

# Standard Treatment Guidelines and Essential Medicines List Pre-Implementation Assessment: Prescribing Practices at Selected Sites

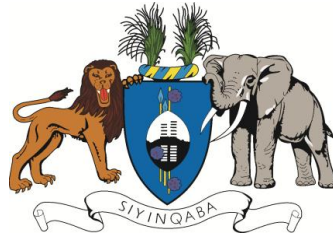
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to Pharmaceuticals and Services





## **Standard Treatment Guidelines and Essential Medicines List Pre-Implementation Assessment: Prescribing Practices at Selected Sites**

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Greatjoy Mazibuko  
Kidwell Matshotyana  
Sithembile Dlamini-Ngeketo  
Sifiso Sithole

August 2012



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## **Key Words**

rational use, standard treatment guidelines, essential medicines list

Systems for Improved Access to Pharmaceuticals and Services  
Center for Pharmaceutical Management  
Management Sciences for Health  
4301 North Fairfax Drive, Suite 400  
Arlington, VA 22203 USA  
Telephone: 703.524.6575  
Fax: 703.524.7898  
E-mail: [siaps@msh.org](mailto:siaps@msh.org)  
Web: [www.siapsprogram.org](http://www.siapsprogram.org)

## CONTENTS

Acronyms and Abbreviations .....	iv
Acknowledgments.....	v
Executive Summary .....	vi
Introduction.....	1
Background .....	1
Aim of the Assessment .....	2
Methodology .....	3
Design .....	3
Targets and Sampling .....	4
Data Collection .....	4
Data Analysis .....	5
Ethical Considerations .....	5
Results.....	6
Summary of Findings.....	6
Types of Facilities Visited .....	6
Number of Medicines Prescribed per Prescription .....	7
Prescribing Patterns Indicators .....	8
Percentage of Medicines Prescribed by Generic Name .....	9
Percentage of Encounters in Which an Antibiotic Is Prescribed .....	10
Percentage of Encounters in Which an Injection Is Prescribed .....	10
Percentage of Medicines Prescribed According to the EML.....	10
Indicators Describing Access to Unbiased Information .....	10
Discussion .....	12
Conclusion and Recommendations.....	14
Conclusion .....	14
Recommendations.....	14
Annex A. Clearance Letter from the Principal Secretary .....	16
Annex B. Request Letter for Data Collectors from UNISWA .....	17
Annex C. Prescribing Indicator Form.....	18
Annex D. Health Facility Indicator Form .....	19
Annex E. Consolidation Form .....	20
Annex F. List of Facilities Selected for Assessment .....	21

## ACRONYMS AND ABBREVIATIONS

AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
CI	confidence interval
EML	essential medicines list
HIV	human immunodeficiency virus
HSRC	Health Sciences Research Council (South Africa)
INRUD	International Network for Rational Use of Drugs
MOH	Ministry of Health
MOHSS	Ministry of Health and Social Services (Namibia)
MSH	Management Sciences for Health
NGO	Nongovernmental organization
PHU	public health unit
PTC	Pharmacy and Therapeutics Committee
RSSC	Royal Swaziland Sugar Corporation
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
STG	standard treatment guidelines
STI	sexually transmitted illness
TB	tuberculosis
UNISWA	University of Swaziland
USAID	US Agency for International Development
WHO	World Health Organization

## ACKNOWLEDGMENTS

The Ministry of Health (MOH) gratefully acknowledges everyone who provided technical support, physical support, and participation in the conceptualization, development, review, and implementation of this assessment. Special thanks go to the facility staff who participated in this assessment and those who provided direct and indirect input during the data collection exercise.

Particular thanks go to the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) program of Management Sciences for Health (MSH) for technical and financial support.

MOH extends its appreciation for the unreserved commitment of the standard treatment guideline (STG)/essential medicines list (EML) task team members who worked tirelessly in the assessments and compiling the report.

Finally, MOH extends its gratitude to Professor Nonhlanhla Sukati, Dean of Health Sciences at the University of Swaziland (UNISWA) for availing the following dedicated team of nursing students who collected data from the selected facilities:

- Mr. Skhombisa Sthebe
- Mr. Mzwiwandile Simelane
- Ms. Lindokuhle Khumalo
- Ms. Sithembile Majola
- Ms. Lindiwe Mhlanga
- Ms. Phumelele Mdluli
- Ms. Zandile Dlamini
- Mr. Thabo Zwakele Dlamini

## EXECUTIVE SUMMARY

The Ministry of Health in Swaziland conducted a baseline assessment of prescribing indicators in an effort to get prescribing data before the implementation of the first edition of the *Standard Treatment Guidelines and Essential Medicines List* of common medical conditions in the country.

The assessment was cross sectional in nature and used prospective data collected from 35 facilities that each had more than 30 patient encounters a day. The assessment was based on prescribing and facility indicators as outlined by the World Health Organization (WHO). These were both private and public sector facilities in the Kingdom of Swaziland. Twenty clinics, eight hospitals, four health centers, and three public health units (PHUs) were assessed.

In total, 1,050 prescriptions were analyzed. On average, 3.3 medicines were prescribed per encounter. Injections were prescribed in 19 percent of the encounters, which was within recommendations from WHO. Adherence to the draft EML in prescribing medicines was also acceptable, with 85 percent of medicines prescribed being listed on the EML. Half of these medicines were prescribed in generic names, far less than the recommended 100 percent. Also of concern was the high antibiotic-encounter per prescription (59 percent).

The results reveal that polypharmacy and antibiotic use is extensive at facilities. These practices fuel inappropriate use that may lead to increased morbidity and mortality in patients as a result of medicine interactions and adverse medicine reactions among other negative effects. Such effects inevitably increase costs and may lead to wastages.

MOH will need to put in place measures to closely monitor and curb irrational use. Regular medicine use evaluations will be useful in monitoring the implementation of various interventions such as the STG/EML and the National Pharmaceutical Policy. Various committees and forums such Pharmacy and Therapeutics Committees (PTCs) should also institutionalize medicine review evaluations as they implement the STG/EML.



# INTRODUCTION

## Background

The Ministry of Health in The Kingdom of Swaziland is currently undergoing various reforms to improve the quality of health services provided by health care professionals from different backgrounds and training. These reforms are aimed at addressing and responding to the growing health burden in the country including the high prevalence of diseases such as HIV/AIDS and TB. The MOH has worked to develop the STG/EML of common conditions in Swaziland that will help improve care and treatment approaches in the country. The STGs are being finalized along with the country's EML based on the WHO Essential Medicines Concept. MOH is also developing a referral linkages document to form part of the overall Essential Health Care Package document.

