Data Collection Survey on Health Sector

Country Report
Republic of Zimbabwe

October 2012

Japan International Cooperation Agency
(JICA)

KRI International Corp.

TAC International Inc.

HM
JR
12-106

Data Collection Survey on Health Sector

Country Report
Republic of Zimbabwe

October 2012

Japan International Cooperation Agency
(JICA)

KRI International Corp.

TAC International Inc.

This report is prepared to support JICA's country operation in health through strategic programming. The contents, however, may need to be supplemented with the latest and more detailed information by the readers since the report is mainly based on literature review and not on field study, with the exception of some countries.

Foreword

Background

The current situation surrounding the health sector in developing countries has been changing, especially at the start of the 21st century. Based on the recommendations from the concept of "Macroeconomics and Health"[1], development assistance for health has greatly increased to accelerate efforts to achieve the Millennium Development Goals (MDGs) by 2015. The development assistance for health has risen sharply from USD 10.9 billion to USD 21.8 billion in 2007[2]. Moreover, development assistance was harmonized by the common framework developed at the three consequent high-level forums in Rome (2003), in Paris (2005) and in Accra (2008).

Regardless of such favorable environmental changes for the health sector in developing countries, the outcomes do not seem to reach the level of expectation in many countries. Many developing countries, particularly Sub-Saharan African countries, will not achieve some of their MDGs 4 (Reduce child mortality), 5 (Improve maternal health) and 6 (Combat HIV/AIDS, malaria and other diseases) by 2015. Therefore, while raising more money for health is crucial for lower-income countries striving to move closer to universal coverage[3]; "More Money for Health[4]", it is just as important to get the substantial health gains out of the resources available; "More Health for Money[5]". Efficiency is a measure of the quality and/or quantity of output of services for a given level of input, and improving efficiency should also be seen as a means of extending coverage for the same cost and the improved health outcomes.

Considering this situation surrounding the health sector in developing countries, in a recent movement of its development assistance work, JICA has been working on country-based analytical work. This consists of macro level and sector wide analytical work aiming to clarify JICA's aid direction in each country by looking at priority areas of concern and aid mapping. The purpose of the Data Collection Survey on Health Sector is to contribute to JICA's analytical work efforts. In the past, JICA's analytical efforts were concentrated on the project planning purpose, as a consequence, information gathered in such analytical works were naturally limited to be around the particular projects. It is therefore thought to be important for JICA to conduct a country-based health sector review to gather complete information and analyze the whole sector to learn about the situation of the country and identify high priority problems and issues to be tackled in the health system.

Objectives of the Study

The key to the formulation of a good project is having conducted thorough sector reviews. Good sector reviews and analyses help us to understand the health situation and its determinants, and the capacity for health project implementation in the countries. They also help us to contribute to the countries for identifying the feasible projects in the context of priorities and developing the necessary policies and strategic planning for the health service delivery. It is also necessary to conduct such health sector review studies on a regular basis in order to develop and implement effective and efficient health projects. Based on this concept, JICA decided to carry out the sector review studies of 23 selected countries. The objectives of the sector review are to give recommendations to JICA on the aid direction for the health sector in each country, and to improve strategic approaches and the efficiency of aid cooperation.

Structure of the Report

The health sector study country report consists of seven chapters. Chapter 1 is the summary of the socio-economic situation of each country. Chapter 2 is an analysis of the national health policy, strategic approaches, and plans. Chapter 3 describes the health situation of each country to show the priority health problems by using health information and data. Chapter 4 is an analysis of the health service delivery function of each country, while Chapter 5 is an analysis of other functions of the country's health system namely: human resources for health, health information systems, essential medical products and technologies including the health facilities, health financing, and leadership and governance. Chapter 6 is an analysis of the development partners' assistance and cooperation. Based on the above analysis, Chapter 7 provides recommendations to JICA on the strategic areas of cooperation and its approaches.

---

[1] WHO announced "Macroeconomics and Health: Investing in Health for Economic Development" in December, 2000. This regards Health is an intrinsic human right as well as a central input to poverty reduction and socioeconomic development and the process helps place health at the centre of the broader development agenda in countries.

[2] Ravishankar N., Gubbins P. Cooley J.R., et. al; June 2009; Financing of global health: tracking development assistance for health from 1990 to 2007; the Lancet 373:2113-2132

[3] According to WHO, Universal coverage (UC) is defined as ensuring that all people have access to needed promotive, preventive, curative and rehabilitative health services, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship. (http://www.who.int/health_financing/universal_coverage_definition/en/index.html)

[4] In the World Health Report 2010 (WHO), the report advocates it with the following concrete three suggestions as the requirements; 1) Increase the efficiency of revenue collection, 2) Reprioritize government budgets, and 3) Innovative financing. As the forth suggestion, it advocates increasing development aid and making it work better for health.

[5] The World Health Report 2010 also suggests the needs of improving the efficacy in the health systems and eliminating the inefficiency/waste will enable the poor countries to improve the availability and quality of the services.

Abbreviations and Acronyms

ACT	Artemisinin-based Combination Therapy
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ARI	Acute Respiratory Infections
ART	Antiretroviral Therapy
ARV	Antiretroviral drugs
BEmONC	Basic Emergency Obstetric and Newborn Care
BMI	Body Mass Index
CCM	Country Coordinating Mechanism
CEmONC	Comprehensive Emergency Obstetric and Newborn Care
DAAC	District AIDS Action Committee
DFID	Department for International Development
DHIS	District Health Information System
DOTS	Directly Observed Therapy Short-course
EPI	Expanded Programme on Immunization
EU	European Union
FNC	Food and Nutrition Council
GNI	Gross National Income
HDI	Human Development Index
HHRS	Human Resources for Health Retention Scheme
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HTF	Health Transition Fund
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illness
IMNCI	Integrated Management of Neonatal and Childhood Illness
IPTp	Intermittent Preventive Treatment in Pregnancy
ITN	Insecticide-Treated Net
JICA	Japan International Cooperation Agency
JOCV	Japan Overseas Cooperation Volunteers
LLIN	Long-Lasting Insecticide-Treated Net
MCAZ	Medicines Control Authority of Zimbabwe
MDGs	Millennium Development Goals
MIMS	Multiple Indicator Monitoring Survey
MOHCW	Ministry of Health and Child Welfare
MOHTE	Ministry of Higher and Tertiary Education
MTP	Medium Term Plan

NAC	National AIDS Council
NatPharm	National Pharmaceutical Company of Zimbabwe
NCDs	Noncommunicable Diseases
NCPI	National Composite Policy Index
NGO	Non-Governmental Organization
NHIS	National Health Information and Surveillance
NIHFA	National Integrated Health Facility Assessment
NMCP	National Malaria Control Programme
NTCP	National Tuberculosis Control Programme
NTDs	Neglected Tropical Diseases
NUST	National University of Science and Technology
OCHA	(UN) Office for the Coordination of Humanitarian Affairs
ORT	Oral Rehydration Therapy
PAAC	Provincial AIDS Action Committee
PEPFAR	President's Emergency Plan for AIDS Relief
PHAZ	Private Hospitals Association of Zimbabwe
PLHIV	People Living with HIV
PMD	Provincial Medical Directorate
PMI	President's Malaria Initiative
PMTCT	Prevention of Mother to Child Transmission
SIDA	Swedish International Development Agency
STERP	Short-Term Emergency Recovery Programme
STI	Sexually Transmissible Infections
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VHW	Village Health Worker
WAAC	Ward AIDS Action Committee
WDSS	Weekly Disease Surveillance System
WHO	World Health Organization
ZDHS	Zimbabwe Demographic and Health Survey
ZIMSTAT	Zimbabwe National Statistics Agency
ZNASP II	Zimbabwe National HIV and AIDS Strategic Plan 2011-2015

Source: http://www.freemap.jp/blankmap/ (Accessed on February 16, 2012)

Map of the Republic of Zimbabwe

Summary

1. The Republic of Zimbabwe faced major challenges from the late 1990s to 2008. This period was characterized by hyperinflation, a complex political and humanitarian situation, and a breakdown in the delivery of social services. The situation has stabilized since the formation of the Inclusive Government and the introduction of the multicurrency system in February 2009. However, the situation remains fragile. The humanitarian needs relating to specific requirements of a wide range of highly vulnerable groups such as returned migrants still remain in Zimbabwe.

2. The main goal of the Medium Term Plan (MTP) (2010-2015) is to maintain macroeconomic stability through sustained delivery of quality social services, including health services. The objective in the health sector is to increase access to comprehensive quality primary health care services. The National Health Strategy (2009-2013) aims to increase access by ensuring protection of the poor and vulnerable through exemption of user fees and maintaining the primary health care approach to strengthen public health capacity.

3. Communicable diseases, maternal, perinatal, and nutritional conditions account for more than 70% of all deaths. Thus, the epidemiological transition has not been completed. Especially, the maternal mortality ratio and under-five mortality rate remain high. Furthermore, the increased burden of HIV contributes to increase maternal deaths and deaths in tuberculosis patients. Tuberculosis has become a major health issue due to the increase of HIV prevalence. In addition, Zimbabwe experienced a very serious cholera outbreak in 2008 and 2009 due to the breakdown of sewage and water supply treatment systems. About 30% of children under-five suffer from chronic malnutrition in every province and malnutrition severely affects child health status. Noncommunicable diseases (NCDs), especially cancer attributed to HIV infection, have been increasing. The National Health Strategy therefore recognized the importance of strengthening NCD control.

4. Primary health care services, which integrate oral health, mental health, and control of NCDs into the eight components, are provided. The health system in the public sector consists of four levels. The referral system is not functioning and all referral hospitals are replicating the work at primary level facilities. Regarding maternal and child health services, the contraceptive prevalence rate, the percentage of women who had more than four antenatal care and the percentage of deliveries assisted by a skilled provider are about 60% or more. However, poor access to postnatal care and insufficient emergency newborn and obstetric care services are the contributing factors to high maternal and infant mortality. In addition, implementation of the Integrated Management of Childhood Illness (IMCI) started in 2000, but many challenges remain. In the area of HIV/AIDS response, the National AIDS Council (NAC) is responsible for coordination, monitoring and evaluation of multi-sectoral response. The decentralized structures of NAC are established at each administrative level. HIV testing rates have been increasing and also, access to treatment and support has been expanding. With regards to malaria, the efforts have been made to achieve universal access to prevention (insecticide-treated mosquito net) and early treatment. The policy of community case management of malaria was adopted in 2010 and the pilot study was

conducted. Tuberculosis control has been conducted in cooperation with the HIV/AIDS programme. As a result, access to diagnosis and treatment has been improved. Nutrition intervention is conducted in collaboration with the Food and Nutrition Council (FNC). The challenges in the field of nutrition intervention include the shortage of nutritionists due to a freeze on employment. In the area of NCD control, the Ministry of Health and Child Welfare (MOHCW) aims to establish the control system by increasing health institutions which can perform routine checkup and NCD management.

5. Zimbabwe's health system is affected by a substantial shortage of skilled and experienced health workers in terms of quantity and quality. This shortage is attributed to outmigration or internal migration from public health care sector to other sectors. The vacancy rates are high in every category of health workers in public sector. In response to the critical situation, the Global Fund and other donors have contributed to the Human Resources Retention Scheme and allowances are paid to health workers. The financial sustainability of the scheme is the major challenge. In the area of health financing, the health system is grossly under-funded. The percentage of national budget allocated to health is less than 10%. The proportion of household expenditure for health has increased and heavier financial burden for health is posed to the people. In the area of health information system, although the system is structured in order to utilize data for monitoring and evaluation, implementation remains a challenge. Inadequate data analysis, reports production and publication are also key challenges. The distance to health facilities is a big problem for women in rural areas in accessing health care. To tackle the problem, the MOHCW plans to establish maternity waiting homes. Most of the health facilities and equipment are obsolete due to insufficient budget. Also, unstable basic infrastructure such as water and electricity disrupts service delivery. In the area of pharmaceutical management, the supply system has been improving due to donors' support. However, the availability of medicines remains low and logistics management cannot be functional without donors' assistance. The MOHCW has started quality assurance activities since 2010. However, full-fledged activities have not been started.

6. Donors have increasingly moved from providing purely humanitarian assistance to supporting recovery and transition. However, most donors continue to channel aid through the UN system and civil society organizations. Major donors have been supporting Zimbabwe in the field of maternal and child health, and HIV/AIDS. The Health Transition Fund (pooled fund) which is managed by UNICEF was created in order to support the implementation of the National Health Strategy. Japan has suspended its cooperation except for humanitarian assistance since 2000. However, given the recent stability of the political situation, Japan is now considering concrete cooperation projects which will contribute to humanitarian purposes.

7. Although there are many challenges in the health sector in Zimbabwe, maternal and child health and HIV control are particularly urgent issues. To revitalize the collapsed health system, securing human and financial resources and medicines are urgently needed. The government and development partners have been responding to those challenges. It is reasonable for Japan to continue its cooperation based on the past cooperation in the area of prevention of mother to child transmission of HIV.

JICA Data Collection Survey on Health Sector

Country Report
Republic of Zimbabwe

Table of Contents

List of Figures and Tables

Chapter 1 General Overview

The Republic of Zimbabwe is a landlocked country in sub-Saharan Africa with a surface area of approximately 3.9 million square kilometers (slightly bigger than Japan). The population of Zimbabwe is estimated to be 12.5 million and about 38% of the population resides in urban areas [1].

Zimbabwe faced major challenges from the late 1990s to 2008. This period was characterized by hyperinflation, a complex political and humanitarian situation, and a breakdown in the delivery of social services. According to the United Nations Development Programme (UNDP), Zimbabwe's Human Development Index (HDI) score between 1990 and 2010 dropped by 15% from 0.425 to 0.364, while the sub-Saharan Africa average score rose over the same period by 30% from 0.347 to 0.453. In 2010, Zimbabwe's HDI was ranked lowest amongst 169 countries surveyed, while for 2011, the country's ranking changed to 173 out of 187 independent states assessed by UNDP.

