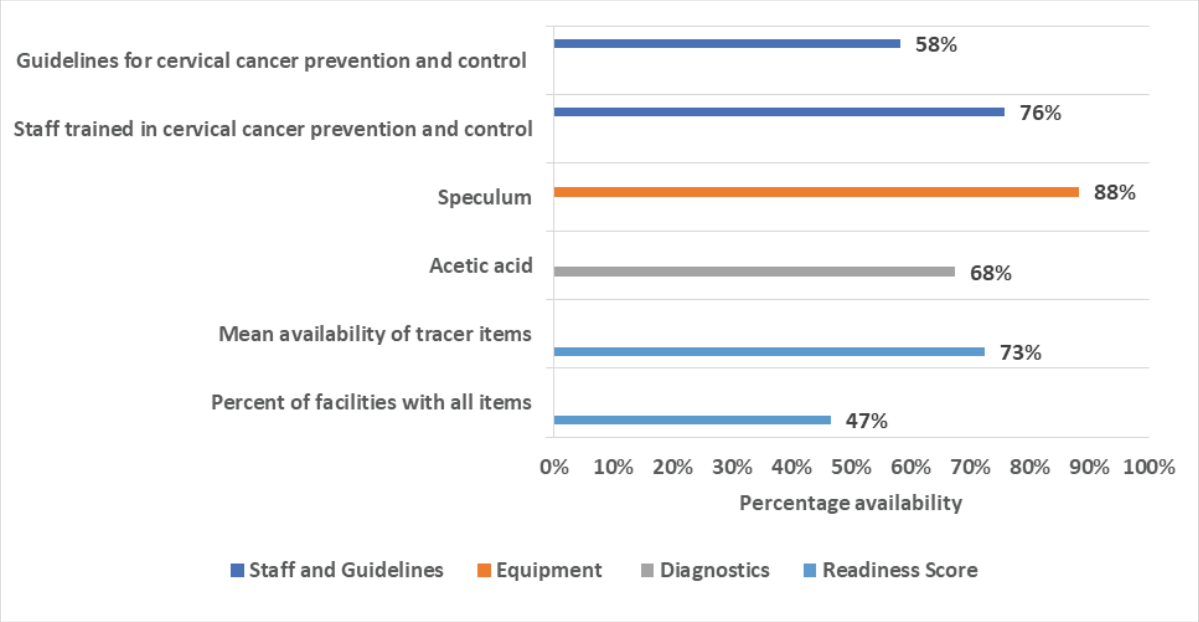
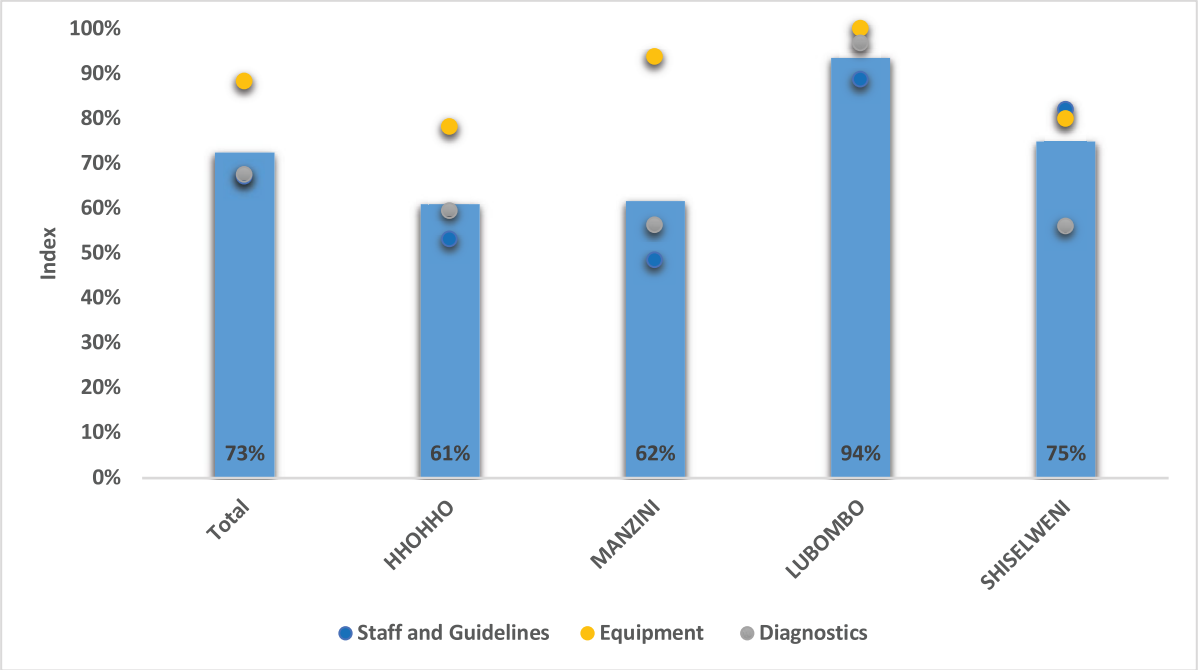


Figure 7- 0 10 shows the readiness scores for provision of cervical cancer services by regional disaggregation. The highest readiness score was recorded in Lubombo region (94%) followed by Shiselweni region (75%), while Manzini and Hhohho regions had the lowest readiness scores, at 62% and 61% respectively. Low readiness scores in the latter two regions were mostly due to low scores in the staffing and guidelines domain, as well as low availability of tools needed for diagnosing cervical cancer – acetic acid and a vaginal speculum. Readiness is also higher in government facilities (84%) and those that are mission run (88%), but lower in private facilities (31%) and industrial facilities (59%)

Figure 7- 0—2: Percentage of facilities that have tracer items for cervical cancer, by region (N=120)



7.6.3. Areas for Action

1. There is a missed opportunity of providing cervical cancer screening services at PHU, given the high proportion of women that can access care at these public units including those who are HIV positive, a known risk factor for cancer of the cervix.
2. An opportunity exists for engaging private facilities to start offering cervical cancer screening services especially in clinics with maternity services
3. There is a need to increase training of clinical health workers staff on screening and guidelines for detecting cervical cancer
4. The survey also revealed shortages in diagnostic equipment for cervical cancer like speculums and acetic acid.