An evidence-based medicine approach has been applied in reviewing the draft documents to capture the best internationally recognized cost-effective practices while at the same time taking cognizance of the limitations in Swaziland. The development of the two documents has been based on the premise that “development of treatment guidelines in a resource limited country cannot and should not be done in isolation with the drawing up of a medicines list based on the Essential Medicines Concept.”<sup>1</sup> The two are not mutually exclusive.

Such documents have been shown to improve the quality of health care, patient treatment outcomes, and prescribing patterns if implemented well. In an effort to bring to the attention of all stakeholders of the possible benefits of having an STG/EML, MOH embarked on an impact assessment survey that will be implemented in two phases. Phase I is the STG/EML pre-implementation stage, and phase II is the post-implementation survey stage particularly focusing on prescribing indicators.

The International Network for the Rational Use of Drugs (INRUD) in collaboration with WHO has worked on simplifying the process of investigating medicine use by developing concise methodologies and tools to be used in such evaluations or assessments.

WHO estimates that 50 percent of all medicines are inappropriately prescribed and dispensed and also that more than 50 percent of patients fail to take medicines correctly.<sup>2</sup> According to the 1985 WHO Conference of Experts, medicine use can be considered appropriate, or rational, only if the following conditions are met. Medicines must be

- Prescribed when clinically indicated
- At the correct dosages
- For the right duration
- At the lowest cost both to the patient and his or her community

The inappropriate use of medicines can be as a result of the following:

- Failing to prescribe in accordance with guidelines

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<sup>1</sup> Nyazema, N. 2011. *STG/EML Review: Inception Report*. Arlington, VA: MSH/SPS.

<sup>2</sup> Mohanta, G. 2011. *A Tool to Promote Rational Drug Use*. <http://www.ipapharma.org/pt/july2011/16-17.pdf>

- Prescribing with under- or overdosing
- Prescribing of expensive medicines when cheaper medicines would be adequate
- Excessively using injectable medicines when oral formulations are appropriate
- Using too many medicines per patient (polypharmacy)

Inappropriate use of medicines has far-reaching consequences including, but not limited to, the emergence of antimicrobial resistance and adverse medicine interactions.

### **Aim of the Assessment**

The aim of the assessment was to determine the impact of introducing the Swaziland STG/EML as measured by the outpatient prescribing patterns in Swaziland. This measurement will be made by conducting both a pre- and post-STG/EML implementation assessment.

## METHODOLOGY

### Design

A cross-sectional survey on outpatient prescribing patterns was used in this assessment.

### *Prescribing Indicators*

The following WHO/INRUD indicators were selected for the purpose of this survey.<sup>3</sup> The STG/EML task team decided on these indicators.

- **Average number of medicines per prescription.** The purpose of this indicator is to measure the degree of polypharmacy in the selected public and private facilities. It considers the number of medicines prescribed per patient encounter. For this purpose, it does not matter whether the medicines have actually been dispensed.
- **Percentage of medicines prescribed by generic name.** This indicator aims at measuring the practice of using generic names when prescribing. A generic name as defined by WHO is the unique name of a medicine that is globally recognized and is public property. The names normally identify active pharmaceutical ingredients or pharmaceutical substances.<sup>4</sup>
- **Percentage of antibiotics per prescription.** One of the biggest contributors to antimicrobial resistance is the inappropriate use of antibiotics. Of particular concern is the use of antibiotics for treatment of ailments that are viral in nature. This purpose of this indicator was to measure the extent of antibiotic use in the selected facilities. Antibiotics used in sexually transmitted infection (STI) management were not counted for this indicator.
- **Percentage of injections per prescription.** The purpose of this indicator was to estimate the extent to which injections are used as a route of administration of medications. Several studies show that these are commonly overused and costly forms of medicine therapy.
- **Percentage of medicines prescribed from the EML.** Swaziland had a draft EML that was distributed to facilities. This draft was used in the development of the final EML, and facilities were measured against the draft version. The purpose of this indicator was to estimate the extent to which prescribers adhere to this list.
- **Percentage of medicines prescribed according to the STG.** This indicator sought to measure compliance to treatment guidelines and served as a proxy indicator for rational prescribing among practitioners. This indicator was not assessed in the pre-implementation assessment because the STG/EML had not been implemented at the time of the assessment.

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<sup>3</sup> WHO. 1993. *How to Investigate Drug Use in Health Facilities: Selected Drug Indicators*. Geneva: WHO.

<sup>4</sup> WHO. 1997. *Guidelines on the Use of International Nonproprietary Names (INN) for Pharmaceutical Substances*. Geneva: WHO.

- **Percentage of facilities with STGs and other materials.** The purpose of this indicator was to measure the availability of basic reference materials at health facilities. The following materials had to be available at the selected facilities:
  - STI guidelines
  - Antiretroviral therapy (ART) guidelines
  - Draft EML

Facilities were not measured on the availability of the new edition of the STG/EML.

## Targets and Sampling

Sampling was done in accordance with WHO recommendations. For simple prospective cross-sectional medicine utilization surveys, WHO recommends 20 facilities with about 30 patient encounters per facility,<sup>5</sup> in this study, 46 facilities with more than 30 patient encounters per day were conveniently selected for the survey.

A list of all the public, mission, nongovernmental organization (NGO), and private facilities in the country with an indication of the patient encounters at the facility a day was generated.<sup>6</sup> Data from the health management information system were also used in determining the patient encounters per facility. (See table 1. See annex f for the list of facilities selected for this survey.)

**Table 1. Public and Private Health Facilities in Swaziland**

Level of facility	Public (gov. + Mission + NGO)	Private	Total
Hospitals	8	4	12
Health centers	5	0	5
PHUs	8	0	8
Clinics	141	99	240
Grand total	162	103	265

Source: Adapted from the MOH's *Service Availability Mapping Report* (2010).

## Data Collection

The prescriber indicator form (annex C) and a modified facility indicator form (annex D) were used as data collection tools, all from WHO/INRUD. Third-year nursing students from UNISWA were employed as data collectors. A formal request (annex B) from MOH was sent to the Dean of Health Sciences to assist with availing the students for this exercise. The data collectors were trained on data collection and on the scope of the exercise.

