Country Data Profile on the Pharmaceutical Situation in the Southern African Development Community (SADC)

ZAMBIA

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Country	**ZAMBIA**
Name of Coordinator	Mildred Mulenga
Position	Principal Pharmacist
E-mail address	milile52000@yahoo.com
Tel number	0260977306442
Date Submitted	12 October 2009
Name of Endorser	Dr Gardner Syakanta
Position of Endorser	Director Clinical Care and Diagnostic Services

INTRODUCTION

The SADC Pharmaceutical Business Plan 2007-2013 aims at ensuring availability of essential medicines, including African traditional medicines, in order to reduce disease burden in countries. Within this context, **Zambia** has collaborated with WHO in the collection and analysis of data on it's pharmaceutical situation. This information will be used as a baseline before embarking on the implementation of the Pharmaceutical Business Plan, and will be used: to take stock of the pharmaceutical situation and identify areas in need of strengthening and support; to compare results with those of other countries fostering a sharing of experiences and enabling identification of strengths and opportunities for cooperation; and to measure over time the impact of the support provided by the SADC Secretariat, WHO and other partners.

A questionnaire on pharmaceutical policies and structures was developed by WHO based on previous tools elaborated by the organization and other leading partners such as the Medicines Transparency Alliance. To facilitate the work at country level, the questionnaire was filled in at central level by WHO with data available from global sources (e.g. WHO Statistical System) as well as with specific information available within the Essential Medicines Department of WHO. This included not only the WHO 2007 Level I Survey, but also country-specific assessments such as the level II facility survey[1], the WHO/HAI pricing surveys[2] etc.

After being populated, the questionnaire was sent to **Zambia** so that public officials could review and correct the filled data and, where possible, complete the missing data fields. A local consultant was recruited to facilitate the process and collect information from key agencies (Department of Pharmaceuticals, Central Medical Store, etc.). The names of respondents to each section were registered, in case follow-up was needed; the source of each data was also included in the questionnaire as a guarantee of the quality of the information and can be seen in the last column on each table. A senior official in the Ministry of Health has confirmed the accuracy of the information and provided permission for its publication on SADC and WHO web sites.

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[1] *WHO Operational package for assessing, monitoring and evaluating country pharmaceutical situations. Guide for coordinators and data collectors.* Geneva, World Health Organization, 2007.

[2] WHO, Health Action International, *Measuring medicine prices, availability, affordability and price components 2nd edition*, Geneva, World Health Organization, 2008.

PART 1- HEALTH and DEMOGRAPHIC DATA

1.1 Demographic and Socioeconomic Indicators				
Population, mortality, fertility			**YEAR**	**SOURCE**
Population, total	**11,992**	,000	2007	World Health Statistics
Population < 15 years	**46%**	% of total population	2007	World Health Statistics
Population > 60 years	**5%**	% of total population	2007	World Health Statistics
Urban population	**35%**	% of total population	2007	World Health Statistics
Population growth	**1.9%**	Annual %	2007	World Bank Nutrition, Health and Population
Fertility rate, total	**5.2**	Births per woman	2007	World Health Statistics
Economic status			**YEAR**	**SOURCE**
GDP	**11.36**	Current US$ Billions	2007	World Development Indicators database, April 2009
GDP growth	**6.2%**	Annual %	2009	Central Statistics Office, Zambia
GNI per capita	**770**	Current US$	2007	World Development Indicators database, April 2009
Population living < PPP int. $1 a day	**N/A CSO Zambia uses poverty line**	%		CSO Zambia uses poverty line
Income share held by lowest 20%	**0.9%**	%	2006	CSO

Education and literacy			YEAR	SOURCE
Adult literacy rate, 15+ years		% of total population		
Primary school enrolment rate, males	**90.0%**	% of male population	2006	World Health Statistics
Primary school enrolment rate, females	**94.0%**	% of female population	2006	World Health Statistics

1.2 Mortality and Causes of Death				
Life expectancy and mortality			**YEAR**	**SOURCE**
Life expectancy at birth (both sexes)	**46**	Years	2007	World Health Statistics
Adult mortality rate (both sexes, 15 to 60 years)	**550**	/1,000 population	2007	World Health Statistics
Maternal mortality ratio	**830**	/100,000 live births	2005	World Health Statistics
Neonatal mortality rate	**40**	/1,000 live births	2004	World Health Statistics
Infant mortality rate (between birth and age 1)	**103**	/1,000 live births	2007	World Health Statistics
Under 5 mortality rate	**170**	/1,000 live births	2007	World Health Statistics