Table 7- 0 2: Percentage of facilities that have tracer items for cervical cancer services among facilities that provide this service, by region (N=120)

Categories	Guidelines for cervical cancer prevention and control	Staff trained in cervical cancer prevention and control	Speculum	Acetic acid	Percent of facilities with all items	Mean availability of tracer items	Total number of facilities
Facility type							
National Referral Hospital	100%	100%	100%	100%	100%	100%	1
Regional Referral Hospital	100%	75%	100%	100%	75%	94%	4
Specialized Hospital	100%	100%	100%	100%	100%	100%	1
Health Centre	80%	80%	80%	80%	80%	80%	5
Public Health Unit (PHU)	100%	67%	67%	67%	67%	75%	3
Clinic with maternity	67%	89%	94%	78%	56%	82%	18
Clinic without maternity	54%	72%	86%	63%	42%	69%	79
Specialized Clinics	67%	100%	100%	100%	67%	92%	3
Managing authority							
Government	77%	93%	88%	77%	60%	84%	60
Mission	83%	83%	94%	89%	67%	88%	18
Industrial	38%	63%	88%	50%	25%	59%	8
Private (non-industrial) owned by nurse(s)	0%	50%	50%	25%	0%	31%	4
Private (non-industrial) owned by doctor(s)	0%	25%	85%	20%	0%	33%	20

Allied Services

8.0. Introduction

Allied services include the availability of basic surgical services, comprehensive surgical services and blood transfusion services. These are important services for tertiary level care in a health system. This chapter presents findings of the 2017 SARA survey on the availability of these services across facilities and regions in the country.

8.1. Basic surgical services

The availability of basic surgical services was assessed by checking for whether facilities provided the following services: incision and drainage of abscesses, wound debridement, acute burn management, suturing, closed treatment of fractures, cricothyroidotomy, male circumcision, hydrocele reduction, chest tube insertion, closed repair of dislocated joints and foreign body removal

8.1.1. Availability of basic surgical services

Of the 327 facilities, 39% were found to be offering basic surgical services. Availability was higher in larger health facilities which by design are the ones that are expected to provide these services. For example, availability was 100% at the National and 4 out of 5 Regional Referral Hospitals, and 60% in Health Centers (Table 8 – 1). Only 40% of Health Centers had wound debridement services, and only 20% offered male circumcision. Fourteen percent of PHUs provided suturing services but no other basic surgical care. Very few clinics (with or without maternity) offered basic surgical services.

Table 8-1: Percentage of facilities that offer basic surgical services (N=327)

	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
Facility type													
National Referral Hospital	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Regional Referral Hospital	100%	100%	100%	100%	100%	100%	80%	100%	100%	100%	100%	100%	100%
Specialized Hospital	67%	67%	0%	67%	67%	33%	0%	0%	0%	0%	33%	0%	67%
Health Centre	80%	80%	40%	80%	80%	80%	0%	20%	40%	60%	60%	60%	60%
Public Health Unit (PHU)	14%	0%	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%
Clinic with maternity	61%	35%	13%	61%	55%	3%	0%	3%	3%	3%	0%	0%	29%
Clinic without maternity	39%	27%	11%	35%	37%	1%	1%	2%	1%	0%	2%	2%	22%
Specialized Clinics	15%	9%	6%	5%	12%	3%	2%	6%	3%	3%	3%	2%	5%

8.1.2. *Readiness to provide basic surgical services*

Figure 8 – 1 shows readiness to provide basic surgical services. Overall, readiness was at 45% with only 2% of facilities having all tracer items available at the time of the survey. Lower readiness was observed in the staff and guidelines domain – only 15% of facilities that offered basic surgical services had the necessary guidelines and only 12% had trained staff to offer these services. Facilities also generally lacked some necessary equipment for basic surgery. Less than a third of facilities had retractors, suction apparatus, nasogastric tubes or oxygen. There was however better supply of some medicines and commodities that are commonly used for surgery. Almost all facilities readily had skin disinfectant (92%), lidocaine (88%) and sutures (92%) but only 17% had ketamine and only 7% had splints.

Figure 8—1: Readiness to offer basic surgical services among facilities that provide this service (N=129)

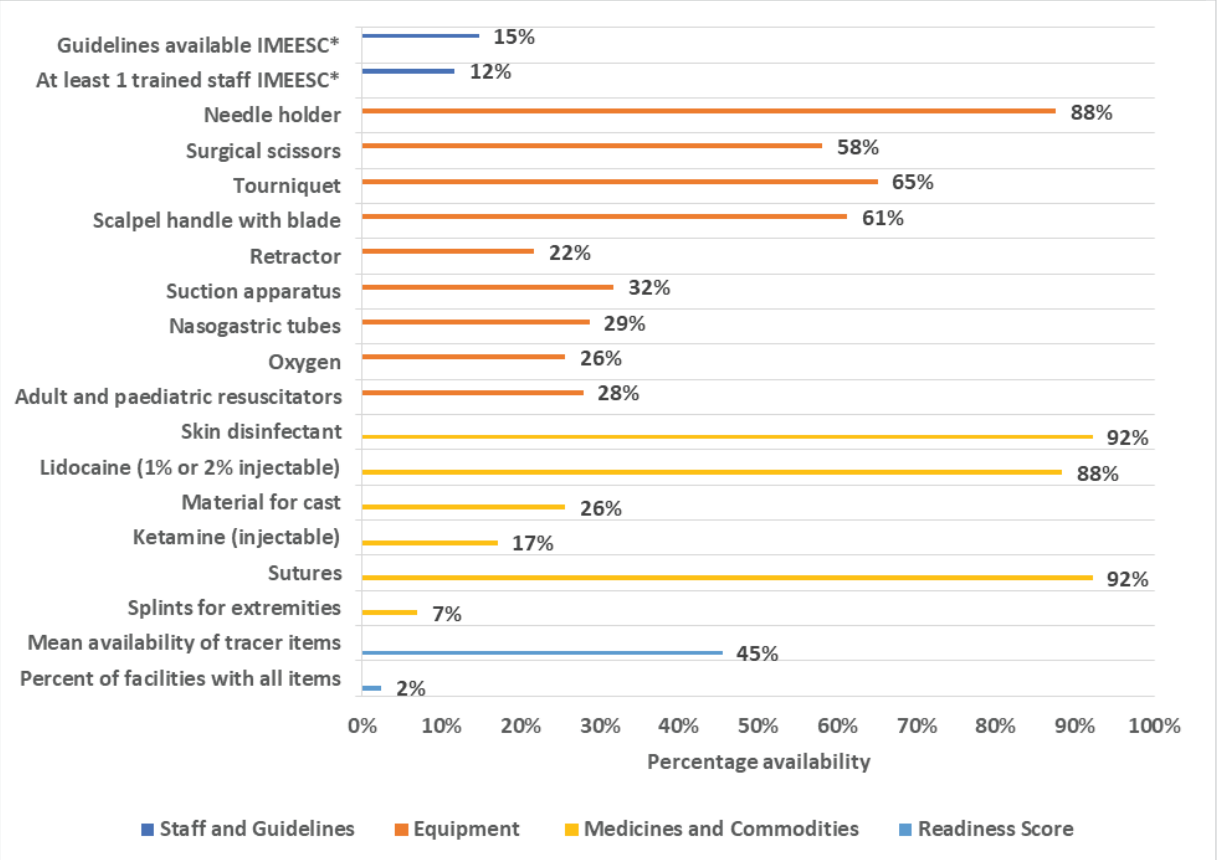
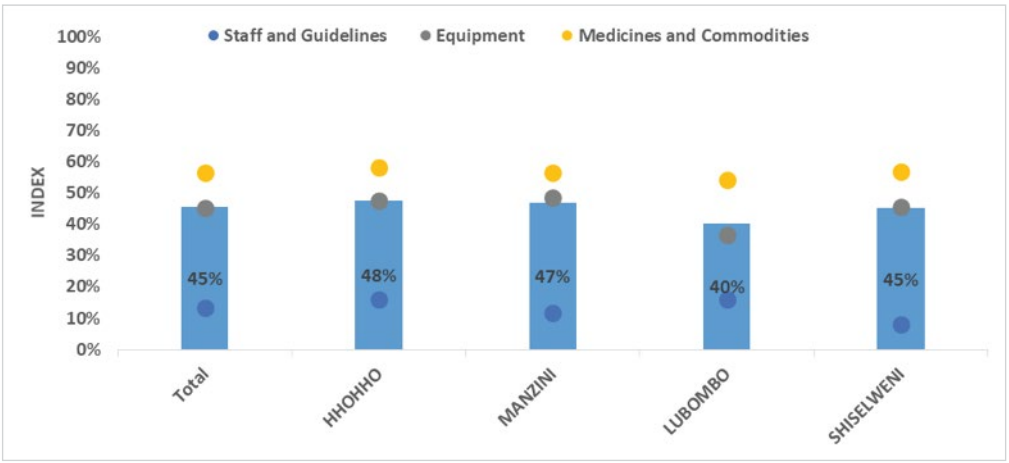