The situation has stabilized since the formation of the Inclusive Government and the introduction of the multicurrency system in February 2009. However, the situation remains fragile. For instance, 12% of the rural population is expected to become food-insecure during the lean season in the first quarter of 2012. As to water supply, a third of rural Zimbabweans still drink from unprotected water sources and are thus exposed to water-borne diseases. Furthermore, due to economic hardships fuelled partly by the over-60% unemployment rate in the country, an estimated three million Zimbabweans live abroad, the majority in Botswana and the Republic of South Africa, mostly on irregular status. Many of the deportees from these countries require humanitarian aid [2]. The humanitarian needs related to food security, the continued threat of disease outbreaks, and requirements concerning specific needs of a wide range of highly vulnerable groups such as returned migrants still remain in Zimbabwe. The main socioeconomic and demographic indicators are summarized in Table 1-1.

Table 1-1 Main Socioeconomic and Demographic Indicators

Indicator	Value	Year
Total population	12,571,000	2010
Annual population growth (%)	77.8	2010
Life expectancy at birth, total (years)	48.45	2009
Crude birth rate (per 1,000 people)	29.26	2009
Crude death rate (per 1,000 people)	14.05	2009
GNI per capita, Atlas method (current US$)	460	2010
GNI growth (annual %)	814.8	2010
Literacy rate (15 years old and above) (%)	91.9	2009
Human Development Index (rank)*	173/187	2011

Source: World Bank Development Indicators Online (March 2012) [1],
* Human Development Report 2011 (UNDP) [3]

Administratively, Zimbabwe is divided into eight provinces, two cities (Harare and Bulawayo) with provincial status, and 63 districts.

Chapter 2 Development Policy

2.1 National Development Policy

The Inclusive Government launched the Short-Term Emergency Recovery Programme (STERP) in March 2009 in order to address the fundamental economic challenges affecting the country, and to resuscitate and rehabilitate the economy. The Government developed two critical policy documents to succeed STERP: the Three-Year Macro-Economic Policy and Budget Framework (2010-2012) and the Medium Term Plan (MTP) (2010-2015).

The MTP's main goal is to maintain the macroeconomic stability and restore the economy's capacity to produce goods and services competitively. The MTP recognizes that economic growth will be realized through sustained delivery of quality services such as health care, education, road transportation, energy, water and sanitation. Therefore, the policy objective in the health sector is to increase access and utilization of comprehensive quality primary health care services and referral facilities to 100% by 2015. The policy targets and its measures are as follows:

Table 2-1 MTP's Targets and Measures in the Health Sector

Policy Target
• Increase availability of medicine from 50% to 100% for vital and essential from 30% to 80% by 2012; • Reduce under-five mortality rate from 94 deaths per 1000 live births in 2009 to 34 by 2015 (MDG 4); • Reduce maternal mortality rate from 725 deaths per 100,000 live births to 145 by 2015 (MDG 5); • To have halted, by 2015, and begun to reverse the spread of HIV and AIDS (MDG 6); • To have halted, by 2015, and begun to reverse the increasing incidence of malaria, TB, and diarrheal diseases (MDG 6); • Increase functionality of biomedical equipment to at least 80% by 2012; • To increase the local production of drugs, medicines, and medical equipment; • To set up referral medical institutions to attend to high-end medical problems and initiate medical tourism; • Increase the staffing levels from the current 65% to 100% by 2012; • Rehabilitate health infrastructure to at least 80% functionality by 2012; and • Improve the availability of reliable transportation and telecommunication systems in at least 60% of public health facilities.
Policy Measure
• Finalize and implement the National Health Strategy; • Review remuneration and other conditions of service to attract and retain skills in the health sector; • Intensify training of health personnel at all levels; • Enforce the implementation of a comprehensive Primary Health Care approach; • Allocate 15% of the national budget to the health sector in line with the Abuja Declaration by 2015; • Enhance and strengthen the PPP concept for the rehabilitation of health infrastructure and provision of medicine during the plan period; • Promote health insurance schemes; • Encourage local production of pharmaceuticals through an appropriate incentive regime; • Promote health tourism; • Expand behavior change communication, drugs availability, community support and counseling to mitigate the impact of HIV and AIDS; • Restore basic health service delivery at the community level, focusing on basic packages of preventive and curative maternal and child health, HIV and AIDS, TB and malaria; and • Strengthen regulatory authorities such as the Medicines Control Authority of Zimbabwe.

Source: Government of Zimbabwe (2010) Medium Term Plan (MTP) January 2010-December 2015 [4]

2.2 Health Sector Development Plan

The Ministry of Health and Child Welfare (MOHCW) developed "The National Health Strategy for Zimbabwe (2009-2013) - Equity and Quality in Health: A People's Right". The main thrusts of the 2009-2013 National Health Strategy are firstly to provide a framework for immediate resuscitation of the health sector (Health System Strengthening), and secondly, to put Zimbabwe back on track towards achieving the Millennium Development Goals (MDGs).

The National Health Strategy ensures protection of the poor and vulnerable through exemption of user fees, maintains the primary health care approach, integrates preventive and curative services, and promotes the use of Village Health Workers (VHWs) to strengthen the public health capacity of communities. The approach of the National Health Strategy is shown in Figure 2-1.

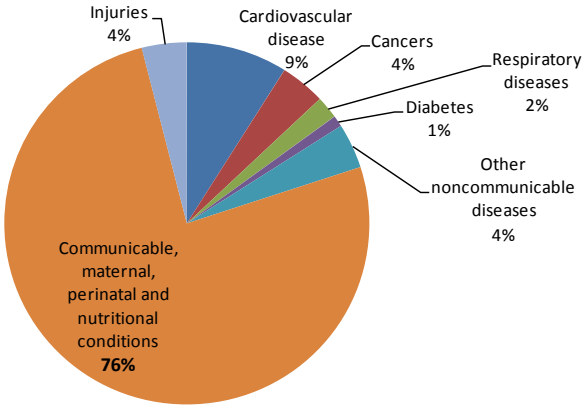
Source: MOHCW, The National Health Strategy for Zimbabwe (2009-2013) [5]

Figure 2-1 Strategic Approach of the National Health Strategy (2009-2013)

Chapter 3 Health Status of the Population

3.1 Epidemiological Profile

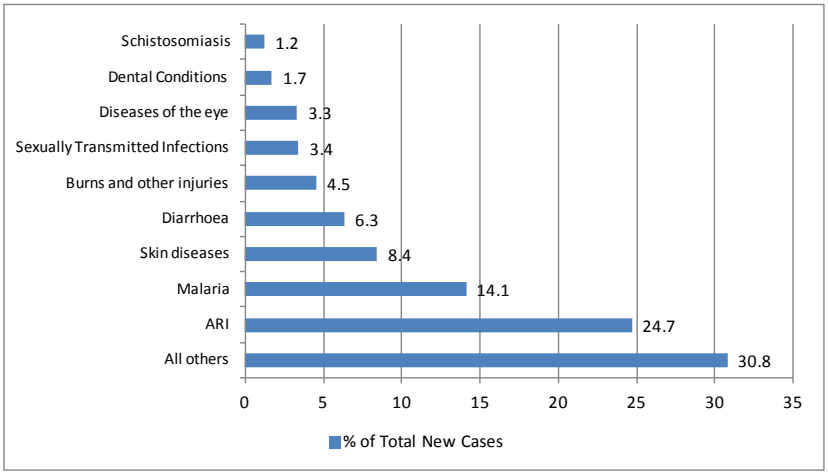
Morbidity and mortality trends in Zimbabwe show that the population is still affected by common preventable and treatable diseases and conditions including nutritional deficiencies, communicable diseases, pregnancy, childbirth and newborn-related conditions. According to the estimates from WHO, communicable diseases, maternal, perinatal, and nutritional conditions accounted for 76% of all deaths (Figure 3-1) [6].



Source: WHO (2011) NCD Country Profile [6]

Figure 3-1 Proportional Mortality (% all ages)

Figure 3-2 shows the top ten causes for outpatient visits to health facilities, and Table 3-1 presents the breakdown of the top ten causes of in-patient morbidity and mortality in 2008. As the figure and table show, acute respiratory infections (ARI), malaria, tuberculosis (TB), HIV and AIDS, and pregnancy-related conditions are the most significant causes of morbidity and mortality in Zimbabwe.



Source: MOHCW (2008) National Health Profile [7]

Figure 3-2 Top Ten Causes of Outpatient Visits (2008)[6]

[6] Data from T5 Form (Outpatient). "All others" refer to the diseases not listed on the T5 Form.

Table 3-1 Top Ten In-patient Causes of Morbidity and Mortality (2008)

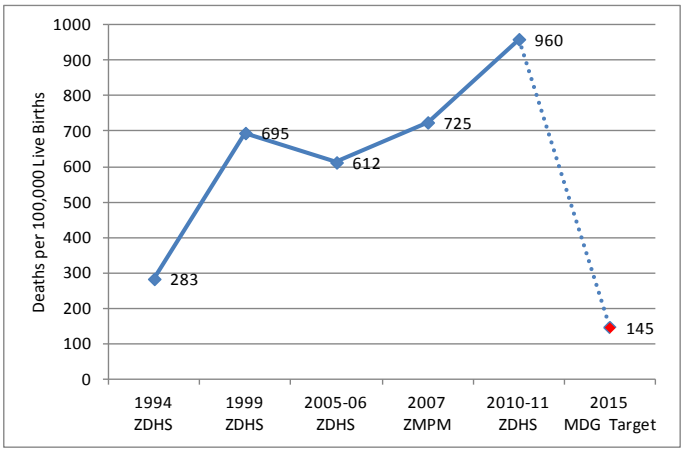
Causes of Morbidity		%	Causes of Mortality		%
1	Normal Delivery	32.3	1	ARI	23.3
2	ARI	13.7	2	Pulmonary TB	15.4
3	Direct & Indirect Obstetric Causes	11.8	3	HIV related/ AIDS	15.0
4	Malaria	9.4	4	Intestinal Infections	14.6
5	Intestinal Infections	7.9	5	Certain Conditions originated in the perinatal period	7.2
6	Pulmonary TB	6.2	6	Malaria	6.6
7	Other reasons	5.9	7	Meningococcal & other Meningitis	5.0
8	Abortion	5.1	8	Other reasons	4.6
9	HIV related/ AIDS	4.2	9	Nervous System (except meningitis)	4.3
10	Signs, Symptoms & ill-defined conditions	3.6	10	Signs, Symptoms & ill-defined conditions	4.1
		100			100

Source: MOHCW (2008) National Health Profile [7]

3.2 Maternal and Child Health

3.2.1 Maternal Health

As Figure 3-3 shows, according to the Zimbabwe Demographic and Health Survey (ZDHS) 2010-2011[7], maternal mortality ratio greatly increased from 283 per 100,000 live births in 1994 to 960. It is unlikely that Zimbabwe will meet the MDG 5 target of 145 per 100,000 live births by 2015.



Source: CSO and Macro International Inc. (1995) ZDHS 1994 [8]; CSO and Macro International Inc. (2000) ZDHS 1999 [9]; CSO and Macro International Inc. (2007) ZDHS 2005-06 [10]; MOHCW, Maternal and Perinatal Mortality Study 2007 [11]; Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

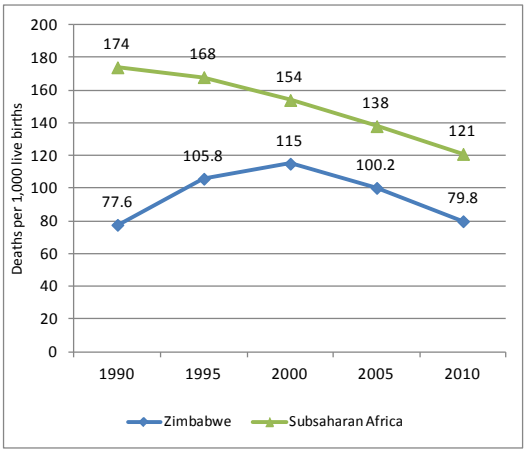
Figure 3-3 Trends in Maternal Mortality Ratio[8]

According to the Zimbabwe Maternal and Perinatal Mortality Study (2007), the primary causes of maternal deaths were as follows: AIDS defining conditions (25.5%), post-partum hemorrhage (14.4%), hypertension/eclampsia (13.1%), puerperal sepsis (7.8%), abortion complications (5.8%), and malaria (5.8%). In addition, the estimation of the UN Maternal Mortality Estimation Inter-agency Group indicated that 38.8% of maternal deaths are attributed to HIV [13]. The impact of HIV on maternal mortality remains heavy.

[7] For reference, the UN inter-agency estimated that the maternal mortality ratio in Zimbabwe is 570 per 100,000 live births in 2010. In the ZDHS, the estimate of the maternal mortality ratio is for the seven-year period preceding the 2010-11 survey. Therefore, the values are not simply comparable.
[8] The MDG target value is from the MTP.