Health facilities were notified of the survey through the office of the principal secretary. Data collectors were given training on how to collect the data. Data on prescribing indicators were collected from patients' cards as they presented themselves to the pharmacy. Health workers were also asked to present guidelines that are being used at each facility. Pharmacy personnel assisted the data collectors where possible.

<sup>5</sup> WHO. 1993. *How to Investigate Drug Use in Health Facilities: Selected Drug Indicators*. Geneva: WHO.

<sup>6</sup> MOH. 2010. *Service Availability Mapping Report*. Mbabane: MOH.

## **Data Analysis**

The completed forms were sent to the secretariat of the STG/EML committee and analyzed using a computerized spreadsheet on an Excel package. For the prescribing indicators, the unit of analysis was the individual prescription, recorded on the prescriber indicator form. The necessary data on prescribing indicators were calculated and summarized by facility on the prescribing indicator form (annex C) and facility indicators on the facility summary form (annex D).

### ***Consolidation Table for All Facilities***

After the data had been collected from each facility, the results were entered onto a consolidation form (annex E) on Excel. Univariate analysis was done to describe the distribution of facility characteristics and prescribing patterns. Descriptive statistics (i.e., means, minimum and maximum values, and the standard errors for individual indicators) were then calculated from this computerized spreadsheet.

### ***Graphic Displays of Results***

From the consolidation table, bar charts were generated showing the number of facilities at different levels of each indicator and how the facilities vary. These charts are indicative only of how the different facilities compare, because the number of prescriptions studied in each facility (usually 30 in a basic survey) is too low to give a reliable picture of that individual facility. These comparative data are useful, however, for identifying facilities where follow-up activities could be undertaken. To highlight contrasts between different types of facilities in these figures, different shades were used.

## **Ethical Considerations**

The assessment was not expected to raise any significant ethical issues because the methods and practice should fall within the regular activities and mandate of the MOH, but clearance and a cover letter (annex A) were sought from the principal secretary of the MOH.

## RESULTS

### Summary of Findings

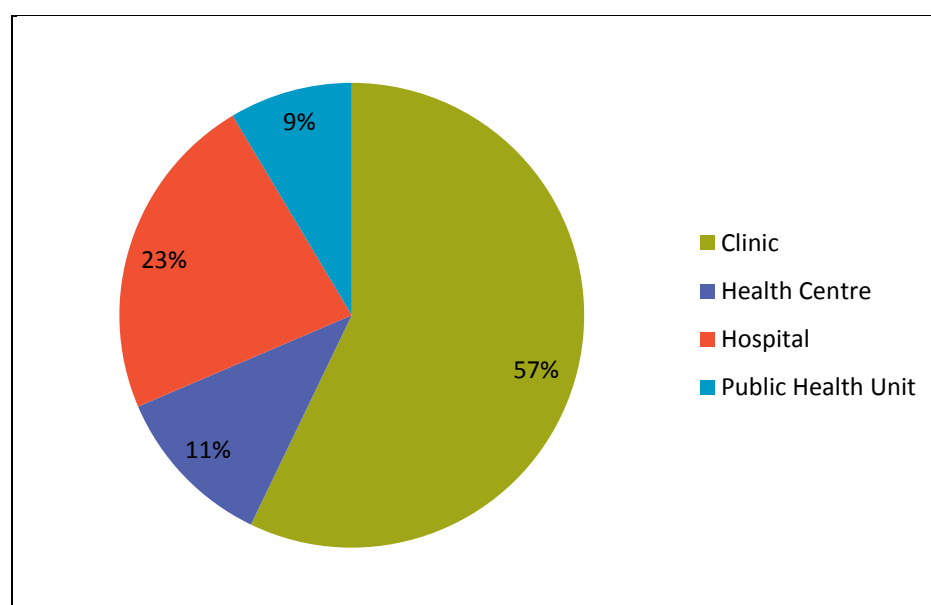
Table 2 provides a summary of the assessment finding in the context of the WHO standards.

**Table 2. Summary of Findings and Comparison with WHO Limits**

Indicator	WHO standards	Assessment findings at 95% CI
Average number of items in a prescriptions per encounter	1.6–1.8	3.33 (3.07, 3.60)
Percentage of medicines prescribed by generic name	100%	53% (46%, 60%)
Percentage of encounters with antibiotic prescribed	20–26.8%	59% (52%, 66%)
Percentage of encounters with injection prescribed	13.4–24.1%	19% (14%, 24%)
Percentage of medicines prescribed on EML	100%	89% (84%, 93%)

### Types of Facilities Visited

It was envisaged that 46 facilities would be visited, but in total, 35 facilities were assessed. Of these, twenty (57 percent) were clinics, eight (23 percent) were hospitals, four (11 percent) were health centers, and three (9 percent) were PHUs (figure 1).



**Figure 1. Facilities assessed (N = 35)**

### Facility Type and Sector

Of these 35 facilities, the majority (n = 27) of facilities visited were providing services for the public sector (figure 2).