Figure 8 – 2 shows the readiness to provide basic surgical services by regional disaggregation. Readiness was generally low with less than 50% values for all regions. Facilities had low readiness scores across all domains but mostly for staffing and guidelines.

Figure 8—2: Readiness to offer basic surgical services by region (N=129)



The National Referral Hospital was ready to provide all basic surgical services. Regional Referral Hospitals were also mostly ready. However, 3 did not have IMEESC guidelines or staff trained in the use of these guidelines, 3 did not meet the requirements for having surgical scissors, 3 did not have both adult and pediatric resuscitators and 3 did not have splints. Health centers are also mostly ready – 4 did not have IMEESC guidelines, none had staff trained in the use of these guidelines, none had ketamine only 4 of 5 health Centres had scalpels wit blades, retractors, nasogastric rubes, and tourniquets.

Table 8-2: Readiness to offer basic surgical services by facility type and managing authority (N=129)

	Guidelines available IMEESC*	At least 1 trained staff IMEESC*	Needle holder	Scalpel handle with blade	Retractor	Surgical scissors	Nasogastric tubes	Tourniquet	Adult and pediatric 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
Facility type																				
National Referral Hospital	100%	100%	100%	100 %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	1
Regional Referral Hospital	40%	40%	80%	60%	80%	40%	80%	60%	40%	80%	100%	100%	100%	100%	100%	40%	80%	0%	71%	5
Specialized Hospital	50%	50%	100%	100%	0%	50%	50%	100%	50%	50%	50%	100%	100%	50%	100%	0%	50%	0%	62%	2
Health Centre	25%	0%	100%	75%	75%	100%	75%	75%	75%	100%	100%	100%	100%	0%	75%	25%	100%	0%	72%	4
Public Health Unit (PHU)	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	100%	100%	0%	100%	0%	0%	0%	29%	1
Clinic with maternity	21%	11%	89%	58%	0%	53%	16%	47%	32%	16%	11%	100%	95%	16%	95%	0%	11%	0%	40%	19
Clinic without maternity	3%	4%	86%	56%	14%	56%	16%	66%	19%	21%	13%	90%	90%	8%	85%	1%	15%	0%	39%	80
Specialized Clinics	40%	30%	80%	70%	20%	50%	50%	50%	20%	40%	30%	80%	90%	0%	90%	0%	20%	0%	45%	10
Managing authority																				
Government	8%	6%	87%	46%	17%	44%	17%	56%	19%	21%	19%	94%	94%	13%	90%	4%	19%	2%	39%	52
Mission	14%	9%	82%	45%	9%	59%	9%	77%	32%	23%	14%	86%	91%	18%	86%	5%	9%	0%	40%	22
Industrial	33%	17%	100%	83%	42%	67%	67%	83%	50%	58%	50%	100%	92%	17%	92%	8%	42%	8%	63%	12
Private (non-industrial) owned by nurse(s)	0%	0%	75%	75%	0%	75%	0%	75%	0%	0%	0%	75%	75%	0%	50%	0%	0%	0%	29%	4
Private (non-industrial) owned by doctor(s)	19%	19%	91%	84%	34%	72%	44%	63%	34%	44%	38%	94%	91%	28%	91%	16%	50%	3%	55%	32

8.1.3. *Areas for action*

1. Improved access to basic surgical services will require more training of health workers with the necessary skills to offer this care and emphasis in the use of recommended guidelines for these services.
2. Given that basic surgical services is mostly readily available at the National and Regional Referral Hospitals, better access will necessitate focusing on delivery of specific services at some Health Centres. For example, not all Health Centers provided wound debridement services, male circumcision or acute burn management.
3. Health workers at PHUs should be equipped with skills to manage some non-invasive procedures such as wound debridement s, acute burn management and basic suturing.