PART 2- HEALTH SERVICES

2.1 Health Expenditures				
Overall health expenditures			**YEAR**	**SOURCE**
Total annual expenditure on health	**677,925,635**	US$ average exchange rate	2006	NHA
Total annual per capita expenditure on health	**38**	US$ average exchange rate	2006	World Health Statistics
Health expenditure as % of GDP	**6.2%**	% of gross domestic product	2006	World Health Statistics
Government expenditure on health as % of total government budget	**16.4%**	% of total government budget	2006	World Health Statistics
Government annual expenditure on health	**411,509,255**	US$ average exchange rate	2006	NHA
Health expenditures by source			**YEAR**	**SOURCE**
Annual per capita government expenditure on health	**18**	US$ average exchange rate	2006	World Health Statistics
Government annual expenditure on health as % of total	**60.7%**	% of total expenditure on health	2006	World Health Statistics
Social security expenditure as % of government on health	**0.0%**	% of government expenditure on health	2006	World Health Statistics
Annual per capita private expenditure on health	**14.9**	US$ average exchange rate	2006	CALCULATED from World Health Statistics
Private expenditure as % of total health expenditure	**39.3%**	% of total expenditure on health	2006	World Health Statistics
Private out-of-pocket expenditure as % of private health expenditure	**67.2%**	% of private expenditure on health	2006	World Health Statistics

Premiums for private prepaid health plans as % of total private health expenditure	**3.7%**	% of private expenditure on health	2006	World Health Statistics
Population covered by national, social, or private health insurance or other sickness funds		% of total population		

2.2 Health Personnel and Infrastructure				
Personnel			**YEAR**	**SOURCE**
Total number of physicians	**1,661**	Total number	2009	Medical Council of Zambia register
Physicians per 1,000 population	**0.14**	per 1,000 pop	2009	Medical Council of Zambia register
Total number of nursing and midwifery personnel	**16,361**	Total number	2009	General Nursing Council register
Nursing and midwifery personnel per 1,000 population	**1.36**	per 1,000 pop	2009	General Nursing Council register
Total number of pharmaceutical personnel[3]	**723**	Total number	2009	Medical Council of Zambia register
pharmaceutical personnel per 1,000 pop	**0.06**	per 1,000 pop	2009	Medical Council of Zambia register
Total number of pharmacists[4]	**243**	Total number	2009	Medical Council of Zambia register
Total number of pharmaceutical technicians[5]	**480**	Total number	2009	Medical Council of Zambia register
Number of newly registered pharmacists in the previous year	**37**	Total number	2009	Medical Council of Zambia register

[3] Pharmaceutical personnel include pharmacists, pharmaceutical assistants, pharmaceutical technicians and related occupations.

[4] ***Pharmacists*** store, preserve, compound, test and dispense medicinal products and counsel on the proper use and adverse effects of drugs and medicines following prescriptions issued by medical doctors and other health professionals. They contribute to researching, preparing, prescribing and monitoring medicinal therapies for optimizing human health.

[5] ***Pharmaceutical technicians and assistants*** perform a variety of tasks associated with dispensing medicinal products under the guidance of a pharmacist or other health professional.

Facilities			**YEAR**	**SOURCE**
Hospitals	**98**	Total number	2008	Health Institutions in Zambia 2008
Hospital beds	**10.6**	/10,000 population	2008	Health Institutions in Zambia 2008
Primary health care units and centres	**1465**	Total number	2008	Health Institutions in Zambia 2008
Licensed pharmacies	**65**	Total number	2009	PRA register

PART 3- POLICY and REGULATORY FRAMEWORK

3.1 Policy Framework				
INDICATOR			**YEAR**	**SOURCE**
National Health Policy exists (NHP)		Yes/No		
-If yes, year of the most recent document		Year		
National Medicines Policy official document exists	**Yes**	Yes/No	2007	WHO Level I
-If yes, year of the most recent document		Year		
-If no, draft NMP document exists		Yes/No		
-If exists, NMP is integrated into NHP	**Yes**	Yes/No	2007	WHO Level I
National Medicines Policy Implementation Plan exists	**Yes**	Yes/No	2007	WHO Level I
-If yes, year of the most recent document	**2005**	Year	2007	WHO Level I
Traditional Medicine Policy exists	**Yes (zero draft available)**	Yes/No	2009	MOH
If yes, year of the most updated document		Year		

3.2 Regulatory Framework				
			YEAR	**SOURCE**
Legal provision exists establishing the powers and responsibility of a Medicine Regulatory Authority (MRA)	**Yes**	Yes/No	2007	WHO Level I
Formal Medicines Regulatory Authority exists	**Yes**	Yes/No	2007	WHO Level I
-If yes, Medicines Regulatory Authority is an independent agency	**Yes**	Yes/No	2009	PRA
-If yes, number of regulatory staff		Number	2009	PRA
-Medicines Regulatory Authority is funded from regular budget from the government	**Yes**	Yes/No	2007	WHO Level I