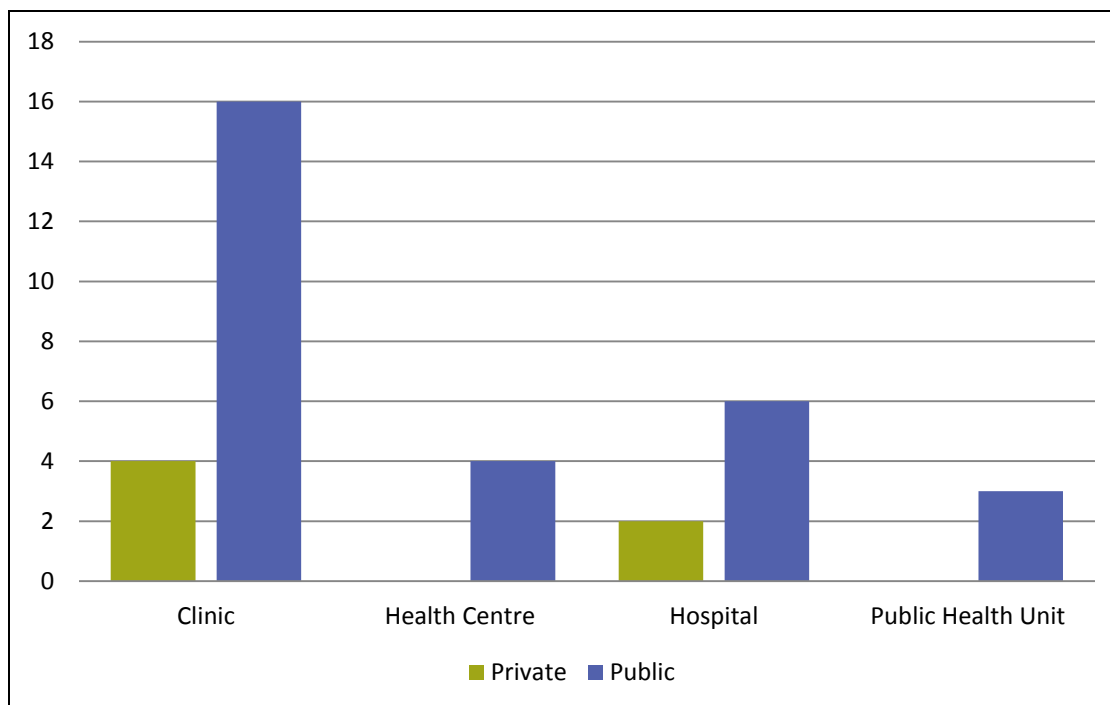
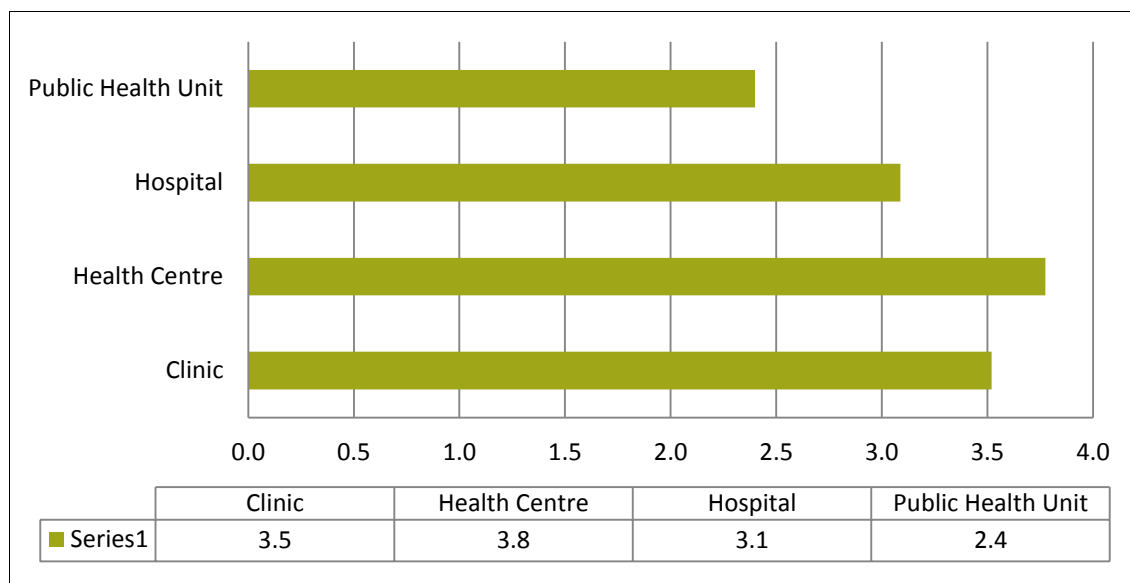


Figure 2. Facilities assessed by sector

### Number of Medicines Prescribed per Prescription

#### Average Number of Items per Prescription by Type of Facility

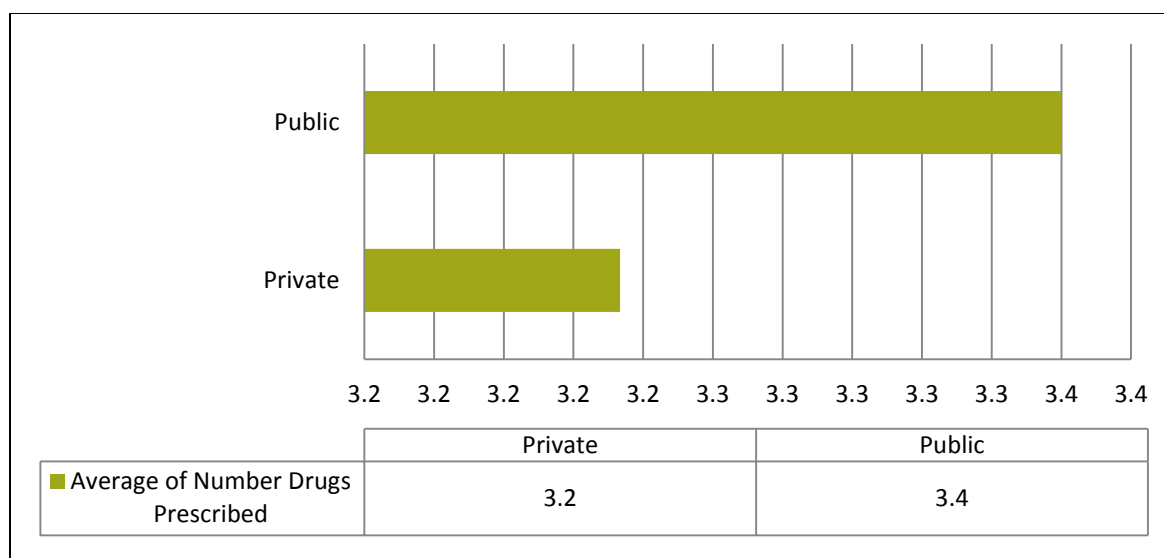
Table 1 and figure 3 show the results for this indicator. The average number of medicines prescribed per prescription was 3.33 medicines at 95 percent CI (3.07, 3.60). Health centers had the highest (3.8) average and were closely followed by clinics (3.5). All facilities had higher numbers of medicines per prescription than what is recommended by WHO.



**Figure 3. Average number of items per prescription by type of facility**

The public sector facilities seemed to have the highest (3.4) number of medicines prescribed per encounter (figure 4).