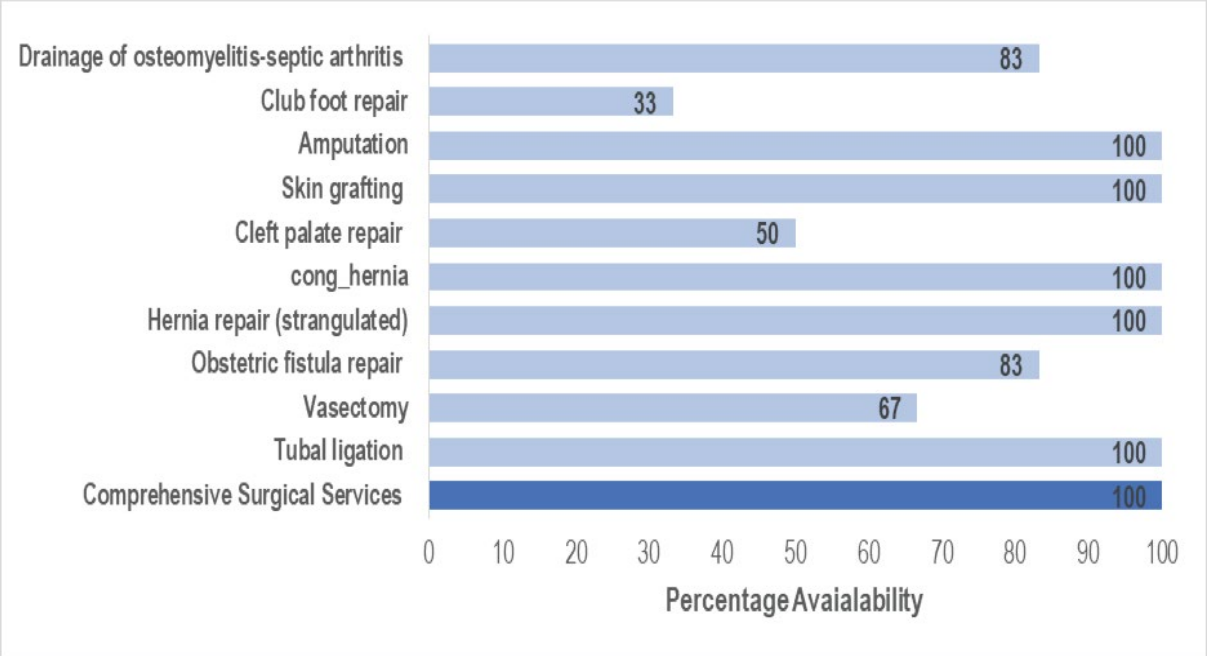
8.2. Comprehensive surgical services

Comprehensive surgical services include provision of tertiary level surgical care such as tracheostomy, tubal ligation, vasectomy, episiotomy, appendectomy, strangulated hernia repair, elective hernia repair, cystostomy, urethral stricture dilatation, laparotomy, congenital hernia repair, neonatal surgery, cleft palate repair, skin grafting and contracture release, open reduction and fixation for fracture, amputation, cataract surgery, club foot repair, drainage of osteomyelitis-septic arthritis, dilatation and curettage as well as obstetric fistula repair.

8.2.1. *Availability of comprehensive surgical services*

The availability of comprehensive surgical services in tertiary level facilities (National Referral and Regional Referral Hospitals) in Eswatini is presented in Figure 8 – 3. All comprehensive surgical services were available at the National Referral Hospital but none of the Regional Referral Hospitals could offer the full range of services – management of osteomyelitis and obstetric fistula was available in 4 Regional Referral Hospitals, vasectomy in 3, cleft palate repair in 2 and club foot repair in one Regional Referral Hospital. All 6 hospital in this analysis offered tubal ligation, strangulated hernia repair, congenital hernia repair, skin grafting and amputation surgery.

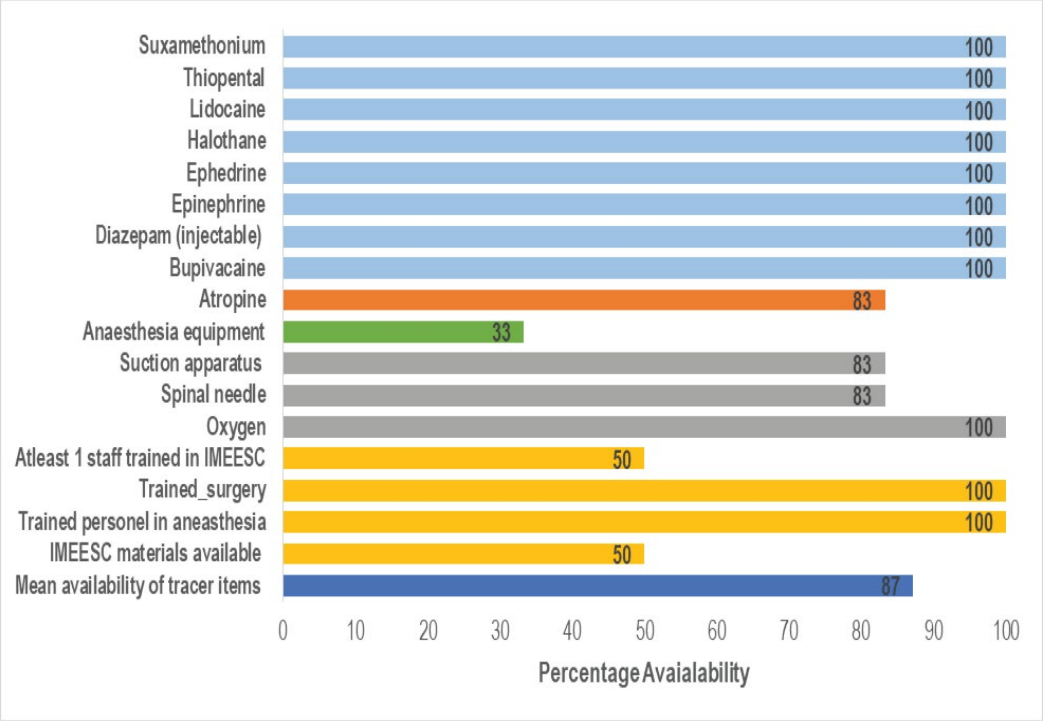
Figure 8—3: Percentage of hospitals that offer comprehensive surgical services (N=6)



8.2.2. *Readiness to provide comprehensive surgical services*

Readiness to provide comprehensive surgical services at the National and Regional Referral Hospitals is presented in Figure 8 – 4. The National Referral Hospital was ready to provide all services that were assessed and facilities scored well (100%) in readiness to provide the 9 drugs that were reviewed. There was however lower readiness regarding the necessary guidelines and training to provide comprehensive surgical services. Only half the facilities had the Integrated Management for Emergency and Essential Surgical Care (IMEESC) guidelines for offering surgical care and a similar proportion had at least one staff member trained in IMEESC. Low readiness was also noted for some equipment that are needed to offer comprehensive surgical services – Only 33% of facilities had adequate anesthesia equipment and 17% did not have functional suction apparatus.

Figure 8—4: Readiness to offer comprehensive surgical services among facilities that provide this service (N=6)



8.2.3. *Action Items*

1. Efforts should be made to train more health workers in Integrated Management for Emergency and Essential Surgical Care (IMEESC) and the use of IMEESC guidelines

2. Measures can be taken to increase the capacity of Regional Referral Hospitals to offer some of this care especially in the areas that with low readiness including anaesthesia equipment, suction apparatus and spinal needles.

8.3. Blood transfusion services

8.3.1. *Availability of blood transfusion services*

Blood transfusion services in Eswatini are by design supposed to be available at the National referral Hospital, Regional Referral Hospitals, and Health Centers. The 2017 SARA survey found that these services were available as required all these facilities except one of the Health Centres (Table 8 – 3). In addition, none of the smaller units were offering blood transfusion services.

Table 8-3: Percentage of facilities that offer blood transfusion services (N=327)

Facility Name	Percentage
National Referral Hospital	100%
Regional Referral Hospital	100%
Specialized Hospital	33%
Health Centre	80%
Public Health Unit (PHU)	0%
Clinic with maternity	0%
Clinic without maternity	0%
Specialized Clinics	0%

8.3.2. *Readiness to provide blood transfusion services*

Figure 8 – 5 shows the readiness of facilities to offer blood transfusion services. Fifty-nine percent of facilities could readily provide blood transfusion services, but only 11% had all the necessary tracer items. There was low readiness in almost all domains of assessment – only 47% of the facilities had guidelines on appropriate use of blood products and a third of facilities did not have a functioning refrigerator with temperature monitoring for blood storage and only half of the facilities (53%) reported insufficient supplies of blood.