-Medicines Regulatory Authority is funded from fees from registration of medicines	**Yes**	Yes/No	2007	WHO Level I
Legal provisions exist for market authorization	**Yes**	Yes/No	2007	WHO Level I
WHO Certification Scheme may be part of the marketing authorization process	**Yes**	Yes/No	2007	WHO Level I
Regulatory agency has website	**No**	Yes/No	2007	WHO Level I
-If yes, please provide URL address		Address		
The Regulatory Authority has a computerized information management system to store and retrieve information on registration, inspections, etc.	**Yes**	Yes/No	2009	PRA

3.3 Medicines Regulatory Authority Involvement in Harmonization initiatives (e.g. countries in SADC have recently established a shared network for posting medicines regulatory information)				
			YEAR	**SOURCE**
Regulatory Authority or MoH is actively involved in regional harmonization initiatives	**Yes**	Yes/No	2007	WHO Level I
-If yes, Regulatory Authority is actively involved in regional initiatives for the harmonization of registration of pharmaceuticals	**Yes**	Yes/No	2009	PRA
-If yes, Regulatory Authority is actively involved in regional initiatives for the harmonization of regulation on Clinical Trials	**Yes**	Yes/No	2009	PRA
-If yes, Regulatory Authority is actively involved in regional initiatives for the harmonization of laws to combat counterfeits	**Yes**	Yes/No	2009	PRA
-If yes, Regulatory Authority is actively involved in regional initiatives for the harmonization of Good Manufacturing Practices	**Yes**	Yes/No	2009	PRA

3.4 Registration				
			YEAR	**SOURCE**
Number of medicines registered	**3,200**	Number	2009	PRA register
List of medicines registered is publicly available	**Yes**	Yes/No	2009	Register for Licensed Medicines and herbal medicines in Zambia
An explicit and transparent process exists for assessing applications for registration of pharmaceutical products	**Yes**	Yes/No	2009	PRA
Functional formal committee exists responsible for assessing applications for registration of pharmaceutical products	**Yes**	Yes/No	2007	WHO Level I
List and application status of products submitted for registration are publicly available	**Yes**	Yes/No	2009	PRA records
INN names are used to register medicines	**Yes**	Yes/No	2007	WHO Level I
Medicines registration fees exist	**Yes**	Yes/No	2009	PRA- Statutory Instrument no.
-If yes, amount per application (US$) for originator product	**808**	US$	2008	PRA
-If yes, amount per application (US$) for generic product	**808**	US$	2008	PRA
Average length of time from submission of a product application to decision (months)	**12**	Months	2009	PRA
A transparent process exists to appeal medicines registration decisions	**Yes**	Yes/No	2004	Pharmaceutical Act 2004
Computerized system exists for retrieval of information on registered products	**Yes**	Yes/No	2007	WHO Level I

3.5 Manufacturing				
Domestic Manufacturers			**YEAR**	**SOURCE**
Legal provisions exist for licensing domestic manufacturers	**Yes**	Yes/No	2004	Pharmaceutical Act 2004
The country has guidelines on Good Manufacturing Practices (GMP)	**Yes**	Yes/No	2008	PRA-GMP guidelines
-If yes, these guidelines are used in the licensing process	**Yes**	Yes/No	2008	PRA
The country has capacity for:				
-R&D to discover new active substances	**Yes**	Yes/No	2007	WHO Level I
-Production of pharmaceutical starting materials	**No**	Yes/No	2007	WHO Level I
-Formulation from pharmaceutical starting material	**Yes**	Yes/No	2007	WHO Level I
-Repackaging of finished dosage forms	**Yes**	Yes/No	2007	WHO Level I
Number of domestic manufacturers	**6**	Number	2009	PRA register
Number of GMP compliant domestic manufacturers	**2**	Number	2008	PRA
Multinational manufacturers and importers			**YEAR**	**SOURCE**
Legal provisions exist for licensing multinational manufacturers that produce medicines locally	**No**	Yes/No	2009	PRA
Number of multinational pharmaceutical companies with a local subsidiary	**No**	Number	2009	PRA
Number of multinational pharmaceutical companies producing medicines locally	**No**	Number	2009	PRA
Legal provisions exist for licensing importers	**Yes**	Yes/No	2007	WHO Level I

3.6 Quality Control				
			YEAR	SOURCE
Legal provisions exist to inspect premises and collect samples	**Yes**	Yes/No	2007	WHO Level I
Legal provisions exist for detecting and combating counterfeit medicines	**Yes**	Yes/No	2007	WHO Level I
Samples are tested for post-marketing surveillance	**Yes**	Yes/No	2007	WHO Level I
List is publicly available giving detailed results of quality testing in past year	**No**	Yes/No	2009	PRA
Legal provisions exist to ensure quality control of imported medicines	**Yes**	Yes/No	2007	WHO Level I
Legal provisions exist for the recall and disposal of defective products	**Yes**	Yes/No	2007	WHO Level I