#### ***Average Number of Items per Prescription by Sector***

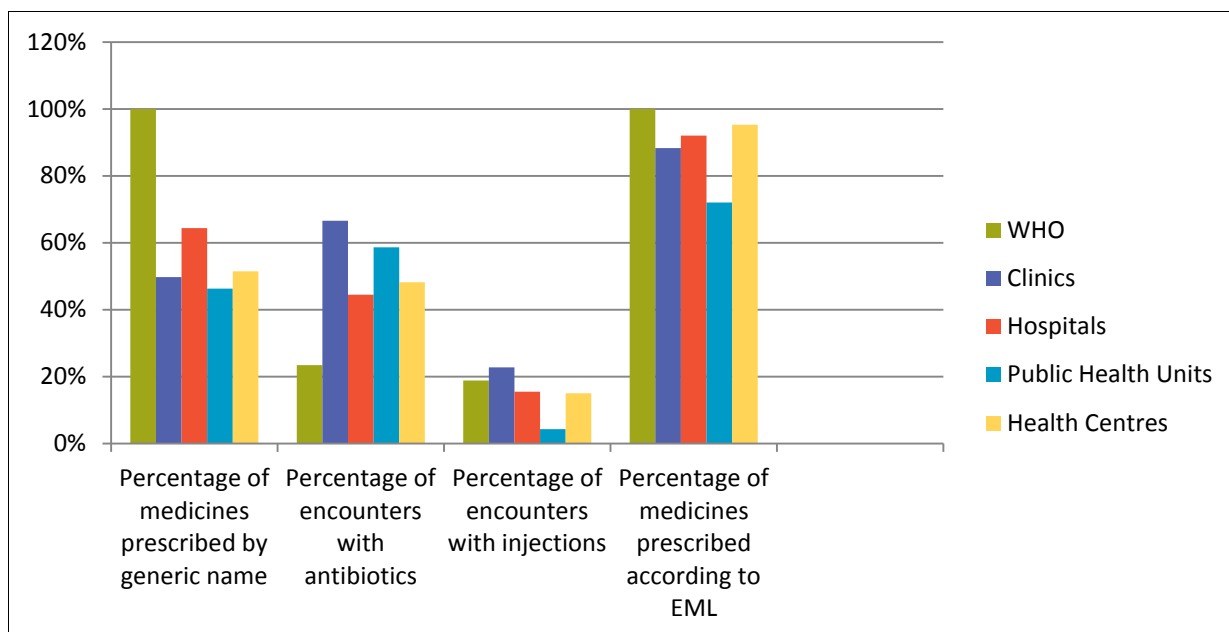


**Figure 4. Average number of prescriptions by sector**

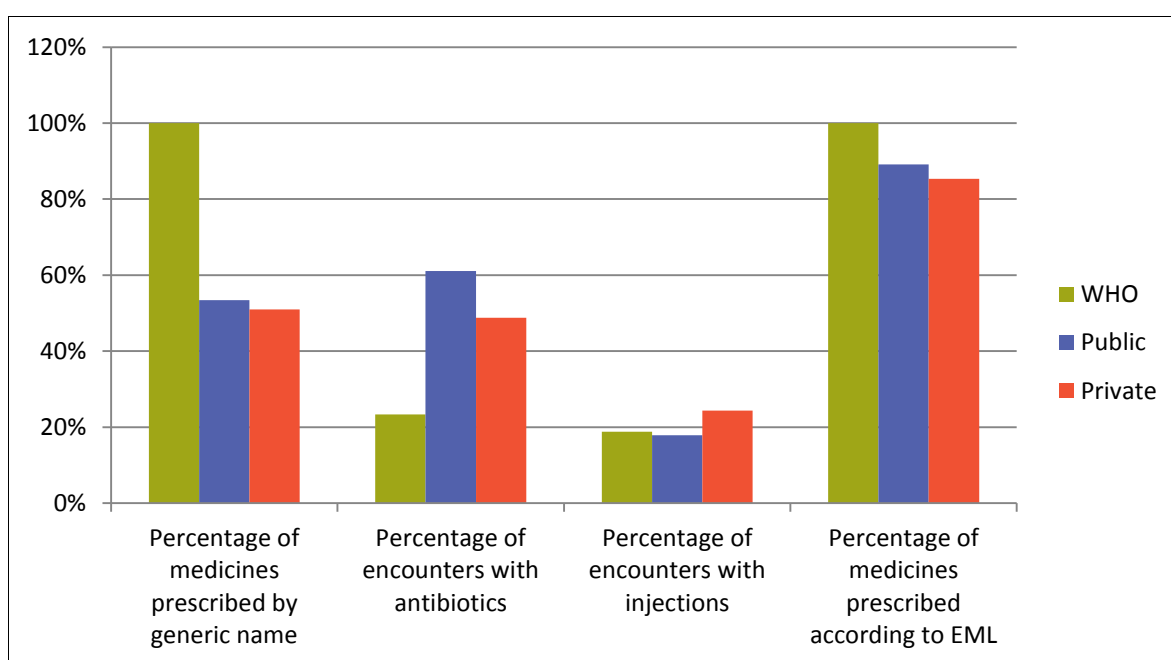
#### **Prescribing Patterns Indicators**

The results from the indicators related to prescribing patterns are shown and described below in figure 5 (by type facility type) and figure 6 (by sector).





**Figure 5. Aggregate of prescribing indicators by type of facility**



**Figure 6. Aggregate of prescribing indicators by sector**

### Percentage of Medicines Prescribed by Generic Name

Results for this indicator are shown table 1, figure 5, and figure 6. The average percentage of medicines dispensed by generic name at 95 percent CI was 53 percent (46 percent, 60 percent). This percentage was half of what WHO recommends (100 percent). PHUs had the lowest percentage (46 percent). The percentage was almost the same in the private (51 percent) and public sector (53 percent), meaning that the practice is similar in both sectors.

### **Percentage of Encounters in Which an Antibiotic Is Prescribed**

The overall average percentage from the assessment at 95 percent CI was 59 percent (52 percent, 66 percent) with the highest percentage (61 percent) in the private sector and clinics (67 percent). In general, the percentage of antibiotic encounters in all facilities and sectors is much higher than the recommended average of 21 percent.