Figure 8—5: Readiness to provide blood transfusion services among those that offer this service

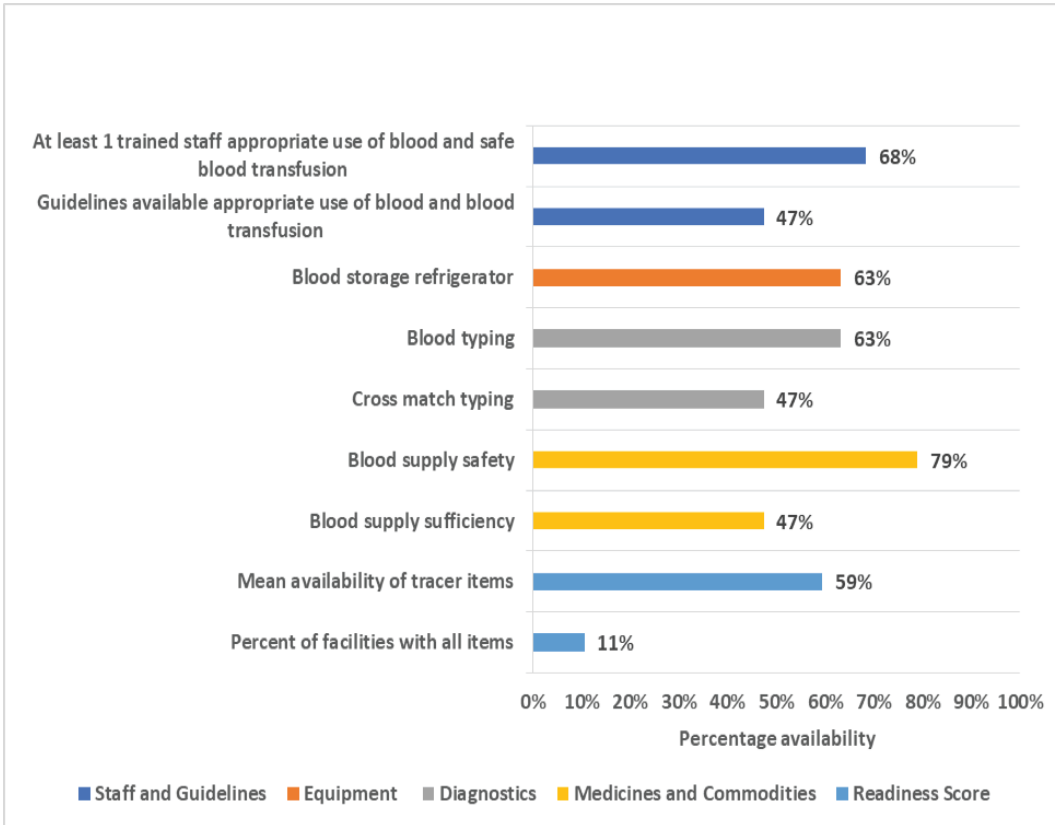
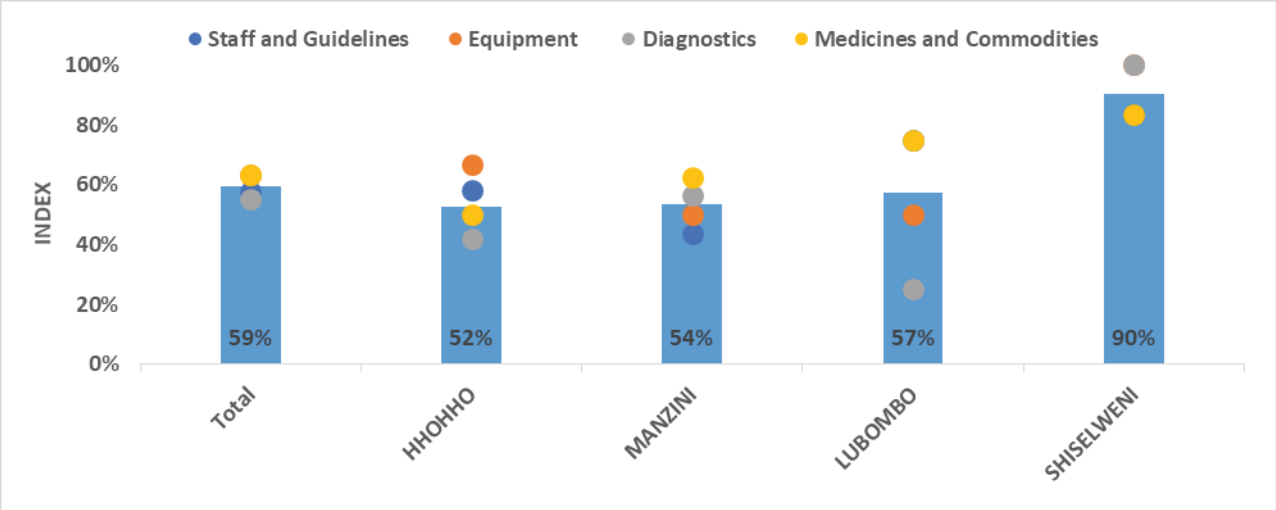


Figure 8 – 6 shows the readiness scores for blood transfusion services by regional disaggregation. The highest readiness score was recorded in Shiselweni region (90%). Lubombo, Manzini and Hhohho all had lower readiness (57%, 54%, and 52% respectively). Shiselweni was more ready than other regions because its three facilities had higher scores in almost all domains than facilities in other regions. Lubombo region scored poorest in the diagnostics domain.

Figure 8—6: Readiness to provide blood transfusion services by region



By facility managing authority (Table 8 – 4) readiness was similar in industry-managed facilities (71%) and government-run hospitals (70%) and slightly lower in mission managed facilities (64%).

Table 8-4: Readiness to offer blood transfusion services by facility type and management authority

	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
Facility type									
National Referral Hospital	100%	100%	100%	100%	100%	0%	100%	0%	86%
Regional Referral Hospital	60%	40%	60%	100%	40%	40%	100%	20%	63%
Specialized Hospital	100%	100%	100%	100%	100%	0%	0%	0%	71%
Health Centre	50%	100%	100%	75%	75%	25%	75%	25%	71%
Managing authority									
Government	67%	78%	89%	89%	67%	22%	78%	22%	70%
Mission	50%	50%	50%	100%	50%	50%	100%	0%	64%
Industrial	100%	100%	100%	0%	0%	100%	100%	0%	71%

8.3.3. *Areas for Action*

1. Prioritization should be given to improving availability of blood transfusion services at the Health Centre that currently does not provide them.
2. Regarding readiness to provide blood transfusion services, efforts should target:
   a. Training of health workers on the use of recommended blood transfusion guidelines.
   b. Improved supply of diagnostics for blood typing and cross-matching
   c. More consistent supplies of blood for transfusion

Tracer medicines availability and readiness

9.0. Introduction

The 2017 SARA survey identified tracer medicines for provision of communicable diseases services, non-communicable disease services, mental and neurological health services as well as palliative care services. These are outlined in the sections that follow.