3.7 Pharmacovigilance				
			YEAR	SOURCE
Legal provisions exist for monitoring adverse drug reactions (ADRs) on a routine basis	**Yes**	Yes/No	2004	Pharmaceutical Act 2004
ADRs are monitored	**Yes**	Yes/No	2007	WHO Level I
-If yes, ADRs are monitored at				
-Central level	**Yes**	Yes/No	2007	WHO Level I
-Regional level	**Yes**	Yes/No	2007	WHO Level I
-Local health facilities	**Yes**	Yes/No	2007	WHO Level I
-If yes, ADRs are reported to the WHO Collaborating Centre for International Drug Monitoring	**No**	Yes/No		

3.8 Medicines Advertising and Promotion				
Legal and regulatory provisions			**YEAR**	**SOURCE**
Legal provisions exist to control the promotion and/or advertising of medicines	**Yes**	Yes/No	2007	WHO Level I
Who is responsible for regulating promotion and/or advertising of medicines	**Co-Regulation**	Government/Industry/ Co-Regulation	2007	WHO Level I
Direct advertising of prescription medicines to the public is prohibited	**Yes**	Yes/No	2004	Pharmaceutical Act 2004
Regulatory pre-approval is required for medicines advertisements and/or promotional materials	**Yes**	Yes/No	2007	PRA
Guidelines exist for advertising and promotion of non-prescription medicines	**Yes**	Yes/No	2009	PRA-Guidelines on advertising and promotion of medicines
Regulatory committee exists for controlling medicines advertising and promotion	**Yes**	Yes/No	2007	PRA
-If yes, members must declare conflicts of interest	**Yes**	Yes/No	2007	PRA
Code of conduct			**YEAR**	**SOURCE**
A national code of conduct exists concerning advertising and promotion of medicines by pharmaceutical manufacturers		Yes/No		
-If yes, adherence to the code is voluntary		Yes/No		
A national code of conduct for doctors exists to regulate their relationship with manufacture sales representatives		Yes/No		

PART 4 - FINANCING

4.1 Medicines Expenditure				
			YEAR	SOURCE
Total medicines expenditure (US$)		US$ current exchange rates		
Medicines expenditure as a % of GDP		% of GDP		
Medicines expenditure as a % of Health Expenditure		% of total health expenditure		
Total public expenditure on medicines (US$)	**28,115,000**	US$ current exchange rates	2008	MOH
MoH annual budget for medicines (US$)	**23,298,000**	US$ current exchange rates	2009	MOH
Total private expenditure on medicines (US$)		US$ current exchange rates		

4.2 Health Insurance and Free Care				
			YEAR	SOURCE
National Health Insurance (NHI) or Social Health Insurance (SHI) exists	**No**	Yes/No	2007	WHO Level I
-If yes, NHI/SHI provides at least partial medicines coverage	**No**	Yes/No	2007	WHO Level I
Proportion of the population covered by NHI or SHI		% of the population		
Existence of public programmes providing free medicines	**Yes**	Yes/No	2007	WHO Level I
-If yes, medicines are available free-of-charge for:				
-Patients who cannot afford them	**Yes**	Yes/No	2007	WHO Level I
-Children under 5	**Yes**	Yes/No	2007	WHO Level I

-Older children	**Yes**	Yes/No	2007	WHO Level I
-Pregnant women	**Yes**	Yes/No	2007	WHO Level I
-Elderly persons	**Yes**	Yes/No	2007	WHO Level I
-If yes, the following types of medicines are free:				
-All	**Yes**	Yes/No	2007	WHO Level I
-Malaria medicines	**Yes**	Yes/No	2007	WHO Level I
-Tuberculosis medicines	**Yes**	Yes/No	2007	WHO Level I
-Sexually transmitted diseases medicines	**Yes**	Yes/No	2007	WHO Level I
-HIV/AIDS medicines	**Yes**	Yes/No	2007	WHO Level I
At least one vaccine	**Yes**	Yes/No	2007	WHO Level I

4.3 Patients Fees and Copayments				
			YEAR	**SOURCE**
Inpatients pay a fee for medicines in public hospitals	**No**	Yes/No	2009	MOH
Registration/consultation fees are common in public health facilities	**Yes**	Yes/No	2007	WHO Level I
Fixed dispensing fees are common for outpatients in public primary health-care facilities	**No**	Yes/No	2009	MOH
Outpatients pay varying amounts for medicines in public primary health-care facilities	**No**	Yes/No	2009	MOH
Medicines copayments are used to pay salaries of public health-care workers	**No**	Yes/No	2007	WHO Level I

4.4 Pricing Regulation				
Price Control for the private sector			**YEAR**	**SOURCE**
Legal or regulatory provisions exist for setting:				
- Manufacturer's selling price	**No**	Yes/No		
- Maximum wholesale mark-up	**No**	Yes/No	2007	WHO Level I
- Maximum retail mark-up	**No**	Yes/No	2007	WHO Level I
- Maximum retail price (exit price)	**No**	Yes/No		
Legal or regulatory provisions for controlling medicines prices vary for different types of medicines		Yes/No		
Government runs an active national medicines price monitoring system for retail prices	**No**	Yes/No	2007	WHO Level I
Retail medicines price information is made publicly accessible according to existing regulation	**No**	Yes/No	2007	WHO Level I