### **Percentage of Encounters in Which an Injection Is Prescribed**

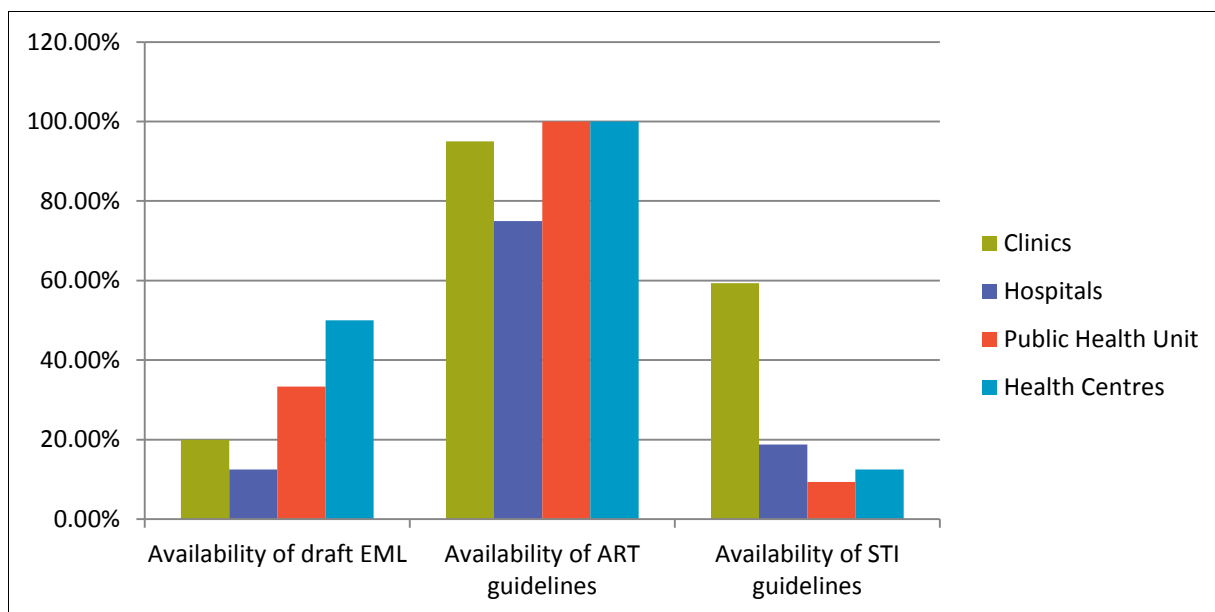
The results of this indicator are shown in table 1, figure 5, and figure 6. The average for this indicator was 19 percent (14 percent, 24 percent) at 95 percent CI. This percentage was within WHO's recommended range (13.4–24.1 percent). When comparing the percentage injection use in the facilities, again clinics and the private sector had the highest percentages of injection use (23 percent) and (24 percent), respectively. PHUs had the lowest (4 percent) percentage of injection use largely due to the fact that immunization services were excluded in this assessment.

### **Percentage of Medicines Prescribed According to the EML**

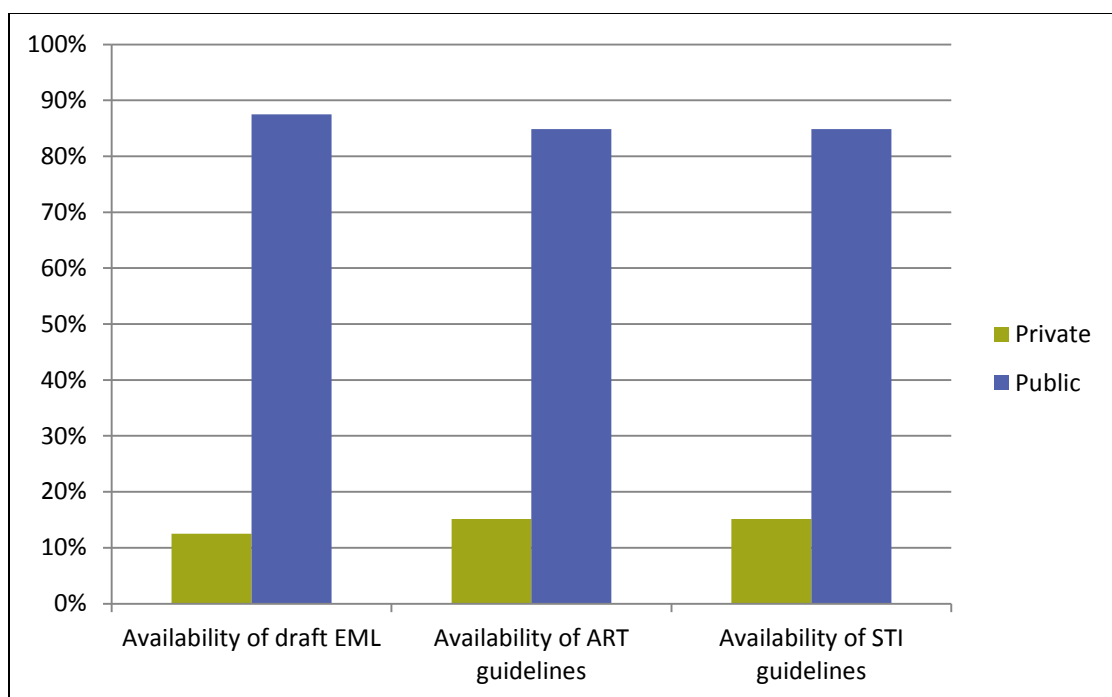
On average, the adherence to prescribing according to the EML was relatively high in all the facilities (89 percent), with health centers and hospitals recording the highest percentage of medicines prescriptions adhering to the EML of (95 percent) and (92 percent), respectively. The practice was comparable in both the private (85 percent) and public (89 percent) sector.

### **Indicators Describing Access to Unbiased Information**

Figures 7 and 8 clearly show the findings related to indicators describing availability of resources (ART, STI, and draft EML) and access to unbiased prescribing information. The STG was not part of the list of materials because it is still to be disseminated to facilities. The draft EML was available in half of the health centers (50 percent).



**Figure 7. Aggregate of availability of reference materials by type of facility**



**Figure 8. Aggregate of availability of reference materials by type of facility**

Public facilities had most of the resource materials as compared to the private sector, where less than 20 percent of the sites assessed had STI guidelines, ART guidelines, and a draft EML.

## DISCUSSION

The results presented above are discussed below, looking at each indicator in detail. WHO standards will be used as reference or gold standard for comparison. Results from selected countries will also be presented to ascertain where the Kingdom of Swaziland is in comparison other countries.

The **average number of medicines per prescription** of 3.3 was significantly higher than that of the WHO standard of 1.6–1.8. From the first edition of the STG/EML with 134 conditions, the average number of medicines proposed is 1.8 per condition. The high figure from the assessment is a clear indication of polypharmacy in the facilities that were assessed. This finding could be attributed to multiple disease and multi-morbidity especially in elderly<sup>7</sup> and also to HIV and TB infections.<sup>8</sup> Irrespective of this, high prevalence of polypharmacy in any patient may lead to increased risk of poor adherence, medication errors, adverse medicine reactions, and medicine interactions. As a result of these negative effects, more money needs to be allocated to manage them. Clearly, whatever the cause of the polypharmacy, it is important that MOH put in place measures to curb it.