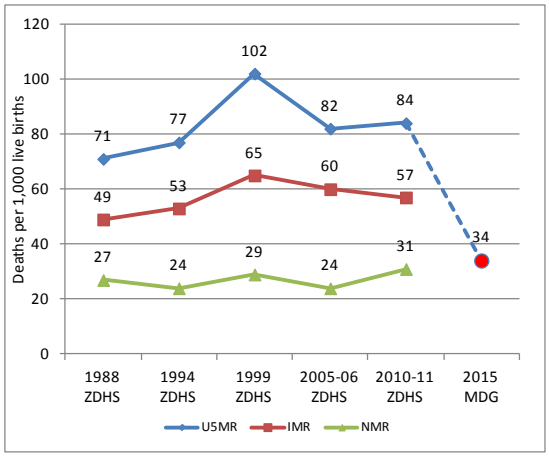
3.2.2 Child Health

The estimated under-five mortality rate increased from 77.6 per 1000 live births in 1999 to 115 in 2000. It decreased to 79.8 in 2010. However, it is worse compared to the 1990 level. Although the under-five mortality rate in Zimbabwe is below the average for sub-Saharan Africa (121 per 1000 live births), it remains high in the world (ranked 37th among 193 countries) [14] [15]. As shown in Figure 3-5, overall child mortality has not been improved according to the results from ZDHS. Major challenges and constraints remain in order to achieve the MDG targets.



Source: Inter-agency Group for Child Mortality Estimation (IGME) Zimbabwe [14]

Figure 3-4 Trends in Under-5 Mortality Rate (estimate) (1990-2010)



Source: Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

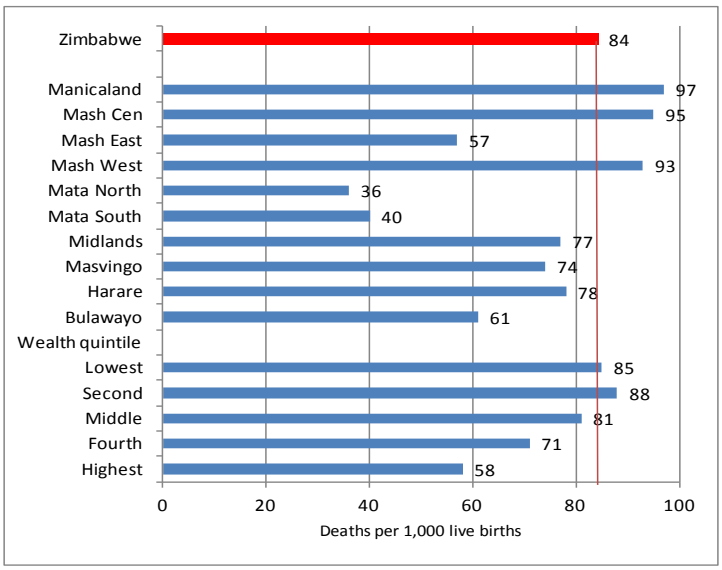
Figure 3-5 Trends in Child Mortality[9]

The primary causes of under-five deaths were as follows: neonatal deaths (30%), HIV/AIDS (21%), pneumonia (12%), diarrhea (9%), and measles (8%). The primary causes of neonatal deaths were as follows: preterm (37%), asphyxia (27%), sepsis/meningitis/tetanus (19%), and congenital (10%) [16].

In Zimbabwe, the median birth interval is almost four years (47.1 months) [10]. Infants born less than two years after a previous birth have particularly high under-five mortality rates (148 deaths per 1000 live births compared with 70 deaths per 1000 live births for infants born three years after the previous birth).

According to the 2010-11 ZDHS, under-five mortality rates vary by province as shown in Figure 3-6. The under-five mortality rate ranges from 36 deaths per 1000 live births in Matabeleland North to 97 in Manicaland. Under-five mortality differs dramatically by wealth. Children born to the richest households are markedly less likely to die before their fifth birthday than children born to the poorest households (58 and 85 deaths per 1000 live births, respectively).

[9] The MDG target value is from the MTP.
[10] WHO recommends to have at least two years (24 months) birth interval after the previous live birth [WHO (2007) Report of a WHO Technical Consultation on Birth Spacing, Geneva, Switzerland, 13–15 June 2005]



Source: Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

Figure 3-6 Under-5 Mortality Rate by Province and Wealth Quintile

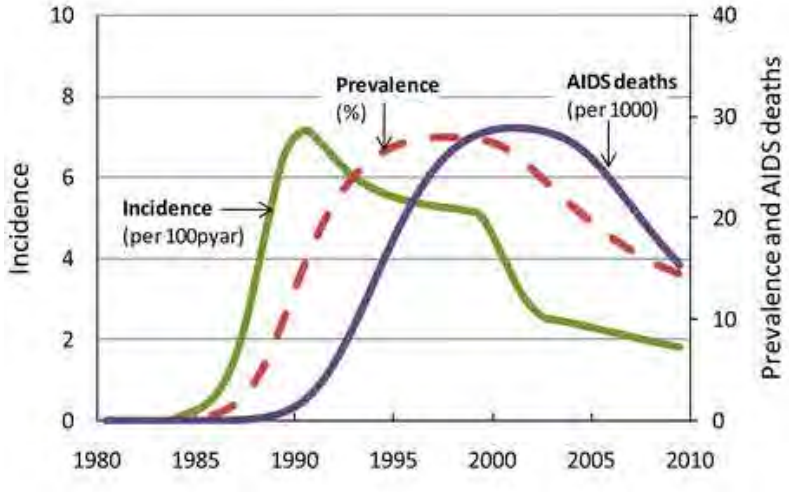
3.3 Communicable Diseases

3.3.1 HIV and AIDS

Zimbabwe is one of the countries that have been worst affected by the HIV epidemic. Adult-estimated HIV prevalence has declined from 27.2% in 1998 to 14.3% in 2010 [17]. Figure 3-7 shows the trends of estimated HIV incidence, prevalence, and AIDS deaths. Results from the ZDHS showed similar trends; Adult (15-49 years old) HIV prevalence has declined from 18% (ZDHS 2005-06) to 15% (ZDHS 2010-11). A comparison of the ZDHS 2005-06 and ZDHS 2010-11 HIV prevalence estimates indicates that HIV prevalence among women has declined from 21% to 18%, and prevalence among men has declined from 15% to 12%.

The epidemic in Zimbabwe is believed to be declining as a result of prevention programmes, in particular, through behavior change and Prevention of Mother to Child Transmission (PMTCT) of HIV, as well as high mortality due to low Antiretroviral Therapy (ART) coverage[11] [17] [18].

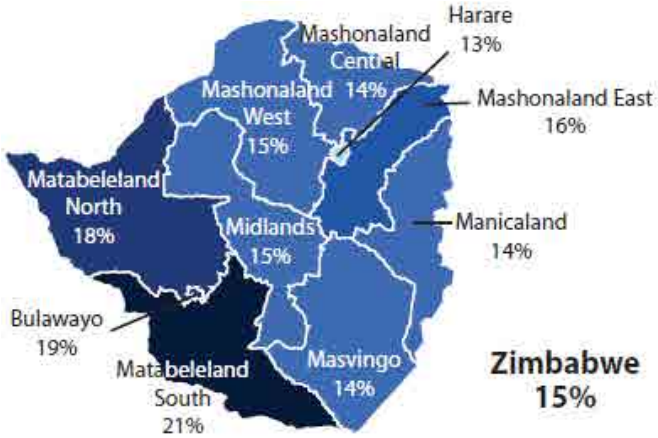
[11] Between 1999 and 2006, less than 5% of people living with HIV had access to ART [17].



Source: Halperin DT, Mugurungi O, Hallett TB, Muchini B, Campbell B, et al. (2011) A Surprising Prevention Success: Why Did the HIV Epidemic Decline in Zimbabwe? [19]

Figure 3-7 Estimated Trends in HIV Incidence, Prevalence, and AIDS Deaths (A Mathematical Model)

According to the 2010-11 ZDHS, as shown in Figure 3-8, HIV prevalence varies by province from 13% in Harare to 21% in Matebeleland South.



Source: Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

Figure 3-8 HIV Prevalence by Province

Although HIV prevalence in Zimbabwe has been declining, the burden of HIV and AIDS remains heavy. The total number of adults and children living with HIV was estimated at 1,168,263 in 2010. About half of them, or 593,168, were in need of antiretroviral therapy (ART) [17]. Table 3-2 indicates the extent of HIV infection and its impact, with projections to 2015.

Table 3-2 Summary of HIV Estimates 2011-15

Indicator	2011	2012	2013	2014	2015
HIV Population (Adults and Children)	1,159,097	1,157,098	1,161,885	1,171,879	1,187,087
New HIV Infections	59,721	59,754	60,646	61,884	65,215
Annual AIDS Deaths	63,765	62,007	58,382	54,038	51,808

Source: NAC (2011) Zimbabwe National HIV and AIDS Strategic Plan: ZNASP II [17]

HIV transmission remains predominantly sexually driven. Sexual transmission accounted for over 80% of infections. Around 57.6% of new HIV infections were derived from a low-risk heterosexual transmission and 18.8% came from partners of casual heterosexual. Majority of new infections occurred in the age group 20-29 years old [17].

According to the results from ZDHS 2010-11, there is a relationship between HIV prevalence and some of the socioeconomic characteristics. For example, among men of age 15-49 who were tested, HIV prevalence declined as educational level increased (more than secondary 9%, secondary 12%, primary 14%, and no education 16%).

With regards to marital status, HIV prevalence for men and women was highest among those who are widowed (men 61% and women 56%). Men and women who have never been married were least likely to be HIV-positive (men 4% and women 8%). There is no clear relationship between wealth and HIV prevalence among men or women.

According to the ZDHS 2010-11, the percentage of men and women with comprehensive knowledge[12] of HIV and AIDS increased since ZDHS 2005-06, from 46.9% to 52.8% and 44.2% to 55.9%, respectively.

Approximately 79% of women and 65% of men have correct knowledge[13] about PMTCT. In the ZDHS 2005-06, only 52% of women and 39% of men had the correct knowledge; thus, there has been a substantial increase in knowledge about PMTCT in Zimbabwe.

3.3.2 Malaria

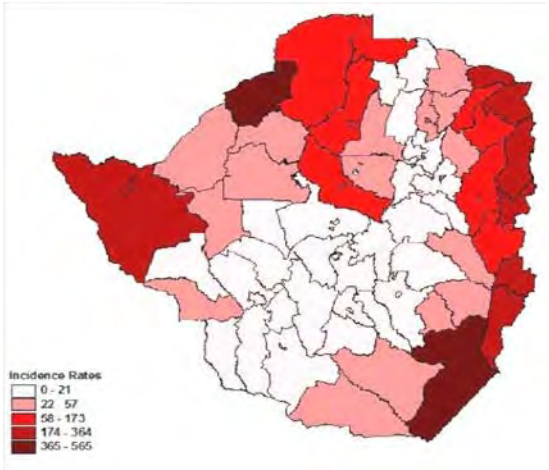
Malaria remains a major infectious disease in Zimbabwe. It is estimated that 50% of the population resides in malaria-endemic areas [20]. Malaria is mainly seasonal with potential for epidemics during the rainy season (from November to April). About 98% of all cases of malaria are caused by *P. falciparum* [21]. Forty-five districts out of 62[14] are considered malarious, with 33 categorized as high-burden districts [22]. Figure 3-9 shows the malaria incidence by district in 2010. There is low or no malaria transmission in the high-altitude areas across the center of the country.

There has been a reduction in the incidence of malaria cases reported over the past 10-year period from 2000 to 2010, as shown in Figure 3-10. In 2010, the malaria incidence rate stood at 49 per 1000 population showing a decline of almost 64% from the 2000 rate of 136. However, the data available consists of both laboratory-confirmed and unconfirmed cases; there are issues with the quality and completeness of data [22].

[12] Comprehensive knowledge means 1) knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chances of getting HIV, 2) knowing that a healthy-looking person can have HIV, 3) knowing that HIV cannot be transmitted by mosquito bites, and 4) knowing that a person cannot be infected by sharing food with a person who has AIDS.

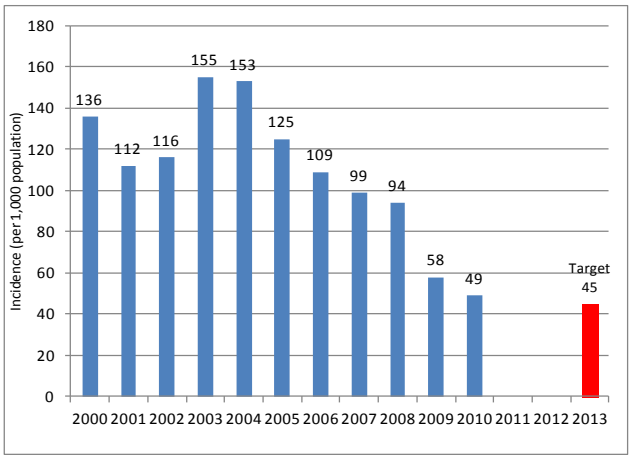
[13] HIV can be transmitted from mother to child by breastfeeding and that the risk of mother-to-child transmission of HIV can be reduced by the mother taking special drugs during pregnancy.

[14] The total number of districts is currently 63 but 62 was used in this study based on the reference.