4.5 Results of WHO/HAI Pricing Survey				
			YEAR	**SOURCE**
Median Price Ratio of **originator brand** products to international reference prices for a basket of key medicines **PUBLIC SECTOR PROCUREMENT**		Median Price Ratio		
Median Price Ratio of **lowest-priced generics** to international reference prices for a basket of key medicines **PUBLIC SECTOR PROCUREMENT**		Median Price Ratio		
Median Price Ratio of **originator brand** products to international reference prices for a basket of key medicines **PUBLIC SECTOR PATIENT PRICE**		Median Price Ratio		
Median Price Ratio of **lowest-priced generics** to international reference prices for a basket of key medicines **PUBLIC SECTOR PATIENT PRICE**		Median Price Ratio		
Median Price Ratio of **originator brand products** to international reference prices for a basket of key medicines **PRIVATE SECTOR PATIENT PRICE**		Median Price Ratio		
Median Price Ratio of **lowest-priced generics** to international reference prices for a basket of key medicines **PRIVATE SECTOR PATIENT PRICE**		Median Price Ratio		

4.6 Duties and Taxes on Pharmaceuticals in the Private Sector				
			YEAR	**SOURCE**
Duty on imported raw materials	**Yes**	Yes/No	2009	MOH
Duty on imported finished products	**No**	Yes/No	2009	MOH
VAT or other taxes on medicines	**No**	Yes/No	2009	MOH
-If yes, amount of VAT on pharmaceutical products (%)		%		

PART 5 - PATENTS

5.1 Medicines Patent Laws				
			YEAR	**SOURCE**
Country is a member of the World Trade Organization	**Yes**	Yes/No		
Patents are granted on pharmaceutical products by a National Patent Office	**No**	Yes/No	2007	WHO Level I
List of patented medicines is available		Yes/No		
National legislation has been modified to implement the TRIPS Agreement	**Yes**	Yes/No	2007	WHO Level I
-If yes, the transitional period has been extended per Doha Declaration	**No**	Yes/No	2007	WHO Level I
-If yes, TRIPS flexibilities have been incorporated into legislation	**Yes**	Yes/No	2007	WHO Level I
-If TRIPS flexibilities have been incorporated, they are:				
-Compulsory licensing provisions	**Yes**	Yes/No	2007	WHO Level I
-Government use	**Yes**	Yes/No	2007	WHO Level I
-Parallel importing provisions	**No**	Yes/No	2007	WHO Level I
-Bolar exception	**No**	Yes/No	2007	WHO Level I

PART 6 – SUPPLY

6.1 Procurement				
			YEAR	SOURCE
Is there a written public sector procurement strategy?	**No**	Yes/No	2009	MOH
-If yes, in what year was it approved?		Year		
Are there provisions giving priority in public procurement to goods produced by domestic manufacturers?	**Yes**	Yes/No	2008	MOH
Are there provisions giving priority in public procurement to goods produced by manufacturers from SADC countries?	**No**	Yes/No	2009	MOH
Do the public sector procurement regulations apply to pharmaceutical procurement?	**Yes**	Yes/No	2008	ZPPA
How many people are working full-time only on procurement of pharmaceuticals for the public sector?	**3**	Number	2009	MOH
There is a tender board/committee overseeing public procurement of medicines	**Yes**	Yes/No	2007	WHO Level I
-If yes, the key functions of the procurement office and those of the tender committee are clearly separated	**Yes**	Yes/No	2007	WHO Level I
Public procurement is limited to medicines on the national EML	**Yes**	Yes/No	2007	WHO Level I
WHO-prequalification system is used to identify suppliers for ARVs, TB, ATM and RHR	**Yes**	Yes/No	2007	WHO Level I
WHO certification system is used to identify suppliers	**Yes**	Yes/No	2009	MOH
A functioning process exists to ensure the quality of other products procured	**Yes**	Yes/No	2009	MOH
-If yes, this process includes prequalification of products and suppliers	**Yes**	Yes/No	2009	MOH
-If yes, explicit criteria and procedures exist for prequalification of suppliers	**Yes**	Yes/No	2009	MOH