The **average percentage of medicines prescribed by generic name** of 53 percent is lower than the recommended 100 percent by WHO. Generic prescribing is recommended by the Kingdom of Swaziland Government policy through the National Pharmaceutical Policy (2011), which states that generic prescribing and dispensing should be enforced in the public and private sectors.<sup>9</sup> As such, the STG/EML has all medicines listed by generic name, and the Central Medical Store order books for facilities also list medicines by generic names. The percentage reveals, however, that not all facilities and health workers use generic names when prescribing. Two anecdotal reasons could be the lack of pharmacy personnel in clinics to appropriately check that prescriptions conform to generic prescribing and the large number of health care workers from different medical training backgrounds in Swaziland.

The **percentage of encounters in which an antibiotic is prescribed** of 59 percent clearly indicates that antibiotics are overprescribed in the Kingdom of Swaziland. This seemingly is a common problem in other countries in the region where their medicine use evaluation studies indicated the following: Namibia, 51 percent,<sup>10</sup> and South Africa, 50 percent.<sup>11</sup> Attributing reasons could be the following:

- Lack of STGs to guide management of conditions requiring antibiotic use
- Rampant empiric antibiotic prescribing as a result of a lack of the medical laboratory capacity needed to test for sensitivity and provide results in a timely fashion

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<sup>7</sup> Nobilli, A. et al. 2011. "Multiple Disease and Polypharmacy in the Elderly: Challenges and the Internist of the Third Millennium." *Journal of Comorbidity*, 1: 28-44

<sup>8</sup> Pau, A.K. 2002. *Polypharmacy Problems: Drug Interactions in the Multidrug Therapy of HIV Infection*. [http://www.prn.org/images/pdfs/440\\_pau\\_alice\\_v7n1.pdf](http://www.prn.org/images/pdfs/440_pau_alice_v7n1.pdf)

<sup>9</sup> MOH. 2011. *National Pharmaceutical Policy* Mbabane: MOH.

<sup>10</sup> MOHSS. 2001. *3rd Drug Use Evaluation Survey in Namibia's Public Health Institutions*. Windhoek: MOHSS.

<sup>11</sup> HSRC. 2006. *Drug Prescribing Habits in Private Surgeries and Public Hospitals: Impact of SA NDP after 10 Years of Implementation*. Pretoria: HSRC. [http://www.hsrc.ac.za/HSRC\\_Review\\_Article-43.phtml](http://www.hsrc.ac.za/HSRC_Review_Article-43.phtml)

Prompt measures have to be taken to improve the prescribing habits and reduce the number of antibiotics prescribed. Over use and inappropriate use of antibiotics may lead to increased antimicrobial resistance to the current, cost-effective antibiotics, increased costs, and risk to the patient from unwanted adverse effects.

Comparatively, the **percentage of encounters in which an injection is prescribed** (19 percent) was within the acceptable standard WHO's recommended 13.4–24.1 percent. Injections are not without attendant risks; including transmission of HIV and hepatitis B. In some cases, injection may not be more effective than oral therapy, and injections tend to be more costly.

Nevertheless, the health workers should be commended for the low level of injection use generally and encouraged to maintain or further reduce the percentage of use.

More than 80 percent of the public facilities assessed, had the **draft EML, ART guidelines, and STI guidelines**, and less than 20 percent of the private facilities had these documents. All PHUs and health centers assessed had ART guidelines. In general, most of the facilities had the ART guidelines. STI guidelines were found in 60 percent of the clinics. Generally, the availability of the draft EML and STI guidelines was much lower than that of the ART guidelines in all facilities.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

The STG/EML pre-implementation assessment revealed that the following issues should to be examined to sustain efforts to improve and strengthen medicine use and management in the Kingdom of Swaziland.

- The average number of medicines per prescription was above the WHO figure (particularly in the public sector) and not in line with the treatment guidelines currently being used in the country or those in the first edition of the STG/EML. PHUs in comparison to other facility types fared very well on this indicator.
- The percentages of medicines prescribed by generic name are too low, and half of what is set by WHO. This finding is comparable in both the public and private sector. Hospitals generally fared well, but the percentage generic prescribing was lower than the target. PHUs have the lowest percentage of prescriptions with medicines prescribed in generic name as compared to other facility types.
- The average percentage use of antibiotics is higher in clinics and in the private sector. Overall the percentage antibiotic use is higher than the WHO recommended percentage. PHUs had scored the least on the use of injections probably due to the fact that vaccines and STI medicines were not included in for the assessment of this indicator.
- The percentage use of injections is in line with the recommendations.
- Compliance to the EML as measured by the percentage of medicines prescribed according to the EML (draft EML available at facilities) was high and comparable in both the public and the private sector.
- Availability of reference materials and guidelines in the private sector is poor.
- Availability of draft EML and STI guidelines in facilities is very low.

### Recommendations

In view of the above findings and discussions, the following recommendations are made:

- MOH should regularly use these validated medicine management and core medicine indicators as part of monitoring and evaluating the implementation of the National Medicines Policy, STGs, and EML.
- MOH should ensure that the results from this assessment are brought to the attention of all relevant stakeholders.
- The use of the STG/EML should be promoted in both the public and private sector through regular distribution and training of all relevant health workers.

- PTCs should take a key role in enforcing the use and implementation of the STG/EML.
- Antibiotic prescribing should be in line with the treatment guidelines. Interventions should be identified and developed through PTCs and other committees such as Infection and Prevention Committees for implementation, to address the large number of antibiotics prescribed per patient.
- Clinic supervisors could be considered to monitor antibiotic usage in clinics and PHUs. Senior medical officers in hospitals can perform this monitoring through PTCs in collaboration with pharmacy staff.
- To control the overuse of antibiotics in a health facility, all recommended prescribers should submit their names and signatures to the pharmacy department. Any prescription that does not have the name and signature of a prescriber on the list should be rejected.
- Culture sensitivity test guidelines should be adhered to before prescribing antibiotics, and pharmacy staff should dispense antibiotics only after confirmation of culture sensitivity test results.
- Proper labeling of medicines must be used. Antibiotic labels must provide instructions for use and emphasize the importance of completing the course in an effort to avoid unwanted resistance to antimicrobial medicines.