Source: National Malaria Control Programme, Ministry of Health and Child Welfare (2011) Zimbabwe Malaria Programme Review Report [21]

Figure 3-9 Malaria Incidence by District (2010)



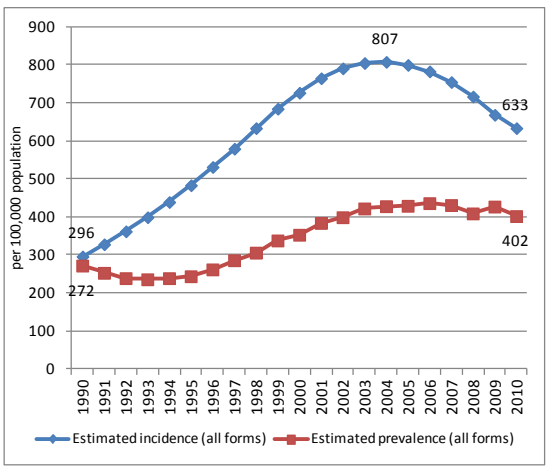
Source: MOHCW (2011) Zimbabwe Malaria Programme Review Report. [21]

Figure 3-10 Trends in Malaria Incidence (2000-2010) [15,16]

3.3.3 Tuberculosis

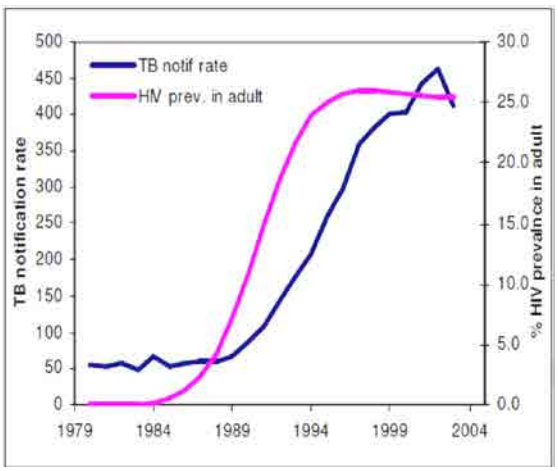
Tuberculosis (TB) continues to be a significant cause of morbidity and mortality in Zimbabwe. In 2008, TB was the second leading cause of in-patient deaths [23]. Zimbabwe is one of the 22 TB high burdened countries in the world. According to WHO, estimated TB incidence has dramatically increased in 2010 from 296 to 633 per 100,000 population (Figure 3-11).

The most significant contributing factor to the TB epidemic is the HIV epidemic. As shown in Figure 3-12, the rise in HIV prevalence preceded the rise in TB cases. The estimated HIV/TB co-infection rate was 75% [24].



Source: WHO (2011) Global Tuberculosis Control: WHO Report 2011 [24]

Figure 3-11 Trends in TB Incidence and Prevalence (1990-2010)



Source: MOHCW (2009) National Tuberculosis Control Programme Five Year Strategic Plan 2009-2013 (Draft) [25]

Figure 3-12 HIV Prevalence and TB Notification Rate

[15] Note that the 2001 drop in cases was attributed to "industrial action" among health workers that paralyzed the health system.
[16] The target value in 2013 is from the National Malaria Control Programme Strategy (2008-2013).

3.3.4 Other Communicable Diseases

Other communicable diseases that are threats to public health include cholera, rabies, and anthrax. In 2008 and 2009, Zimbabwe experienced a very serious cholera outbreak. Cholera epidemics exacerbated by a countrywide breakdown of sewage and water supply and treatment systems. Key cholera statistics are shown in Table 3-3. Incidences of cholera emergencies have been reduced throughout the country, except in vulnerable areas in the eastern and south-eastern parts where situations that contribute to cholera outbreaks have not yet been fully put under control. Of the total reported cholera cases of 1140 in 2011, 870 (76%) were reported from Manicaland Province and 262 (23%) from Masvingo Province [2].

Table 3-3 Trends in Cholera Outbreak

Indicator	2008	2009	2010	2011
Affected Area	All 10 Provinces	All 10 Provinces	19 of 62 districts	10 of 62 districts
Cases	31,819	66,773	1,022	1,140
Case fatality rate	4.99%	4.04%	2.15%	3.9%

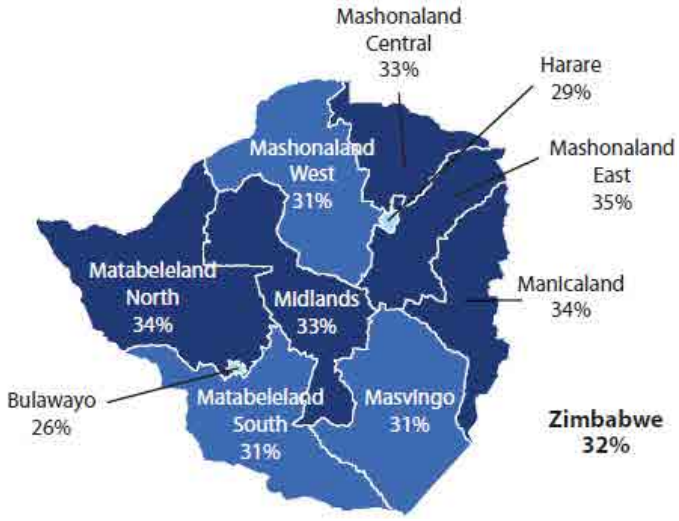
Source: OCHA (2012) Zimbabwe: Health Priorities – Snapshots (as of 23 February 2012) [26]

As one of the neglected tropical diseases (NTDs), schistosomiasis has been a public health problem. In 2008, schistosomiasis was the tenth cause of outpatient visit [23]. According to WHO, schistosomiasis prevalence is 10% to 49% and Zimbabwe is classified as a moderate endemic country. Zimbabwe is also classified as soil-transmitted helminthes endemic country. However, data regarding the national prevalence is still lacking and the nationwide situation is not known [27].

3.4 Malnutrition

Malnutrition is a major contributing factor of morbidity and mortality of children under five years old. According to the ZDHS 2010-11, 32% of children under five were chronically malnourished. Chronic malnutrition[17] is most common among children age 24-35 months (49%) and 18-23 months (47%). The prevalence of chronic malnutrition by province is shown in Figure 3-13. About 3% of children under five suffered from acute malnutrition[18]. With regards to low birth weight, 9.5% of infants had low birth weights (less than 2.5 kg). Only 31% children were exclusively breastfed. On average, children are exclusively breastfed for 2.8 months. Anemia has decreased only slightly from 58% of children (aged 6-59 months) in the 2005-06 ZDHS to 56% of children in 2010-11.

[17] Moderate and severe: Percentage of children aged 0–59 months who are below minus two standard deviations from median height for age of the WHO Child Growth Standards (stunting).
[18] Moderate and severe: Percentage of children aged 0–59 months who are below minus two standard deviations from median weight for height of the WHO Child Growth Standards (wasting).



Source: Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

Figure 3-13 Chronic Malnutrition Prevalence of Children Under Five Years by Province

Regarding the nutritional status of women in reproductive age (15-49), according to the ZDHS 2010-11, 7% of Zimbabwean women were too thin (BMI <18.5); in contrast, 10.6% of women were obese (BMI ≥30.0). Overall, 28% of women suffered from anemia (mild 20%, moderate 7%, and severe 1%). The prevalence of anemia in pregnant women was high (32%).

3.5 Noncommunicable Diseases

According to WHO, noncommunicable diseases (NCDs) such as cardiovascular disease and cancer accounted for 24% of all deaths (Figure 3-1) [6]. In the National Health Strategy (2009-2013), the MOHCW recognized NCDs including diabetes, hypertension, and cancer as an important public health problem and determined to strengthen the control measures against NCDs [5].

The evolving epidemic of HIV in Zimbabwe continues to have a major influence on the incidence and pattern of occurrence of cancer in the country. The most frequently occurring cancers in Zimbabwe that are associated with HIV and AIDS are Kaposi sarcoma, non-Hodgkin lymphoma and cervical cancer. The leading cause of cancer among Zimbabwean black men in 2006 was Kaposi sarcoma (23.8%) followed by prostate (13.1%), eye (6.5%), and non-Hodgkin lymphoma (6.2%). In Zimbabwean black women, the most frequent cancers were cervical cancer (32.5%), Kaposi sarcoma (11.9%), breast (11.7%), eye (4.4%), and non-Hodgkin lymphoma (4.2%) [28].

Chapter 4 Health Service Delivery

4.1 Service Delivery System

The MOHCW is focused on revitalizing the primary health care strategy of organizing services, aiming to ensure the provision of quality and safe services that meet the needs of the people through a network of health facilities. Regarding primary health care, Zimbabwe included oral health and mental health in the eight components[19] in 1981. In 2009, NCDs were added, for a total of 11 elements [29].

The health system in the public sector consists of four levels of care: primary, secondary, tertiary, and quaternary (central). Table 4-1 presents the types and number of health facilities in each level.

Table 4-1 Four Levels of Health System in the Public Sector

Level	Types of Facilities	Number of Facilities	Administration
Quaternary	Central Hospital	14	MOHCW
Tertiary	Provincial Hospital	7	Provincial Health Office (10)
Secondary	District Hospital Mission Hospital	179	District Health Office (63)
Primary	Rural Health Center Clinic	1,331	

Source: MOCHW, The National Health Strategy for Zimbabwe (2009-2013) [5]; MOHCW (2009) National Health Profile 2008 [7] and results from interview in May 2012

In theory, patients are required to proceed to the primary level first and then be referred to the upper levels depending on the complexity of illness. In practice, the experiences of the past decade have shown that the referral hospital chain has broken down, with all referral hospitals replicating the work at the primary level [5].

In the community level, community health workers such as VHWs engage in activities such as giving health education and identifying health problems, and taking action accordingly or referring to the health facilities. VHW reports to the nurse-in-charge of the Rural Health Center which covers her or his village and ward.

In accordance with the norm, Rural Health Centers provide delivery services and are staffed by two nurses (including one midwife) and one environmental technician. Medical doctors are deployed at the secondary level or above.

4.2 Maternal and Child Health Services

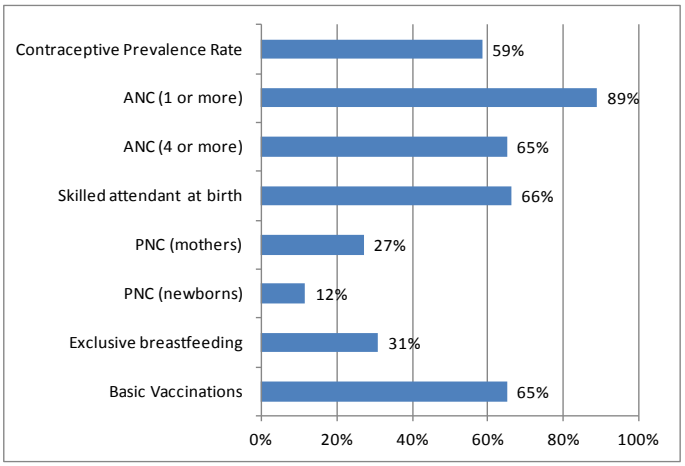
4.2.1 Policy and Strategies

Policies and strategies concerning maternal and child health developed by the MOHCW include the National Maternal and Neonatal Health Road Map (2007-2015), the National Child Survival Strategy for Zimbabwe (2010-2015), the Zimbabwe Expanded Programme on Immunization Comprehensive Multi-year Plan (2009-2013), and the National Adolescent Sexual and Reproductive Health Strategy (2010-2015).

[19] 1) Health education and promotion, 2) Nutrition and breastfeeding, 3) Supply of adequate sanitation and clean water, 4) Maternal and child health care including family planning, 5) Immunization against major infectious diseases, 6) Prevention and control of locally endemic diseases, 7) Appropriate treatment of communicable diseases and injuries, and 8) Provision of essential medicine.

4.2.2 Overview of Maternal and Child Health Services

Figure 4-1 shows the status of indicators related to maternal and child health from family planning to care after delivery in chronological order. Overall, the coverage of postnatal care for mothers and newborns is low. The details of each service will be discussed in the following sections.



Source: Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

Figure 4-1 Coverage of Maternal and Child Health Services

4.2.3 Maternal Health Services

(1) Family Planning

According to the ZDHS 2010-11, knowledge of family planning methods in Zimbabwe is nearly universal; 98% of women and 99% of men of aged 15-49 knew at least one modern method of family planning. Around 59% of married women aged 15-49 used family planning.

Use of modern contraceptive methods has increased dramatically in the past 20 years, from 36% in 1988 to 57% in 2010-11. The contraceptive method most commonly used is the pill (41%). Condom use is very low with 3% using male condoms and less than 1% using female condoms.

(2) Antenatal Care

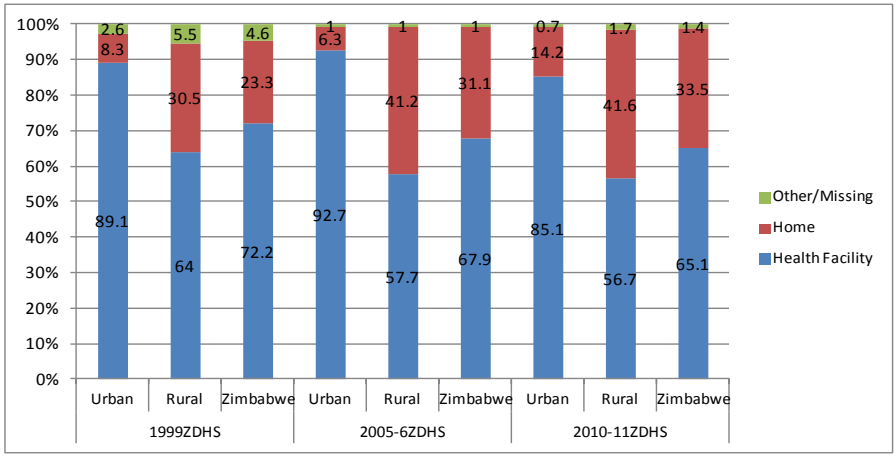
According to the ZDHS 2010-11, 89% of women had more than one antenatal care (ANC) visits and 65% of women had more than four ANC visits. There are no differences between urban-rural residence in the percentage of women who receive ANC.

During an ANC visit, 49% of women took iron supplements; 2% took intestinal parasite drugs. Fifty-five percent of women received more than two doses of vaccine against neonatal tetanus. Sixty-two percent of women were informed of signs of pregnancy complications during an ANC visit.

(3) Delivery

The percentage of deliveries assisted by a skilled provider observed in ZDHS 2010-11 (66%) represented a reduction from the figures reported in ZDHS 2005-06 (69%) and ZDHS 1999 (73%). Also, the percentage delivered by Caesarean-section has declined from 4.8% in 2005-06 to 4.5% in 2010-11.