9.1. Availability of medicines for communicable disease

Tracer medicines for communicable diseases include Mebendazole and Albendazole, Amoxicillin, Ceftriaxone, Cotrimoxazole, Ciprofloxacin, Fluconazole and Metronidazole. Table 9 – 1 summarizes the overall availability of communicable disease medicines in the four geographic regions of the country. The overall availability of tracer medicines varied by drug type but was generally low for ceftriaxone and fluconazole, with both available in less than a third of the facilities). Availability of other medicines was better and with most drugs available in more than two thirds of health facilities. There were also some regional disparities in availability of these medicines with higher availability in Shiselweni and Lubombo regions when compared to Manzini and Hhohho regions.

Table 9-1: Percentage of facilities that have communicable disease medicines available by region (N=327)

Regions	Mebendazole or albendazole cap/tab	Amoxicillin cap/tab	Ceftriaxone injection	Co-trimoxazole cap/tab	Ciprofloxacin cap/tab	Fluconazole cap/tab	Metronidazole cap/tab
HHOHHO	68%	62%	28%	67%	62%	27%	65%
MANZINI	58%	55%	27%	60%	54%	21%	58%
LUBOMBO	88%	88%	27%	96%	87%	25%	87%
SHISELWENI	84%	82%	27%	87%	80%	38%	80%
Total	**68%**	**62%**	**28%**	**67%**	**62%**	**27%**	**65%**

Among government facilities, there was better availability of these tracer medicines in larger facilities like the national and regional referral hospitals than in smaller ones like PHUs and Health Centers (Table 9 - 2). For example, with the exception of Fluconazole all tracer communicable disease medicines were 100% available in the National Referral Hospital. Notably, tracer medicines for communicable diseases were available in very low percentage in private doctor owned facilities than any other managing authority type.

Table 9-2: Percentage of facilities that have communicable disease medicines available by facility type, managing authority and location (N=327)

	Me-/albendazole cap/tab	Amoxicillin cap/tab	Ceftriaxone injection	Co-trimoxazole cap/tab	Ciprofloxacin cap/tab	Fluconazole cap/tab	Metronidazole cap/tab
Facility type							
National Referral Hospital	100%	100%	100%	100%	100%	0%	100%
Regional Referral Hospital	80%	100%	60%	100%	80%	20%	100%
Specialized Hospital	67%	67%	100%	67%	100%	67%	67%
Health Centre	60%	80%	40%	80%	80%	60%	100%
Public Health Unit (PHU)	43%	43%	0%	57%	43%	14%	43%
Clinic with maternity	94%	84%	26%	94%	84%	26%	81%
Clinic without maternity	84%	75%	29%	82%	74%	28%	79%
Specialized Clinics	14%	22%	9%	22%	22%	9%	18%
Managing authority							
Government	80%	69%	14%	82%	82%	23%	72%
Mission	86%	73%	27%	89%	52%	18%	82%
Industrial	82%	88%	48%	85%	76%	27%	94%
Private (non-industrial) owned by nurse(s)	80%	73%	47%	80%	53%	40%	80%
Private (non-industrial) owned by doctor(s)	38%	44%	30%	38%	39%	27%	38%

9.1.1. Areas for action

The above pattern highlights several issues

1. Despite the generally good availability of medicines for communicable diseases, some medicines that are necessary for more severe infections e.g. Injectable ceftriaxone might not be readily available
2. There is a need to improve access to communicable disease medicines at lower level government run health facilities like Health Center and PHUs.

9.2. Availability of non-communicable diseases medicines

Tracer items assessed for availability of medicines for non-communicable diseases included; Amlodipine or alternative calcium channel blocker, Aspirin, Beclomethasone inhaler, Beta blocker, Enalapril or other ACE inhibitor, Epinephrine, Furosemide, Glibenclamide, Gliclazide or glipizide, Glucose 50% injection, sublingual Glyceryl trinitrate, Hydrochlorothiazide or other thiazide diuretic, Hydrocortisone injection, Ibuprofen, Insulin regular, Isosorbide dinitrate, Metformin, Omeprazole or alternatives, Paracetamol, Prednisolone, Salbutamol inhaler, Simvastatin or other

statin and as Spironolactone tablet. All of these were assessed during the assessment as shown in the tables that follow. Please refer to chapter 7 for disease specific NCD drugs and regional comparisons as well as potential areas for action.

Table 9-3: Percentage of facilities that have non-communicable disease medicines available by region (N=327)

HHOHHO	MANZINI	LUBOMBO	SHISELWENI	Regions
19	15	13	27	Amlodipine tablet or alternative calcium channel blocker
60	59	88	84	Aspirin cap/tab
17	24	10	20	Beclometasone inhaler
33	32	33	27	Beta blocker (e.g.bisoprolol, metoprolol, carvedilol, atenolol)
32	33	38	29	Enalapril tablet or other ACE inhibitor e.g. lisinopril, ramipril, perindopril
32	35	44	42	Epinephrine injectable
25	32	29	33	Furosemide cap/tab
44	43	79	69	Glibenclamide cap/tab
11	15	56	28	Gliclazide tablet or glipizide tablet
14	12	12	4	Glucose 50 injection
8	3	0	2	Glyceryl trinitrate sublingual tablet
35	48	65	38	Hydrochlorothiazide tablet or other thiazide diuretic tablet
48	45	56	62	Hydrocortisone injection
37	42	38	40	Ibuprofen tablet
22	26	15	11	Insulin regular injection
10	18	6	7	Isosorbide dinitrate tablet
39	44	46	60	Metformin tablet
32	35	27	33	Omeprazole tablet or alternative such as pantoprazole, rabeprazole
71	68	94	89	Paracetamol cap/tab
36	40	35	53	Prednisolone cap/tab
38	36	62	44	Salbutamol inhaler
16	19	10	7	Simvastatin tablet or other statin e.g. atorvastatin, pravastatin, fluvastatin
19	16	15	11	Spironolactone tablet

There was high variability of availability of drugs for NCDs by the type of drug being compared, by health facility level and by management authority. Availability is generally high at the National and Regional Referral Hospitals, as well as at some of the Health Centres. PHUs and other smaller facilities generally have lower availability of these medicines with most drugs being offered at less than half of the facilities.