-If yes, a list of prequalified suppliers and products is publicly available	**Yes**	Yes/No	2009	MOH
How many people are working full-time on quality assurance for procurement?	**Yes**	Number	2009	MOH
Percentage of public sector procurement expenditures in last year awarded by:				
-National competitive tenders	**37.3%**	% of total value	2007	MOH
-International competitive tenders	**58.5%**	% of total value	2007	MOH
-Negotiation	**0%**	% of total value	2007	MOH
-Direct purchasing	**4.2%**	% of total value	2007	MOH
Public sector tenders are publicly available	**Yes**	Yes/No	2007	MOH
Public sector awards are publicly available	**Yes**	Yes/No	2007	MOH
Public sector tenders use an e-procurement system	**No**	Yes/No	2009	MOH
A written code of conduct exists governing the behaviour of public procurement agencies in their interactions with sales representatives and wholesalers	**Yes**	Yes/No	2009	MOH
List of samples tested during the procurement process and results of quality testing is available	**No**	Yes/No	2009	MOH
Public sector procurement is centralized at the national level	**Yes**	Yes/No	2007	WHO Level I
Is there a capacity building strategy for procurement and supply management?	**Yes**	Yes/No	2007	ZPPA
-If yes, when was it finalized?	**2007**	Year	2007	ZPPA
-If yes, what period does it cover?	**2007-2009**	Year-Year	2009	ZPPA

6.2 Procurement Budget				
		CURRENCY	**YEAR**	**SOURCE**
Total value of medicines procured in the public sector in the previous year	**28,266,063**	USD	2008	MOH
Public procurement expenditure on products from national manufacturers in the previous year (if available)	**851,063**	USD	2008	MOH
Public procurement expenditure on products from SADC manufacturers in the previous year (if available)				
Public procurement expenditure on products on the EML in the previous year (if available)	**28,115,00**	USD	2008	MOH

6.3 Procurement Price of Medicines on the WHO/HAI Global List		
To calculate the **UNIT PRICE** ***please divide the price of the pack by the pack size (e.g. 28, 500, and 100). For example, a pack of 500 amoxycillim 500 mg/caps costing US$ 23.8 would have a unit price of 23.8 /500, that is a per unit price of US$ 0.048.***		
For Year:		
Medicine, Strength, Formulation	**UNIT price for Originator**	**UNIT price for lowest priced generic**
Amitryptyline 25 mg Cap/tab		
Amoxicillin 500 mg Cap/tab		
Atenolol 50 mg Cap/tab		
Captopril 25 mg Cap/tab		
Ceftriaxone 1 g/ vial Injection		
Ciprofloxacin 500 mg Cap/tab		
Co-trimoxazole 8 + 40 mg/ml Susp.		
Diazepam 5 mg Cap/tab		
Diclofenac 50 mg Cap/tab		
Glibenclamide 5 mg Cap/tab		
Omeprazole 20 mg Cap/tab		
Paracetamol 24 mg/ml Susp.		
Salbutamol 0.1mg/dose Inhaler		
Simvastatin 20 mg Cap/tab		

6.4 Distribution				
Distributors[6]			**YEAR**	**SOURCE**
There are national guidelines on Good Distribution Practices (GDP)	***Yes***	Yes/No	2008	PRA
There a list of all GDP compliant distributors		Yes/No		
CMS			**YEAR**	**SOURCE**
Software tools are available for planning medicines supply	**Yes**	Yes/No	2009	MSL
Software tools are available for management of medicines supply (procurement tracking, expenditure tracking, stock levels)	**Yes**	Yes/No	2008	MSL
Data on months of stock on hand is routinely reported to managers	**Yes**	Yes/No	2009	MSL

TOP 5 distributors by market value

Name of distributor	**Sales by Value**		**YEAR**	**SOURCE**
		% of Total		
		% of Total		
		% of Total		
		% of Total		
		% of Total		

[6] For the purpose of this profile, distributors deliver medicines on behalf of others and do not carry any risk for stock lost or expired.

6.5 Wholesale Market Characteristics[7]				
			YEAR	**SOURCE**
Legal provisions exist for licensing wholesalers	**Yes**	Yes/No	2007	WHO Level I
Number of wholesalers in market	**89**	Number	2009	PRA Register
Number of GDP compliant wholesalers in market	**89**	Number	2008	PRA
List of GDP compliant wholesalers is publicly available	**No**	Yes/No	2008	PRA

TOP 5 wholesalers by market value

Name of wholesaler	**Sales by Value**		**YEAR**	**SOURCE**
Unimed Group	**52%**	% of Total	2008	MOH
Mission Pharma	**38.9%**	% of Total	2008	MOH
Ngansa Pharmaceuticals	**3.9%**	% of Total	2008	MOH
Jos Hansen	**3.4%**	% of Total	2008	MOH
Melcome Pharmaceuticals	**1.8%**	% of Total	2008	MOH

[7] Wholesalers own the products that they sell/distribute and carry the risk for stock lost or expired.