As shown in Figure 4-2, 65.1% of births occurred in health facilities per ZDHS 2010-11. This figure is lower than that recorded in ZDHS 2005-06 (67.9%) and ZDHS 1999 (72.2%). Place of delivery varies greatly by urban-rural residence; 85.1% of births in urban areas were delivered in a health facility compared with 56.7% of births in rural areas.



Source: CSO and Macro International Inc. (2000) ZDHS 1999 [9]; CSO and Macro International Inc. (2007) ZDHS 2005-06 [10]; Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

Figure 4-2 Changes in Place of Delivery

In the 2010-11 ZDHS, women were asked about their problems in accessing health facilities. The most important factor impeding women from accessing health care for themselves is getting money to pay for treatment; 50% of the women highlighted this concern (in urban areas 36%, in rural areas 58%). Distance to a health facility was also cited by 34% of women as a big problem in accessing health care. Not unexpectedly, women residing in rural areas were more likely than those in urban areas to report distance as a big problem (49% compared with 10%). Most of the women residing in rural areas have difficulties in accessing health facilities.

As one of the measures for women having difficulties in accessing health facilities, maternal waiting homes are established. The aim of the maternal waiting home is to improve access to health institutions, and to skilled and emergency care to reduce morbidity and mortality of mother and neonate[20] [30]. The number of maternal waiting homes is unclear. According to the survey in 2009, only 22% of the facilities interviewed reported having a maternity waiting home [31].

(4) Basic and Comprehensive Emergency Obstetric and Newborn Care

In theory, the Basic Emergency Obstetric and Newborn Care (BEmONC) services are provided at the primary level and Comprehensive Emergency Obstetric and Newborn Care (CEmONC) services are provided at the secondary level and above. However, the critical shortage of experienced nurses and midwives has weakened the capacity of most health facilities to provide BEmONC and CEmONC. Only

[20] The maternity waiting home should be situated at a site which is easily accessible to the labour ward of health facilities which can provide basic and emergency obstetric and neonatal care and operate 24 hours a day. Ideally, it should be part of the hospital or within 100 metres from the labour ward. The pregnant women are expected to be admitted at 36 weeks of gestation. In maternity waiting homes, pregnant women can receive services such as health education and promotion services on danger signs in pregnancy, baby care, and monitoring of pregnancy. Deliveries are done in the neighboring health facility.

10% of health centers and 30% of district hospitals have at least sufficient midwives according to national policy.

Currently, only one provincial hospital has a functional intensive care unit and another one provincial hospital has a complete set of required specialists; i.e., a pediatrician, obstetrician and gynecologist, general surgeon, physician and anesthetist according to national standards thereby seriously compromising the delivery of CEmONC. It is estimated that less than 5% of complicated deliveries are successfully managed at the provincial hospital level [31].

(5) Postnatal Care

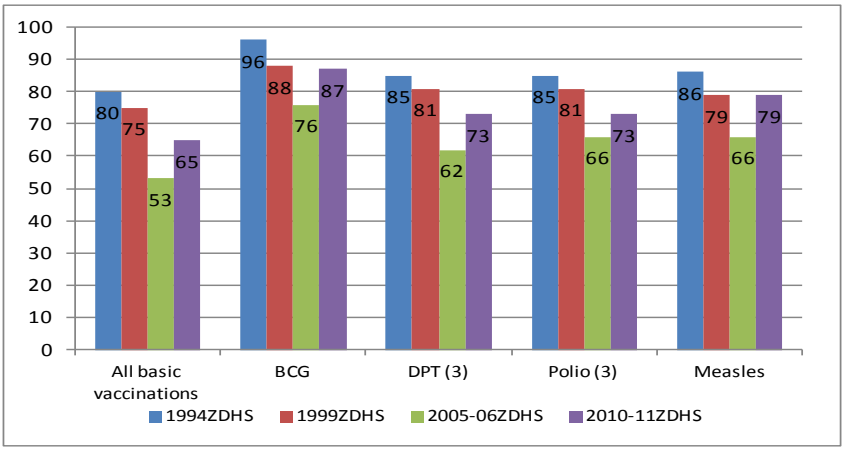
A large proportion of maternal and neonatal deaths occur during the first 48 hours after delivery. Thus, it is recommended that women who deliver in a health facility should be kept for at least 48 hours (72 hours in case of Caesarean-section) for the mothers and infants to be monitored by skilled personnel. According to the ZDHS 2010-11, however, only 27% of women received postnatal check-up within the first two days after delivery, the recommended time period. Fifty-seven percent of women did not have postnatal check-up at all. Concerning postnatal care for the newborns, only 12% of newborns received a checkup in the first two days after birth.

4.2.4 Child Health Services

(1) Vaccination of Children

In the Expanded Programme on Immunization (EPI) in Zimbabwe, children should receive BCG, pentavalent (DPT-HB-Hib), polio, and measles vaccines. New vaccines (Pneumococcal and Rota-virus vaccine) will be introduced into the routine EPI system from 2012 to 2013. According to the 2010-11 ZDHS, the percentage of children 12-23 months old who have received all basic vaccinations has increased from 53% in 2005-06 to 65% in 2010-11. However, it still does not reach the 1994 and 1999 levels (Figure 4-3).

Vaccination coverage is higher in urban areas than rural areas (70% versus 62%). There is more variation in vaccination coverage by province, ranging from only 47% of children fully vaccinated in Manicaland to 83% in Bulawayo. A mother's level of education relates to immunization coverage; 69% of children whose mothers have at least some secondary education are fully immunized compared with 52% of children whose mothers have only primary education. Children in the highest wealth quintile are more likely to be fully vaccinated (73%) than their counterparts in the lowest wealth quintile (55%).



Source: Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

Figure 4-3 Trends in Vaccination Coverage[21]

(2) Childhood Illness

ARI and diarrhea are among the leading causes of childhood morbidity. In the 2010-11 ZDHS, among children under age five with ARI symptoms, advice or treatment was sought from a health facility or a health provider for 48%, and 31% received antibiotics. In case of fever, advice or treatment was sought from a health facility or provider for 37% of the children with fever, out of which 23% of children with fever received antibiotics during the episode of the fever. With regards to diarrhea, 36% of children with diarrhea were taken to a health facility or provider and 74% of children were treated with oral rehydration therapy (ORT) or increased fluids.

Implementation of the Integrated Management of Childhood Illnesses (IMCI) started in 2000 in Zimbabwe. By 2006, more than 800 health workers had been trained in IMCI case management. The IMCI training has been introduced into the pre-service training curriculum for the Registered General Nurse and the Primary Care Nurse [32]. However, challenges remain such as revising the Integrated Management of Neonatal and Childhood Illnesses (IMNCI)[22] training material (integration of pediatric ART components), scaling up of training at the primary health center level, and continuous provision of medicines [33].

4.3 Infectious Disease Control

4.3.1 HIV Control

(1) Programme Implementation

The National AIDS Council (NAC) coordinates, monitors, and evaluates the national multi-sectoral response to HIV and AIDS. NAC and its decentralized structures, the Provincial AIDS Action Committee (PAAC), District AIDS Action Committee (DAAC) and Ward AIDS Action Committee (WAAC), coordinate HIV response in each level. All implementing organizations are to be registered and should report to DAAC monthly.

[21] DPT was change to pentavalent vaccine in 2008. All basic vaccinations mean BCG, measles, and three doses each of DTP or pentavalent and polio.
[22] IMCI has now been termed the Integrated Management of Neonatal and Childhood Illnesses (IMNCI) reflecting the introduction of a neonatal component.

The HIV, AIDS, STI and TB Unit of the MOHCW is in charge of the HIV interventions in the health sector. The MOHCW and NAC have always been collaborating in policy development and others.

(2) Policy and Strategic Plan

The Zimbabwe National HIV and AIDS Strategic Plan (ZNASP II) 2011-2015 identified the impacts to be achieved and priority interventions as presented in Table 4-2.

Table 4-2 Impacts and Priority Interventions of ZNASP II

	Prevention	Treatment, Care and Support	Coordination and Management and Systems Strengthening
Impact	Adult HIV incidence reduced by 50% from 0.85% (48,168) (2009) to 0.435% (24,084) by 2015	HIV- and AIDS-related mortality reduced by 38% by 2015 Adults: from 71,299 (2010) to 44,205 Children: from 13,393 (2009) to 8,304	National HIV and AIDS response is effectively coordinated and managed: the NCPI rating is improved from 6.2 in 2010 to 9.0 in 2015
Priority Interventions	Social and behavior change communication Condoms promotion and distribution Male circumcision PMTCT HIV testing and counseling Treatment and control of STIs Blood safety Provision of post exposure prophylaxis	Antiretroviral Therapy (ART) Nutrition Community Home-Based Care Support for orphans and vulnerable children	Enabling policy and legal environment Coordination and management of the national response Mainstreaming/ integration of HIV and AIDS Systems strengthening Strategic information management Sustainable financing and resource mobilization

Source: NAC (2011) Zimbabwe National HIV and AIDS Strategic Plan: ZNASP II 2011-2015 [17]

(3) Progress in the HIV Response

HIV testing is increasing rapidly in Zimbabwe. According to ZDHS, 33.6% of women and 20.5% of men were tested for HIV and received their test results within the 12 months before the survey in 2010-11 compared with only 6.6% of women and 6.7% of men in 2005-06.

HIV testing rate in pregnant women has been increasing. In 2009, 85% of pregnant women attending ANC services were tested for HIV, compared with 73% in 2006. As a result, PMTCT service coverage has been improving. In 2009, 59% of pregnant women living with HIV received antiretroviral drugs (ARV) to prevent HIV transmission to their infants. This represents a significant increase in coverage from just 15% in 2006.

Access to treatment and care services for AIDS and opportunistic infections has been increasing. Facilities providing ART services increased from 32 in 2006 to 387 in 2010. This results in an increase of PLHIV on ART from 99,408 in 2007, to 218,589 in 2009 and to 326,241 in 2010. The expansion of ART coverage reduced annual AIDS deaths from 123,000 in 2006 to 71,299 at the end of 2010 [17].

Although the coverage of HIV services has been increasing, major challenges remain in further expanding the service coverage, ensuring a stable supply of ARV, and securing human resources to provide services.

4.3.2 Malaria Control

(1) Policy, Strategies and Programme Implementation

The National Malaria Control Programme (NMCP) is operated under the Directorate of Epidemiology and Disease Control of MOHCW. The national malaria response is guided by the National Malaria Control Programme Strategy (2008-2013) to achieve universal access to malaria control intervention. The goals of the strategy are as follows:

- To reduce malaria incidence from 95 per 1000 population in 2007 to 45 by 2013
- To reduce case fatality rate from 4.5% in 2007 to 2.5% by 2013

The malaria programme is funded by the Government, the Global Fund Round 8, the President's Malaria Initiative (PMI), and other partners.

(2) Progress in Malaria Control

Table 4-3 describes the trends in malaria indicators.

Table 4-3 Trends in Malaria Indicators

Indictor	2005/06 ZDHS	2009 MIMS	2010/11 ZDHS
Proportion of households with one or more ITN	9%	27%	29%
Proportion of children under five years old who slept under an ITN the previous night	4%	17%	10%
Proportion of pregnant women who slept under an ITN the previous night	NA	NA	10%
Proportion of women who received two or more doses of IPTp	NA	NA	7%
Proportion of children under five years old with fever in the last two weeks who received treatment with Artemisinin-based Combination Therapy (ACTs)	5%	14%	2%

Source: CSO and Macro International Inc. (2007) ZDHS 2005-06 [10]; CSO (2009) Multiple Indicator Monitoring Survey (MIMS) 2009 Preliminary Report [34]; Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

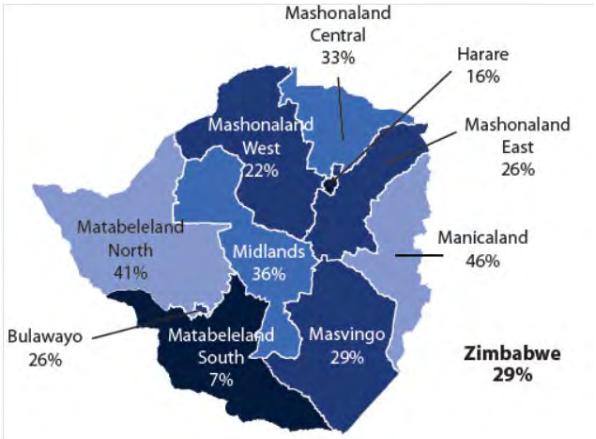
The national strategy aims to achieve universal coverage[23] with Long-Lasting Insecticide-treated Nets (LLINs) in moderate to high transmission areas. Universal coverage is expected to be achieved by 2013.

Figure 4-4 shows the target districts for LLIN, while Figure 4-5 shows the percent of households with at least one Insecticide-Treated Net (ITN) by province in the ZDHS 2010-11. According to Figures 4-4 and 4-5, the provinces with LLIN target districts tend to have higher percentage of ITN ownership.

[23] Universal coverage is defined as either one net for every two persons or at least three nets per household.

Source: President's Malaria Initiative (2011) Malaria Operational Plan- FY 2012, Zimbabwe [22]

Figure 4-4 Targeted LLIN Districts



Source: Zimbabwe National Statistics Agency and ICF International Inc. (2012) ZDHS 2010-11 [12]

Figure 4-5 ITN Ownership by Province

A policy on malaria in pregnancy was adopted in 2004. The policy states that only women living in moderate to high malaria transmission areas should receive Intermittent Preventive Treatment in pregnancy (IPTp). The programme recommends three doses of sulfadoxine-pyrimethamine (SP). The dose of SP is to be taken under direct observation by a health worker.

Although the strategy (2008-2013) sets the target of 85% for IPTp, according to the ZDHS 2010-11, only 7% of pregnant women received two doses of SP. The shortage of SP at health facilities is a contributing factor to the low IPTp uptake. There is a need to improve SP quantification in order to avoid stock outs [22].