Table 9-4: Percentage of facilities that have non-communicable disease medicines available by facility type, managing authority and location (N=327)

Facility type										
	National Referral Hospital	Regional Referral Hospital	Specialized Hospital	Health Centre	Public Health Unit (PHU)	Clinic with maternity	Clinic without maternity	Specialized Clinics	
Amlodipine tablet or alternative calcium channel blocker	0	60	33	100	0	16	16	8	
Aspirin cap/tab	100	100	100	80	43	90	78	17	
Beclometasone inhaler	100	80	100	80	57	6	16	9	
Beta blocker (e.g.bisoprolol, metoprolol, carvedilol, atenolol)	100	100	100	100	0	29	34	6	
Enalapril tablet or other ACE inhibitor e.g. lisinopril, ramipril, perindopril	100	80	100	40	0	26	36	14	
Epinephrine injectable	100	100	33	80	29	52	38	11	
Furosemide cap/tab	100	80	67	60	0	23	32	12	
Glibenclamide cap/tab	100	100	67	80	14	74	61	9	
Gliclazide tablet or glipizide tablet	0	50	83	80	36	35	23	2	
Glucose 50 injection	100	20	33	0	0	6	13	2	
Glyceryl trinitrate sublingual tablet	100	20	0	20	0	0	3	2	
Hydrochlorothiazide tablet or other thiazide diuretic tablet	0	40	67	40	0	58	54	11	
Hydrocortisone injection	100	60	33	60	57	71	55	17	
Ibuprofen tablet	100	80	33	80	14	32	46	14	
Insulin regular injection	100	100	100	100	43	23	18	2	
Isosorbide dinitrate tablet	100	60	67	60	43	6	9	3	
Metformin tablet	100	100	100	80	0	58	50	12	
Omeprazole tablet or alternative such as pantoprazole, rabeprazole	100	100	33	60	29	26	37	6	
Paracetamol cap/tab	100	100	67	100	100	94	86	26	
Prednisolone cap/tab	100	100	67	80	14	29	46	12	
Salbutamol inhaler	100	60	33	60	57	55	48	6	
Simvastatin tablet or other statin e.g. atorvastatin, pravastatin, fluvastatin	100	40	33	20	29	10	15	3	
Spironolactone tablet	100	40	0	100	43	10	15	5	

9.2.1. *Availability of mental health and neurological medicines*

According to the 2016 Essential Health Care Package guidelines, the facilities in level 5 of the health care system are responsible for the provision of mental and neurological services and these includes the national psychiatric centre, the National Referral Hospital and Regional Referral Hospitals. `Table 9 – 5 shows that the availability of medicines essential for management of mental health and neurological conditions. The availability of all essential medicines for managing mental health and neurological conditions was generally very low in health facilities that are smaller than Regional Referral Hospitals.

Table 9-5: Percentage of facilities that have mental health and neurological medicines available by facility type, managing authority and location (N=327

	Amitriptyline tablet	Carbamazepine tablet	Chlorpromazine injection	Diazepam tablet	Diazepam injection or diazepam rectal tubes	Fluoxetine tablet	Fluphenazine injection	Haloperidol tablet	Levodopa + carbidopa tablet	Lorazepam injection	Lithium tablet	Phenobarbital tablet	Phenytoin tablet	Valproate sodium tablet
Facility type														
National Referral Hospital	100	100	100	0	100	100	100	100	0	0	0	0	100	100
Regional Referral Hospital	100	100	100	40	100	60	80	100	0	0	0	0	40	80
Specialized Hospital	0	0	33	0	33	0	33	33	0	0	0	0	0	33
Health Centre	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Health Unit (PHU)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinic with maternity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinic without maternity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Specialized Clinics	0	0	0	0	0	0	0	0	0	0	0	0	0	0

9.2.2. *Areas for action.*

There is a need to:

1. Ensure regular and adequate supply of all tracer items for mental and neurological conditions at the national referral hospital
2. Improve the capacity of Health Centres and PHUs to manage mental health and neurological conditions.

9.3. Availability of palliative care medicines

WHO describes palliative care as an approach that improves the quality of life of patients and their families facing life-threatening illness, through the prevention, assessment and treatment of pain and other physical, psychosocial and spiritual problems. Palliative care applies the following principles: i) provides relief from pain and other distressing symptoms; ii) integrates the psychological and spiritual aspects of patient care; iii) offers a support system to help patients live as actively as possible until death; iv) offers a support system to help the family cope during the patient's illness and in their own bereavement; v) uses a team approach to address the needs of patients and their families, including bereavement counselling, if indicated.

Table 9 – 6 shows the percentage of facilities that had palliative care medicines available at the time of the assessment. Overall, paracetamol was the most available medicine across regions, with highest availability higher than 68% in all regions. Availability of other medicines for palliative care was low. Less than 5% of facilities in all regions readily had stronger palliative medications like haloperidol injection, loperamide, lorazepam and morphine. By facility level, there was high availability of these drugs at the National and Regional Referral Hospitals. Health Centres and PHUs could only provide a few of the medicines.

Table 9-6: Percentage of facilities that have palliative care medicines available by facility type, managing authority and location (N=327)

	Dexamethasone injection	Haloperidol injection	Hyoscine butylbromide injection	Ibuprofen	Loperamide tab/cap	Lorazepam tablet	Metoclopramide injection	Morphine granule, injectable or cap/tab	Paracetamol	Senna preparation (laxative)
Facility type										
National Referral Hospital	100	100	100	100	100	100	0	100	100	0
Regional Referral Hospital	100	40	40	80	100	0	60	100	100	20
Specialized Hospital	33	33	33	33	0	0	0	0	67	0
Health Centre	80	0	0	80	0	0	0	0	100	0
Public Health Unit (PHU)	57	0	0	14	0	0	0	0	100	0
Clinic with maternity	13	0	0	32	0	0	0	0	94	0
Clinic without maternity	12	0	0	46	0	0	0	0	86	0
Specialized Clinics	5	0	0	14	0	0	0	0	26	0

9.3.1. Areas for action:

There is need to:

1. Improve availability of specific medicines for palliative care at Regional Referral Hospitals that currently do not provide them.
2. Enhance the capacity of Health Centers and PHUs to provide some palliative care medication.