PART 7- SELECTION and RATIONAL USE of MEDICINES

7.1 National Structures				
			YEAR	**SOURCE**
National standard treatment guidelines (STGs) for major conditions are produced by the MoH	**Yes**	Yes/No	2009	NSTG 2009
-If yes, year of last update of national STGs	**2009**	Year	2009	NSTG 2009
National essential medicines list (EML) exists	**Yes**	Yes/No	2009	NEML 2009
-If yes, number of **medicine formulations** on the national EML	**404**	Number	2009	NEML 2009
-If yes, year of last update of EML	**2009**	Year	2009	NEML 2009
-If yes, process for selecting medicines on the EML is publicly available	**Yes**	Yes/No	2009	MOH
There is a committee for the selection of products on the national EML	**Yes**	Yes/No	2007	WHO Level I
-If yes, conflict of interest declarations are required from members on national EML committee		Yes/No		
There are explicit criteria for selecting medicines for national EML	**Yes**	Yes/No	2009	MOH
National medicines formulary manual exists	**Yes**	Yes/No	2007	WHO Level I
-If yes, national medicines formulary manual is limited to essential medicines	**No**	Yes/No	2007	WHO Level I
-If yes, year of last update of national medicines formulary manual	**2005**	Year	2007	WHO Level I
National STGs for paediatric conditions exist	**Yes**	Yes/No	2009	NSTG 2009
-If yes, year of last update of national paediatric STGs	**Yes**	Year	2009	NSTG 2009
EML used in public insurance reimbursement	**No**	Yes/No	2007	WHO Level I
Rational use national audit done in the last two years	**Yes**	Yes/No	2007	WHO Level I
% of public health facilities with EML (mean)- Survey data	**40%**	%	2006	WHO Level II
% of public health facilities with STGs (mean)- Survey data	**40%**	%	2006	WHO Level II

Public education campaigns about rational medicines use have been conducted by MoH, NGOs or academia in the previous two years	**Yes**	Yes/No	2007	WHO Level I
A national programme or committee involving government, civil society, and professional bodies exists to monitor and promote rational use of medicines	**No**	Yes/No	2007	WHO Level I
A national strategy exists to contain antimicrobial resistance	**Yes**	Yes/No	2007	WHO Level I
-If yes, date of last update of the strategy		Year		
A national reference laboratory has responsibility for coordinating epidemiological surveillance of antimicrobial resistance	**Yes**	Yes/No	2007	WHO Level I
A public or independently funded national medicines information centre provides information on medicines to consumers	**No**	Yes/No	2007	WHO Level I
Legal provisions exist for the control of narcotics, psychotropic substances, and precursors	**Yes**	Yes/No	2007	WHO Level I
The country is a signatory to the International Conventions on the Control of Narcotics, Psychotropic Substances and Precursors	**Yes**	Yes/No	2007	WHO Level I

7.2 Prescribing				
			YEAR	**SOURCE**
Legal provisions exist to govern the licensing and prescribing practices of prescribers	**Yes**	Yes/No	2007	WHO Level I
-The following types of health workers are legally allowed to prescribe				
-Nurses		Yes/No		
-Midwives		Yes/No		
-Community health workers		Yes/No		
-Pharmacists		Yes/No		
Prescribers are legally allowed to dispense		Yes/No		
Prescribers in the public sector dispense medicines	**Yes**	Yes/No	2007	WHO Level I
Prescribers in the private sector dispense medicines	**Yes**	Yes/No	2007	WHO Level I
The basic medical training curriculum includes components on:				
- Use of the national EML	**Yes**	Yes/No	2007	WHO Level I
- Use of national STGs	**Yes**	Yes/No	2007	WHO Level I
- Problem-based pharmacotherapy	**Yes**	Yes/No	2007	WHO Level I
- Good practices in prescribing	**Yes**	Yes/No	2007	WHO Level I
The basic nursing training curriculum includes components on:				
- Use of the national EML	**Yes**	Yes/No	2007	WHO Level I
- Use of national STGs	**Yes**	Yes/No	2007	WHO Level I
- Problem-based pharmacotherapy	**Yes**	Yes/No	2007	WHO Level I
- Good practices in prescribing	**Yes**	Yes/No	2007	WHO Level I
The basic training curriculum for paramedical staff includes components on:				
- Use of the national EML	**Yes**	Yes/No	2007	WHO Level I
- Use of national STGs	**Yes**	Yes/No	2007	WHO Level I
- Problem-based pharmacotherapy	**Yes**	Yes/No	2007	WHO Level I
- Good practices in prescribing	**Yes**	Yes/No	2007	WHO Level I