As of August 2010, the new NMCP policy for case management stated that all suspected malaria cases should have parasitological confirmation done by microscopy or rapid diagnostic test before prescribing an antimalarial drug. In 2010, the NMCP adopted the policy and conducted a pilot study of community case management[24] for malaria. The NMCP is preparing to scale up the training of community health workers and to implement community-based treatment on a national scale in malaria-endemic districts [22].

4.3.3 Tuberculosis Control

Policy, Strategies and Programme Implementation

The National Tuberculosis Control Programme (NTCP), which is part of the HIV, AIDS, STI and TB unit, was established in the late sixties. In 1983, the government developed a policy of integration of all TB activities into the primary health services. The NTCP officially adopted the Directly Observed Therapy Short-course (DOTS) strategy in 1997.

The draft Five-Year Strategic Plan (2009-2013) of the National Tuberculosis Control Programme aims to increase the case detection rate of new infectious (sputum smear-positive) TB cases to at least 70% and to achieve treatment success in at least 85% of detected new infectious TB cases.

[24] Community-based health workers conduct RDT and ACT prescription under the supervision of health centers.

(2) Progress in TB control

According to WHO, case detection rate for TB was 56% (2010) and treatment success rate (new smear positive) was 78% (2009) [24].

TB remains the commonest cause of death among people living with HIV (PLHIV). Therefore, collaboration between the TB and HIV programmes is important in the prevention, diagnosis and treatment of TB for PLHIV. Table 4-4 presents the progress in responses to TB/HIV co-infection.

Table 4-4 Progress in Prevention, Care and Management of TB/HIV Co-infection

Indicator	2007	2008	2009
Percentage of TB cases tested for HIV	26% (10,762)	45% (18,310)	83% (38,424)
Percentage of HIV positive TB cases	69% (7,426)	76% (18,310)	77% (29,586)
Percentage of HIV positive TB cases put on cotrimoxazole preventive therapy	78% (5,824)	79% (12,402)	80% (23,669)
Percentage of HIV positive TB cases put on ART	23% (1,727)	25% (4,630)	29% (8,509)

Source: NAC (2011) Zimbabwe National HIV and AIDS Strategic Plan: ZNASP II 2011-2015 [17]

4.3.4 Control for Other Infectious Diseases

In the MOHCW 2012 plan, to reduce morbidity due to schistosomiasis and soil-transmitted helminthes, the MOHCW sets the strategies as follows: Establishing and training joint MOHCW and the Ministry of Education, Sports, Arts and Culture schistosomiasis and soil-transmitted helminthes mass treatment implementation teams at all levels, and developing treatment guidelines for schistosomiasis, soil-transmitted helminthes, rabies, etc.

4.4 Response to Malnutrition

The National Nutrition Department within the MOHCW is responsible for defining policy and overseeing the delivery of direct nutrition interventions. Nutrition is a multi-sectorial issue. Therefore, the National Nutrition Department collaborates and coordinates with other departments of the MOHCW in activities such as guideline development.

With respect to policy and strategies on nutrition, the MOHCW and the Food and Nutrition Council (FNC) developed the National Food and Nutrition Security Policy (2011).[25] A strategic plan will be developed later.

In theory, Provincial Nutritionists at the provincial level, and District Nutritionists and Nutrition Assistants at the district level are to be placed. In practice, however, there are ten districts out of 62 that have vacancies due to the freeze on employment. At the community level, VHWs have been engaging in nutrition activities such as nutrition education, growth monitoring, and referral to health facilities.

Improved collaboration between departments within the MOHCW is critical to the delivery of interventions such as exclusive breastfeeding, the management of acute malnutrition, and maternal micronutrient supplementation [35]. Also there is a need to strengthen behavior change communication activities, training for VHWs and development of IEC material.

[25] It was still in the process of approval as of May 2012.

4.5 Response to Noncommunicable Diseases

In the National Health Strategy (2009-2013), Zimbabwe recognized that it is faced with a triple burden of communicable, re-emerging and noncommunicable diseases (NCDs) and conditions. Therefore, to reduce the burden of NCDs by 20% by 2013, this will be set as one of the objectives of the National Health Strategy.

As one of the objectives in 2012, the MOHCW sets a target to increase the proportion of health facilities that routinely screen and appropriately manage selected NCDs (diabetes, hypertension, selected cancers (breast, prostate), eyes disease, and chronic respiratory conditions) to at least 50%. The expected outputs of the MOHCW 2012 plan include at least 30% of district and provincial hospitals screen and counsel all outpatients over 40 years of age for diabetes and hypertension, and an NCD Risk Factor Survey is conducted and reports be available.

Chapter 5 Health System

5.1 Human Resources for Health

5.1.1 Overview

Zimbabwe's health system is affected by a substantial shortage of skilled and experienced health workers. The economic depression in 2008 heavily affected the stability of health workers in the public sector. It was reported that at the peak of the economic depression, the MOHCW lost 3588 staff through resignations [36]. According to the Human Resources Department report in December 2008, the vacancy levels in the public health sector were 69% for doctors, 80% for midwives, 62% for nurses, over 63% for medical school lecturers and over 50% for pharmacy, radiology and laboratory personnel [5] [32].

The overall vacancy rate for all categories was 16% as of December 2011. The categories with high vacancy rates, among others, include specialist doctors (77%), government medical officers, environmental health officers and technicians. On the other hand, the establishment for nurses was almost filled up with the creation of Primary Care Nurses posts (1588). The vacancy rate for nursing professions was 8% [37].

Table 5-1 Staff Establishment (Major Designation)

Designation	Establishment	In Post	Vacancies
Doctors	1,767	1,075	39%
Nursing	20,177	18,501	8%
Environmental Health	2,480	1,776	28%
Pharmacy	584	468	20%
Nutrition	1,030	858	17%
Laboratory/Pathology	572	433	24%
Surveillance and Health Information System	225	165	27%
Engineering and Equipment Maintenance	194	111	43%

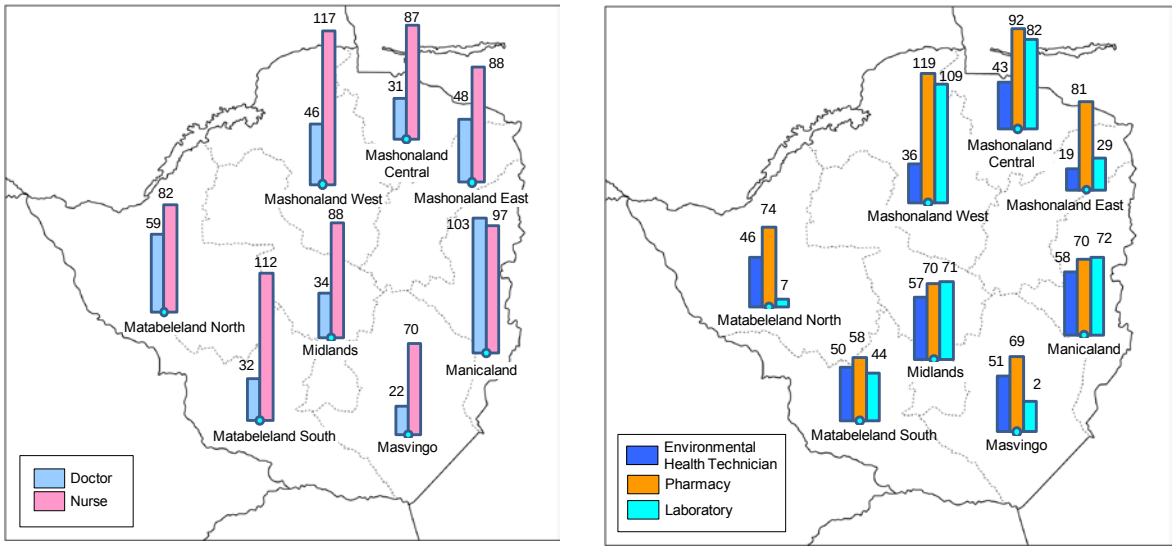
Source: Health Service Board (2012) Annual Report 2011 [37]

WHO recommends 2.3 health workers (nurse, midwives and doctors) per 1000 population. The actual density in Zimbabwe is much lower than this: doctor density was between 0.01-0.02 per 1000 population per province; nurse density was 0.5-1.4. Table 5-2 presents the actual density of doctors and nurses per 1000 population by province. Table 5-3 shows that the vacancy rates greatly vary by province and by category.

Table 5-2 Health Worker Density by Province (per 1000 population)

Province	Doctor	Nurse
Manicaland	0.02	0.6
Mashonaland Central	0.01	0.6
Mashonaland East	0.02	0.7
Mashonaland West	0.02	0.7
Matabeleland North	0.02	0.7
Matabeleland South	0.02	1.4
Midlands	0.02	0.6
Masvingo	0.01	0.5

Source: Marjolein Dieleman, Mark Watson & Chenjerai Sisimayi with additional help from CCORE (2012) Impact assessment of the Zimbabwe Health Worker Retention Scheme [38]



Source: Marjolein Dieleman, Mark Watson & Chenjerai Sisimayi with additional help from CCORE (2012) Impact assessment of the Zimbabwe Health Worker Retention Scheme [38]

Figure 5-1 Post Filling Rate in the Public Sector by Province (June 2011)

5.1.2 Policy and Strategies

The Health Service Board recruits, deploys, and redeploys human resources under the MOHCW. It also develops the human resource policy, and supervises and monitors the status of compliance with the policy. The Human Resources Department of the MOHCW provides technical support in coordination and collaboration with the Health Service Board.

The Health Service Board, the Human Resources Department of the MOHCW and stakeholders developed the Human Resources for Health Policy (2010) and the Human Resources for Health Strategic Plan (2010-2014). The strategic plan focuses on four key areas: 1) human resources information and research, 2) production, training and development of human resources, 3) deployment, utilization, management and retention, and 4) human resources planning and financing.

5.1.3 Human Resources Planning

The MOHCW establishment was last reviewed in 1983. This, however, does not correspond to the current population growth and increased disease burden, especially by the HIV epidemic. Without expansion of the establishment and the lifting of the current freeze on the employment of health workers, then the shortage of health workforce remains a big problem.

In the MOHCW 2012 plan, the following objectives are identified: to reduce the overall vacancy rate among health workers from 17% in 2011 to 10% at the end 2012, to increase the establishment to be cope with an increased population and the evolving burden of disease, and to strengthen the human resource information system.

Task shifting is one of the measures to tackle the human resource shortage. For example, task shifting from doctors to nurses in initiating ART can be considered especially in Zimbabwe where there is a critical shortage of doctors. However, official discussion on task shifting has not been confirmed.

5.1.4 Production and Training

Pre–service education for health workers in Zimbabwe is delivered through health training institutions under both the Ministry of Higher and Tertiary Education (MOHTE) and the MOHCW. The University of Zimbabwe - College of Health Sciences trains doctors, pharmacists, laboratory scientists, nurses, and other professionals at degree and post-graduate level. The National University of Science and Technology (NUST), Solusi, Africa University, etc., also provide degree courses for various health professional programmes. Harare and Bulawayo Polytechnic Colleges offer training to pharmacy technicians and environmental health officers. Good coordination between the MOHTE and MOHCW is needed in curricula development, planning, and accreditation of programmes and others [36].

Table 5-3 Number of Training Institutions by Profession and Type of Ownership

Category	Type of Ownership			Total
	Public	Private not for Profit	Private for Profit	
Medicine	2	0	0	2
Pharmacy	2	0	0	2
Nursing & Midwifery	20	23	1	44
Laboratory	1	0	0	1
Environmental Health	6	0	0	6
Radiology	5	0	0	5
Physiotherapy/Rehabilitation	2	0	0	2

Source: Zimbabwe Health Workforce Observatory (2009) Human Resources for Health- Country Profile Zimbabwe [36]

The shortage of teachers and tutors is critical. For example, the establishment of nurse tutors from health training institutions is 257. As of December 2011, those in their posts were only 141 and there was a 53% vacancy rate of the total establishment. This basically reflects that all training institutions are operating with inadequate staff thereby compromising quality of performance and results produced [37]. Other challenges include the supply and demand imbalance of human resources due to the government's freeze on recruitment.

5.1.5 Employment, Deployment, Retention and Management

Employment of human resources by the Health Service Board needs permission from the Ministry of Finance. As a result, the employment process becomes long.

In 2009, the Human Resources for Health Retention Scheme (HHRS) was launched by the Global Fund, European Union, the UK Department for International Development (DFID), UNICEF, and others in response to the decline in health delivery services and major outbreaks of cholera. The HHRS provides allowances to health workers based on their attendance. The HHRS resulted in the increase of facility-based births attended by skilled health personnel from 53% to 76% of all births between 2008 and 2011. However, attribution of the HHRS to changes in utilization of services has not been determined, and it can only be concluded that the scheme may have contributed to such changes.

The HHRS will be co-financed by the Health Transition Fund (HTF) contributions from donors and the government with a phased-down approach after 2011. The HTF commitment will initially support 94% of the scheme's costs in the second half of 2011, with a phase-out approach to zero% in 2015 as government

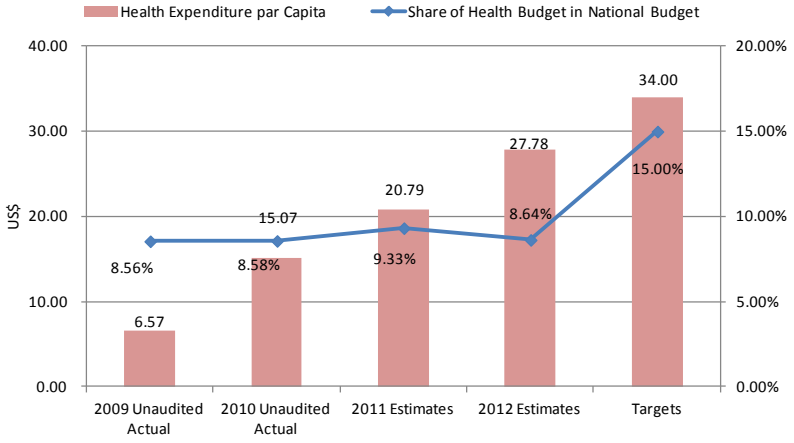
resources become increasingly available. The total amount required is US$153,193,423, and US$57,610,243 of the total amount will be provided by the HTF. The HHRS aims to support a projected quota of 22,065 workers in the public system. Any additional health workers will be fully supported by the government [33].