Diagnostic Services

10.0. Introduction

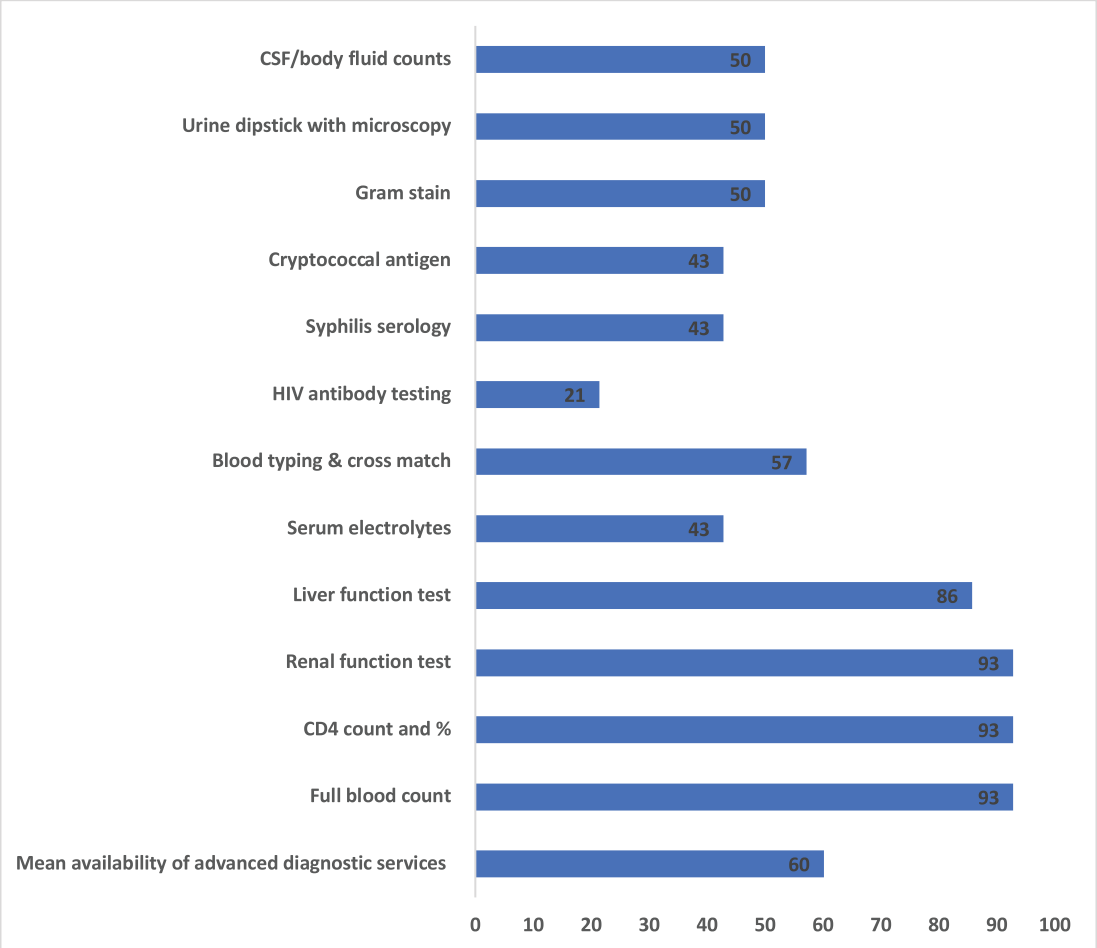
Two types of diagnostics services were assessed in the 2017 SARA survey - availability of advanced diagnostic laboratory services and availability high level diagnostic equipment. This analysis only assessed availability of these services at higher level public facilities (Health Centre or bigger).

10.1. Availability of advanced diagnostic services

Advanced diagnostic laboratory test services are offered mostly at tertiary level facilities and in Health Centres. Services that were assessed in this area included: serum electrolytes, a full blood count with differential, blood typing and cross match, liver function tests, renal function test, CD4 cell counts, HIV antibody testing (ELISA), syphilis serology, cryptococcal antigen testing, gram staining, urine microscopy testing and cerebral spinal fluid (CSF)/body fluid analyses.

The mean availability of advanced diagnostic laboratory services in level 3 to level 5 facilities was 60% (Figure 10 – 1). All services were available at the National Referral Hospital (100%), 78% were available at Regional Referral Hospitals and 35% at Health Centres. Availability of advanced diagnostic laboratory tests at health facilities also varied by the level of complexity that a test required. For example, automated procedures like, full blood counts, CD4 cell counts and liver function tests were available at almost were all facilities (93%) as compared to more services that require more technical skills like syphilis serology and HIV ELISA (both at 43% of facilities). The following test were not available at health centres: serum electrolytes, Cryptococci antigen tests, gram staining, and CSF fluid analyses.

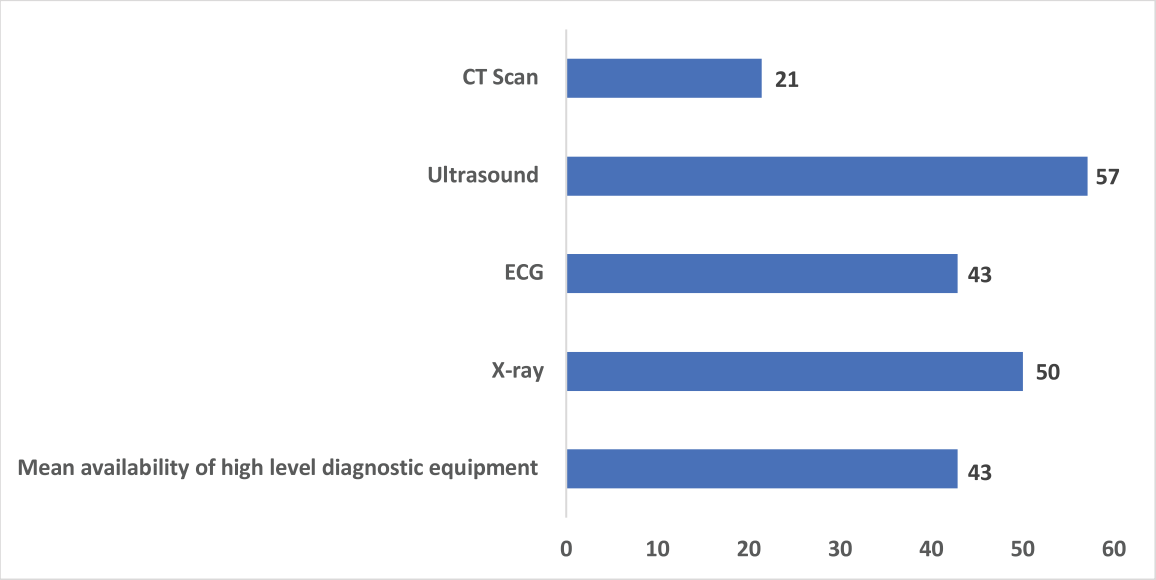
Figure 10—1: Percentage of hospitals that offer advanced diagnostic services (N=14)



10.2. Availability of high level diagnostic equipment

High level diagnostic equipment that are expected to be available at health facilities include ultrasound, ECG, X-ray and CT scan services. The mean availability of these services in level 3 to level 5 facilities was 43% (Figure 10 – 2). All imaging services were available at the National Referral Hospital, 65% were available at Regional Referral Hospitals and only 15% at Health Centres. None of the Health Centres had x-ray imaging services and only 20% could provide ultrasound services.

Figure 10—2: Percentage of hospitals that have high level diagnostic equipment available (N= 14)



10.1.1. Areas of action

Efforts should be put in improving the capacity of capacity of Health Centres to provide advanced diagnostic services– for example serum electrolytes, syphilis tests , X-Ray imaging services and sonography.