Regulations exist requiring hospitals to organize/develop Drug and Therapeutics Committees (DTCs)	**Yes**	Yes/No	2007	WHO Level I
Mandatory, non-commercially funded continuing education that includes use of medicines is required for doctors	**No**	Yes/No	2007	WHO Level I
A public or independently funded national medicines information centre exists that provides information on demand to prescribers	**No**	Yes/No	2007	WHO Level I
Prescribing by generic name is obligatory in:				
-Public sector	**Yes**	Yes/No	2007	WHO Level I
-Private sector	**Yes**	Yes/No	2007	WHO Level I
Incentives exist to encourage prescribing of generic medicines in public health facilities	**No**	Yes/No	2009	MOH
Incentives exist to encourage prescribing of generic medicines in private health facilities	**No**	Yes/No	2009	MOH
INRUD prescribing indicators			**YEAR**	**SOURCE**
Number of medicines prescribed per patient contact in public health facilities (mean)	**2.7**	Number	2006	WHO Level II
% of patients receiving antibiotics (mean)	**54.6%**	%	2006	WHO Level II
% of patients receiving injections (mean)	**19%**	%	2006	WHO Level II
% of drugs prescribed that are in the EML (mean)	**98.4%**	%	2006	WHO Level II
Diarrhoea in children treated with ORS (%)	**100%**	%	2006	WHO Level II
Non-pneumonia ARIs treated with antibiotics (%) (mean)	**82%**	%	2006	WHO Level II

7.3 Dispensing				
			YEAR	**SOURCE**
Legal provisions exist to govern licensing and practice of pharmacy	**Yes**	Yes/No	2007	WHO Level I
A professional association code of conduct exists governing professional behaviour of pharmacists	**No**	Yes/No		
The basic pharmacist training curriculum includes components on				
-Use of the national EML	**Yes**	Yes/No	2007	WHO Level I
-Use of national STGs	**Yes**	Yes/No	2007	WHO Level I
-Problem-based pharmacotherapy	**Yes**	Yes/No	2007	WHO Level I
-Good practices in prescribing	**Yes**	Yes/No	2007	WHO Level I
Mandatory, non-commercially funded continuing education that includes use of medicines is required for pharmacists	**No**	Yes/No	2007	WHO Level I
A public or independently funded national medicines information centre exists that provides information on demand to dispensers	**No**	Yes/No	2007	WHO Level I
Substitution of generic equivalents is permitted for:				
-Public sector dispensers	**Yes**	Yes/No	2007	WHO Level I
-Private sector dispensers	**Yes**	Yes/No	2007	WHO Level I
Incentives exist to encourage dispensing of generic medicines in:				
-Public pharmacies	**No**	Yes/No	2007	WHO Level I
-Private pharmacies	**No**	Yes/No	2007	WHO Level I
Antibiotics are sold over-the-counter without a prescription	**Yes**	Yes/No	2007	WHO Level I
Injections are sold over-the-counter without a prescription	**Yes**	Yes/No	2007	WHO Level I
Narcotics are sold over-the-counter without a prescription	**No**	Yes/No	2009	PRA
Tranquillisers are sold over-the-counter without a prescription	**No**	Yes/No	2009	PRA
INRUD dispensing indicators			**YEAR**	**SOURCE**
% of prescribed drugs dispensed to patients (mean)	**86%**	%	2006	WHO Level II
Percentage of medicines adequately labelled in public health facilities (mean)	**29%**	%	2006	WHO Level II
Percentage of patients knowing correct dosage in public health facilities (mean)	**83.9%**	%	2006	WHO Level II

PART 8 - HOUSEHOLD DATA

8.1 Data from Household surveys				
			YEAR	**SOURCE**
Adults with acute conditions taking all medicines prescribed	**77.9%**	%	2002-3	WHS (World Health Survey)
Adults with acute conditions not taking all medicines because they cannot afford them	**2.4%**	%	2002-3	WHS
Adults with acute conditions not taking all medicines because they cannot find them	**17.0%**	%	2002-3	WHS
Adults (from poor households) with acute conditions taking all medicines prescribed	**84.4%**	%	2002-3	WHS
Adults (from poor households) with acute conditions not taking all medicines because they cannot afford them	**0.9%**	%	2002-3	WHS
Adults with chronic conditions taking all medicines prescribed	**56.8%**	%	2002-3	WHS
Adults with chronic conditions not taking all medicines because they cannot afford them	**11.4%**	%	2002-3	WHS
Adults with chronic conditions not taking all medicines because they cannot find them	**31.8%**	%	2002-3	WHS
Adults (from poor households) with chronic conditions taking all medicines prescribed	**68.8%**	%	2002-3	WHS
Adults (from poor households) with chronic conditions not taking all medicines because they cannot afford them	**0.0%**	%	2002-3	WHS
Children with acute conditions taking all medicines prescribed	**82.2%**	%	2002-3	WHS
Children with acute conditions not taking all medicines because they cannot afford them	**2.7%**	%	2002-3	WHS
Children with acute conditions not taking all medicines because they cannot find them	**13.9%**	%	2002-3	WHS
Children (from poor households) with acute conditions taking all medicines prescribed	**87.1%**	%	2002-3	WHS
Children (from poor households) with acute conditions not taking all medicines because they cannot afford them	**0.3%**	%	2002-3	WHS