In order to effectively monitor the HHRS, the Health Service Board secured the services of five Human Resources Auditors. There are as many as 1500 health facilities that have to be audited and this is a mammoth task for just five people. The Auditors work is therefore limited to confirm the attendance of human resources.

5.2 Health Financing

5.2.1 Overview

The health system is grossly under-funded. The MTP aims to allocate 15% of the national budget to the health sector in line with the Abuja Declaration[26] by 2015. However, as Figure 5-2 shows, only 8.56% of the national budget was allocated to health in 2010[27]. The 2010 budgetary allocation represented approximately US$15 per capita per annum. This figure is much less than the US$34 per person recommended by the WHO Macroeconomic Commission on Health[28]. In 2009, the government allocated 12% of the national budget to health; however, the MOHCW received only approximately 30% of what was allocated. Salaries for health workers represented 92% of expenditures [35].

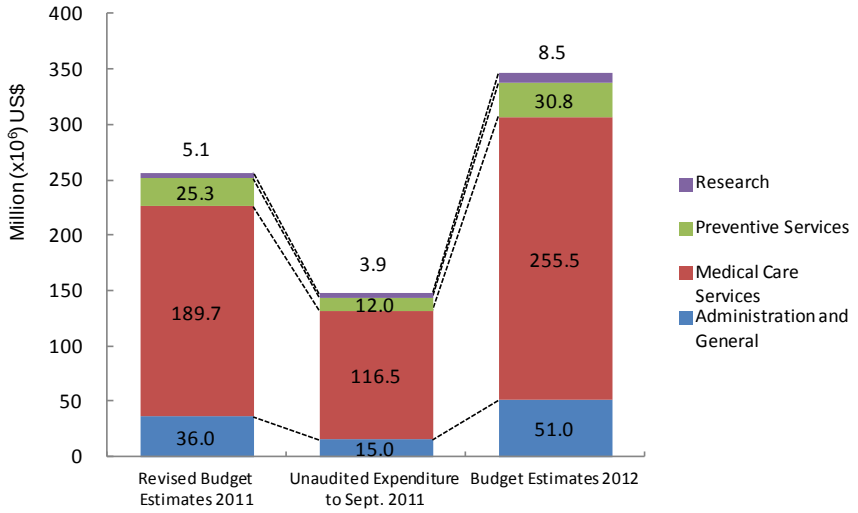


Source: Hon. T. Biti, M.P., Minister of Finance (2011) The 2012 National Budget [39]

Figure 5-2 Share of Health Sector Budget in the National Budget and Health Expenditure per Capita

[26] In 2001, African Union countries meeting in Abuja, Nigeria pledged to increase government funding for health to at least 15%.
[27] Zimbabwe's fiscal year is from January to December.
[28] According to the report of the Commission on Macroeconomics and Health (WHO, 2001), providing minimal essential health care services would require expenditure in 2007 of at least US$34 per capita per year in low-income countries.

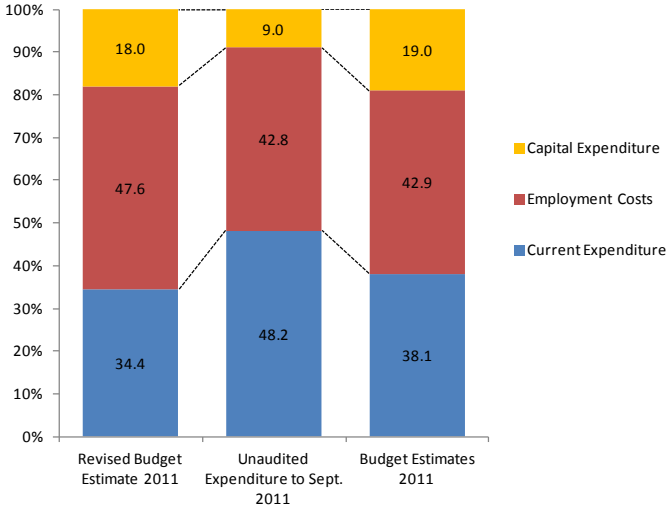
Health expenditure can be categorized into four items: administration and general, medical care services, preventive services, and research. Figure 5-3 shows that the expenditure to the medical care services has a higher proportion compared to the others.



Source: Ministry of Finance (2011) Blue Book [40]

Figure 5-3 Health Expenditure by Item

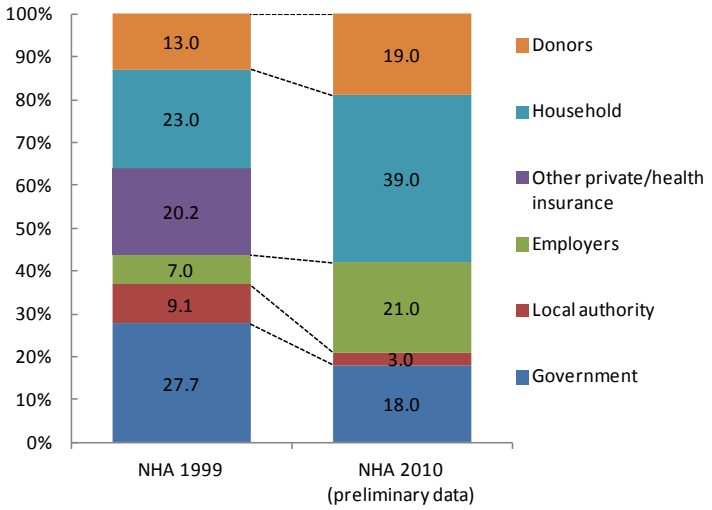
Figure 5-4, the health expenditure when it is categorized by current and capital expenditure, shows that about 80% of the budget were planned to be spent on current expenditure in the budget estimate for 2011. However, in the actual expenditure up to September 2011, more than 90% of the budget was spent on current expenditure. Employment costs represent a high percentage.



Source: Ministry of Finance (2011) Blue Book [40]

Figure 5-4 Current and Capital Health Expenditure

Figure 5-5 shows the financing sources of health sector. Financing from the government has decreased. As a result, the financing from households has increased from 23% to 39%. Moreover, donor financing has also increased.



Source: MOHCW (2000) National Health Accounts Zimbabwe [41] and interview with Deputy Director of Finance and Administration, MOHCW (May 2012)

Figure 5-5 Sources of Health Financing

5.2.2 User Fees

Following independence, Zimbabwe did not charge user fees in public facilities, and a social welfare system exempted the poorest from paying. However, as part of structural adjustment, user fees were introduced into the public system in 1991. Since then, the official policy has been to exempt pregnant women, the elderly above 65 years old, and children under five from fees. In reality, rates and collection systems vary across the country and serve as a significant barrier to women and children accessing health services [35]. The surveys suggested that only about 53% of health facilities provide full maternity services free of charge. Other facilities charge fees with prices varying from US$3 to US$50 [33].

5.3 Health Information System

The Health Information and Surveillance Systems Unit within the Department of Epidemiology and Disease Control is responsible for the National Health Information and Surveillance (NHIS) system. The NHIS system was designed and piloted in 1985, and was rolled out nationwide in 1988. Posts for Health Information Assistants were created at the district and mission hospital levels to improve the NHIS system.

5.3.1 Policy, Strategies and Implementation System

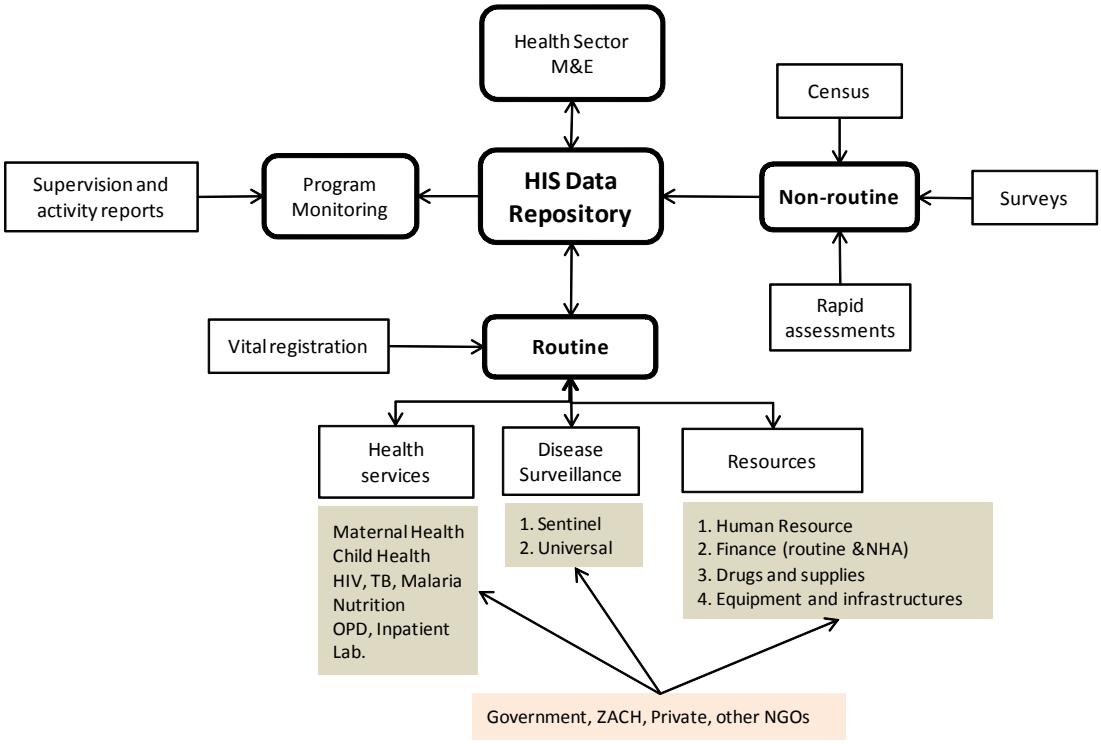
The National Health Information Strategy (2009-2014) was developed with the support from UNFPA. The overall goal of the strategy is to optimize the performance of health services at all levels through strengthening the health information system (HIS). A set of 99 core health indicators has been adopted in the strategy. Monitoring and evaluation of the health sector will be conducted using the 99 indicators.

In developing the strategy, the National HIS Management Committee, comprised of related organizations such as the Zimbabwe National Statistics Agency (ZIMSTAT) and Private Hospitals Association of Zimbabwe (PHAZ), was established. The National HIS Technical Committee was formed under the National HIS Management Committee. The Technical Committee is composed of personnel with technical expertise in the public and private health sector. The Technical Committee meets quarterly.

In order to better integrate with the vital registration system, four personnel are seconded from the ZIMSTAT, in addition to nine MOHCW staff in the Health Information & Surveillance Systems Unit. At the provincial and district levels, health information officers are assigned to Provincial and District Health Offices. At the central, provincial, and district hospitals, health information officers are assigned to compile and analyze the data. At rural health centers and clinics, a nurse is usually in charge of health information.

5.3.2 Data Collection

The Health Information System National Strategy defined the HIS conceptual framework as shown in Figure 5-6.



Source: MOHCW, National Health Information Strategy 2009-2014 [42]

Figure 5-6 HIS: Subsystems, Data Sources, and Information Flow

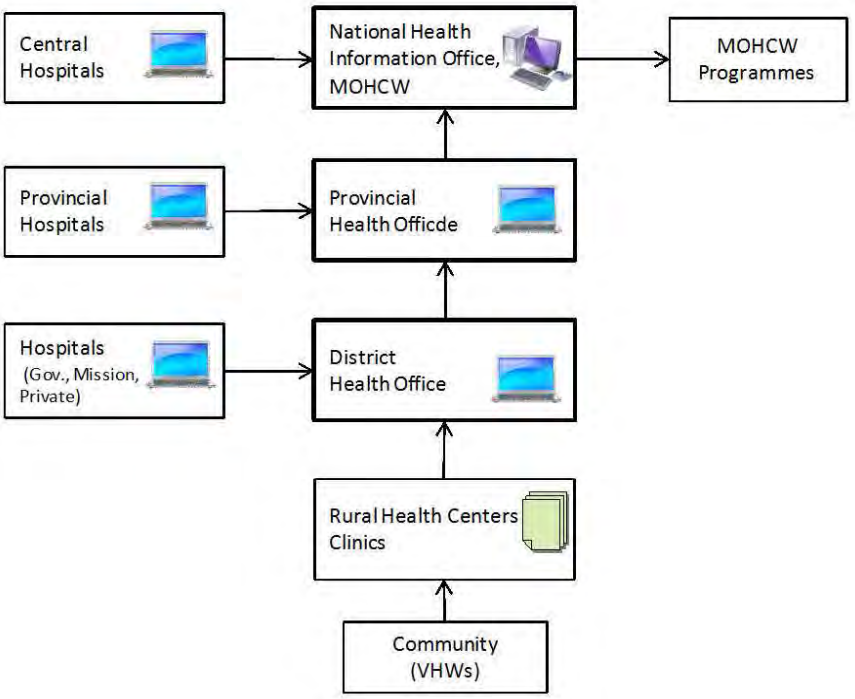
As Figure 5-6 shows, the data sources of HIS are divided into two: routine and non-routine sources. While routine data is obtained from regular reports from health facilities, non-routine data is from household surveys, etc.