## ANNEX A. CLEARANCE LETTER FROM THE PRINCIPAL SECRETARY

Telephone: (+268 404  
2431)  
Fax: (+268 404 2092



MINISTRY OF HEALTH  
P.O. BOX 5  
MBABANE  
SWAZILAND

### THE KINGDOM OF SWAZILAND

28<sup>th</sup> June 2012

To: See distribution list

Dear Sir/Madam

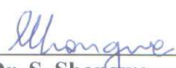
#### RE: STG/EML PRE-IMPLEMENTATION ASSESSMENT

The Ministry of Health (MOH) in collaboration with Management Sciences for Health/SPS program has finalised the Standard Treatment Guidelines and Essential Medicines List of common medical conditions in the Kingdom of Swaziland. These documents are meant to assist health workers with standardization of treatment approaches to specific conditions and also rationalizing use of medicines.

In order to assess the potential benefits of having these documents, the MOH has planned to conduct a pre-implementation assessment of prescribing patterns during the week 16<sup>th</sup> – 20<sup>th</sup> July 2012 in the facilities listed below. Checklists adapted from the WHO/INRUD list of indicators will be used in this exercise. Information will be collected from prescriptions presented to the dispensary or pharmacy or from prescriber's notes. Student Nurses on attachment will collect this information from the facilities and they will submit to the STG/EML task team in Mbabane.

MOH requests your assistance with providing support and permitting the students to collect information as per the checklist. For any enquiries to this matter do not hesitate to contact **Dr. Sithembile Dlamini-Nqeketo: STG/EML task team Chairperson** on email: [sithembile.snap@nercha.org.sz](mailto:sithembile.snap@nercha.org.sz) and tel: 24043622.

Yours Sincerely,

  
Dr. S. Shongwe  
Principal Secretary: MOH





## ANNEX B. REQUEST LETTER FOR DATA COLLECTORS FROM UNISWA

Telephone: (+268 404  
2431)  
Fax: (+268 404 2092



MINISTRY OF HEALTH  
P.O. BOX 5  
MBABANE  
SWAZILAND

### THE KINGDOM OF SWAZILAND

9<sup>th</sup> July 2012

To: Dean: Faculty of Health Sciences

Dear Sir/Madam

**RE: REQUEST FOR STUDENTS TO COLLECT DATA: STG/EML PRE-  
IMPLEMENTATION ASSESSMENT**

The Ministry of Health (MOH) in collaboration with Management Sciences for Health/SPS program has finalised the Standard Treatment Guidelines and Essential Medicines List of common medical conditions in the Kingdom of Swaziland. These documents are meant to assist health workers with standardization of treatment approaches to specific conditions and also rationalizing use of medicines.

In order to assess the potential benefits of having these documents, the MOH has planned to conduct a pre-implementation assessment of prescribing patterns during the week 16<sup>th</sup> – 20<sup>th</sup> July 2012 in the facilities listed below. Information will be collected from prescriptions presented to the dispensary or pharmacy or from prescriber's notes. Student Nurses on attachment will collect this information from the facilities and they will submit to the STG/EML task team in Mbabane.

MOH requests your assistance with providing 8 students to collect information from these facilities. Each region will be allocated two students. For any enquiries to this matter do not hesitate to contact **Dr. Sithembile Dlamini-Nqeketo: STG/EML task team Chairperson** on email: [sithembile.snap@nercha.org.sz](mailto:sithembile.snap@nercha.org.sz) and tel: **24046322**. MSH/SIAPS will provide support for this activity. The students will be trained on the 16<sup>th</sup> July on how to collect the data.

Yours Sincerely,

A handwritten signature in black ink, appearing to be 'S. M. Zwane'.

**Dr. S. M. Zwane**  
**Director: Health Services**



## ANNEX C. PRESCRIBING INDICATOR FORM

<b>PRESCRIBING INDICATOR FORM</b>								
Location: _____								
Investigator: _____					Date: _____			
Seq. #	Date of Rx (dd/mm/yy)	Age (yrs)	# Medicines	# Generics	Antib. (0/1)*	Injec. (0/1)*	# on EDL	Diagnosis (Compulsory)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
<b>Total</b>								
<b>Average</b>								
<b>Percentage</b>				%	%	%	%	
		<i>of total medicines</i>	<i>of total cases</i>	<i>of total cases</i>	<i>of total medicines</i>			

## ANNEX D. HEALTH FACILITY INDICATOR FORM

<b>SURVEY FORM 2: HEALTH FACILITY INDICATOR FORM</b>	
<b>Name of health facility:</b>	
<b>Name and designation of data collectors:</b>	
<b>Tel. no. of team leader:</b>	<b>Date:</b>
EML available at facility (Y/N) – Even draft	
National policies (malaria, TB, ART, STI) available at facility (Y/N)	
Other guidelines in place	

## ANNEX E. CONSOLIDATION FORM

Date	Facility	Avg. Medicines Prescribed	Percent Generics	Percent Antibiotics	Percent Injections	Percent on EDL	% Medicines Dispensed	% Available EDL	% Available ART Guide	% Available STI Guide

## ANNEX F. LIST OF FACILITIES SELECTED FOR ASSESSMENT

<b>Hhohho Region</b>	Mbabane Government Hospital
	Baylor COE
	Piggs Peak Government Hospital
	Mkhuzweni Health Centre
	Dvokolwako Health Centre
	Lobamba Clinic
	Mbabane PHU
	Motshane Clinic
	Satellite Clinic
	Mahwalala Red Cross Health Clinic
	Medisun Clinic
	Dr. Sarugaser Clinic
<b>Manzini Region</b>	Raleigh Fitkin Hospital
	Mankayane Government Hospital
	Mankayane PHU
	National TB Hospital
	Psychiatry Hospital
	King Sobhuza II PHU
	Philani Clinic
	Manzini Clinic
	Phocweni Clinic
	Sigombeni Red Cross Clinic
	Dr. Mathunjwa Clinic
	Women and Children Hospital
<b>Lubombo Region</b>	Good Shepherd Hospital
	Sithobela Health Centre
	Shewula Nazarene Clinic
	Ubombo Clinic (ILLOVO)
	St. Theresa Clinic
	Siteki Nazarene Clinic
	Gilgal Clinic
	RSSC Mhlume Clinic
	RSSC Simunye Clinic
	Siteki PHU
	Vuvulane Clinic
<b>Shiselweni Region</b>	Hlathikulu Government Hospital
	Nhlangano Health Centre
	Matsanjeni Health Centre
	Hlathikulu PHU
	Mashobeni Clinic
	Our Lady of Sorrows Clinic
	JCI Clinic
	Dr. M. Ahmed-Essa Clinic