Routine Data

1) Health Service Data

Data (outpatient, in-patient, HIV programme, etc.) is collected and summarized at the health facilities and reported monthly to District Health Offices. The District Health Information System (DHIS) software was introduced in 2010 and started rolling out nationwide in August 2010. Data collection tools have been updated with the introduction of the DHIS software. Computers were provided at the district level and above and the DHIS software was installed. As of May 2012, outpatient (T5 form), malaria, and nutrition data were incorporated into the DHIS. Other components are planned to be incorporated to the DHIS in two to three years from now.

The data from the private sector has to be collected in the HIS. However, data collection is insufficient and the current status is unclear. To strengthen the data collection from the private sector, the MOHCW collaborates with PHAZ and other related organizations[29]. Figure 5-7 shows the information flow from health facilities.



Source: MOHCW, National Health Information Strategy 2009-2014 [42] and interviews in May 2012

Figure 5-7 Flow of Health Information

Data from VHWs' activities are reported to the rural health center and the data are consolidated together with those from the rural health center. Therefore, it is not possible to distinguish the data whether it is from the community or facility. Also, programmes such as tuberculosis and HIV/AIDS have a parallel reporting system separately from the HIS and this has not been fully integrated into the HIS.

[29] A full-fledged reporting from the private sector will start after the DHIS system is prepared.

2) Disease Surveillance

The Weekly Disease Surveillance System (WDSS)[30] provides weekly data on notifiable diseases such as malaria, diarrhea, dysentery, and influenza. Primary health facilities reported to their district health information unit either by dispatching the completed form through a staff member or by phone call. The reporting rates were poor due to unstable infrastructure and other constraints. In response to these problems, data reporting using mobile phones to transmit data started since 2011, profiting the expanding mobile phone network. A total of 1165 public health facilities, out of about 1500 facilities, received a mobile phone from the Global Fund Round 8 support. On Mondays, primary health facilities report to their district health information unit. The district health information unit then reports to the provincial health information unit on Tuesdays, and subsequently, the data goes to the national health information unit on Wednesdays. WDSS is planned to be integrated into the DHIS in the future.

3) Resources

Information systems concerning resources such as human resources, finance, drugs and supplies, equipment, and infrastructure are established and managed by the departments in charge. They have not been integrated into the HIS but planned to be integrated in the future.

(2) Non Routine Data

Census is conducted every ten years in Zimbabwe. The latest one was held in 2002 and the next one is planned in 2012. Regarding household surveys, ZDHS was conducted in 1988, 1994, 1999, 2005-2006, and 2010-2011 (basically every five years). The Multiple Indicator Monitoring Survey (MIMS)[31] was conducted in 2009 and is planned in 2013-2014 in order to evaluate the progress towards MDGs.

The MOHCW, with support from its partners and donors such as the United States Agency for International Development (USAID), UNICEF, DFID, and the World Bank, has been conducting a National Integrated Health Facility Assessment (NIHFA) since 2011. The objective of the project is to generate evidence-based information on all the health facilities (human resources, infrastructure, equipment, medicines, and supplies) and quality of services. The MOHCW intends to use the assessment results as baseline data for any interventions in the health sector.

5.3.3 Analysis, Utilization, and Dissemination

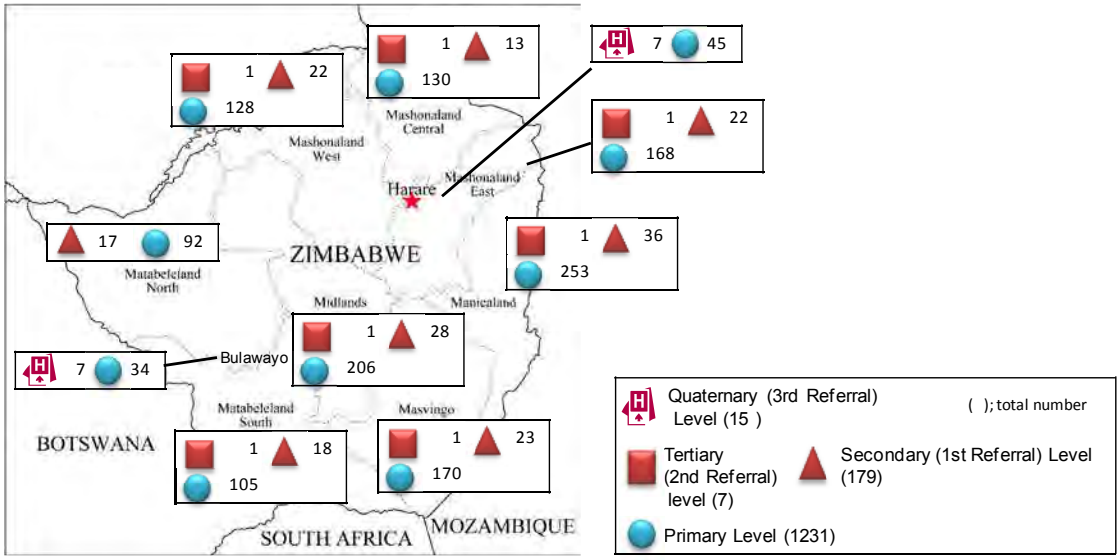
The current challenge is to encourage analysis and use of information at data collection points: health facilities at all levels of the health delivery system. For example, at the central level, the MOHCW produce Annual Health Profiles which contain details on core health indicators such as major causes of morbidity and mortality of outpatient and inpatient departments, and the trends of major diseases by districts and provinces. However, it has not been produced since 2008[32]. The Health Information and Surveillance Systems Unit recognizes the importance of strengthening the analysis of data, production of reports, publication and dissemination of results.

[30] It serves as the Integrated Disease Surveillance and Response (IDSR).
[31] MIMS is a customized version of the Multiple Indicator Cluster Survey (MICS) which was originally developed by UNICEF.
[32] Annual Health Profiles in 2009, 2010, and 2011 were not produced because of the political and economical instability and introduction of DHIS software (interview with Health Information and Surveillance Systems Unit in May 2012)

5.4 Health Infrastructure, Equipment, and Medical Supply

5.4.1 Health Infrastructure and Equipment

The standard practice in health infrastructure planning and development is to ensure the establishment of one rural health centre per 10,000 population; one district hospital per 140,000 population; and one provincial hospital per province. Figure 5-8 shows the number of public health facilities by province in 2008. A study was conducted in the NIHFA about the latest number of facilities and the results will be available later.



Source: MOHCW (2009) National Health Profile 2008 [7]

Figure 5-8 Public Health Facilities by Level and by Province (2008)

The Access to Health Care Services Study in 2008 found that most communities lived within a 5-km radius to the nearest health facilities, 23% between 5 km to 10 km, and 17% over 10 km from the nearest health centre [5].

In the ZDHS 2010-11, 49% of women residing in rural areas answered that the distance is a problem in accessing health facilities. Therefore, maternity waiting homes provide a place for pregnant women residing in remote areas to deliver safely. In the MOHCW 2012 plan, a rehabilitation of one maternity waiting home facility per district is set as one of the objectives.

According to the National Health Strategy (2009-2013), resources being allocated for maintenance under the "maintenance vote" (budget line item) are grossly inadequate to meet all the refurbishment requirements of the dilapidated infrastructure and obsolete equipment. Majority of physical health infrastructure is in a state of very serious disrepair. Fixed plant and equipment such as laundry machines, kitchen equipment and boilers are also nonfunctional. As a result, very few public health institutions are able to meet basic hospital standards for patient care and infection control measures [5]. In the 2011 budget, US$2,302,000 was allocated for maintenance of health facilities and equipment. As of September 2011, only 27.5% of the estimated amount was spent for the purpose [40].

Basic infrastructure such as water and electricity is unstable and this disrupts management of health facilities and service provision. In the MOHCW 2012 plan, the objectives for health infrastructure include drilling of boreholes for institutions without improved water and sanitation systems, and the repair of and fuel provision for generators.

5.4.2 Medicines Supply

(1) Policy and Management System

The Directorate of Pharmacy Services of the MOHCW is responsible for policy formulation and management of medicines supply. Provincial pharmacists are assigned at the provincial level and district pharmacists, pharmacy technicians, and dispensary assistants are assigned at the district level. The Medicines Control Authority of Zimbabwe (MCAZ) regulates the registration of pharmaceuticals to be used in Zimbabwe, as well as the licensing of pharmaceutical manufacturers, wholesale dealers, community pharmacies, and other organizations and individuals that procure, distribute and/or sell pharmaceuticals.

The MOHCW developed the Zimbabwe National Medicines Policy (2011). The current essential medicines list is the 6th Essential Medicines List and Standard Treatment Guidelines for Zimbabwe 2011. The list is revised every four years.

(2) Current Status

Although the situation of medicines and equipment has been improved with the assistance from donors, health professionals cannot provide quality services in the absence of adequate supplies of medicines and equipment. Availability of essential drugs and supplies has remained very low, averaging 51% for vital items and 30% for all the other categories of items on the essential drugs list in 2009 [31]. In the MOHCW 2012 plan, the MOHCW aims to increase the availability of vital medicines from 44% in 2011 to 100% by end of 2012, and overall availability of medicines from 37% in 2011 to 80 % by end of 2012.

(3) Supply Chain Management

The Directorate of Pharmacy Services quantifies the annual national needs for medicines and medical supplies in the public sector. The National Pharmaceutical Company of Zimbabwe (NatPharm) undertakes procurement, stocks, and distributes medicines and medical supplies. Currently, however, most of the medicines and supplies are procured by the development partners.

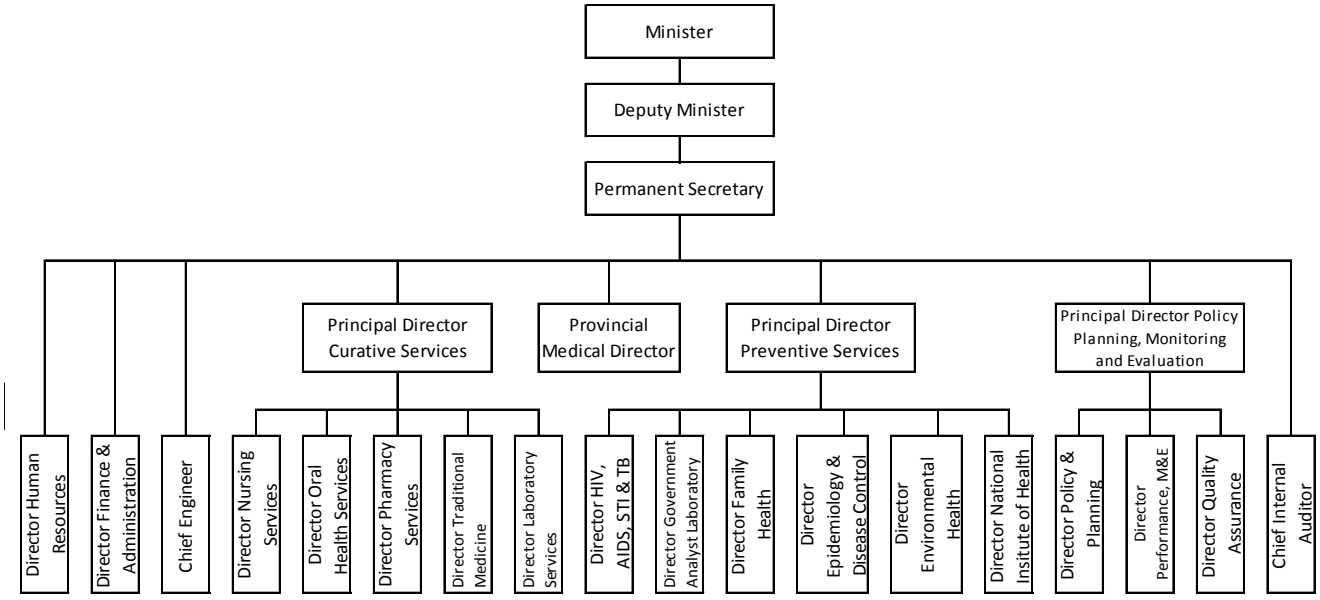
NatPharm distributes medicines quarterly. The distribution was done by a pull system. The current system is the informed push system; tuberculosis and malaria medicines, essential medicines and medical supplies included in the Primary Health Care Packages are distributed through this push system. In the informed push system, medicines are distributed from NatPharm directly to health facilities. However, ARV is distributed by a pull system.

5.5 Leadership and Governance

5.5.1 Health Administration System

The MOHCW headquarters' role consists of regulatory, policy setting, and provision of a legally enabling environment for the operations of the various health service providers and funders. The structure of MOHCW is shown in Figure 5-9. The Provincial Medical Directorate (PMD) is a functional extension of the national level. The PMDs have the responsibility to coordinate the planning and management of health delivery in the provinces. The District Health Office is the operational level of the health delivery system. Its goal is to provide a comprehensive range of health services in line with the national and provincial policies and guidelines [5].

District Health Offices supervise health facilities in their areas. In practice, supervision is not conducted sufficiently due to logistical problems, etc. In this difficult situation, District Health Teams provide support to rural health centers when they conduct outreach activities. The support includes ART initiation by doctors from the District Health Teams because nurses cannot initiate ART.



Source: MOHCW (2009) National Tuberculosis Control Programme Five Year Strategic Plan 2009 – 2013 (Draft) [25]

Figure 5-9 Structure of MOHCW

5.5.2 Regulatory Function (Accreditation, Certification, and Quality Management)

The major pieces of legislation that govern the health sector in Zimbabwe are the Health Service Act (2002), the Public Health Act (2002), and the Health Professions Act (2000). To protect patients' rights, the Patient's Charter was likewise developed.

The Health Professions Authority is responsible for regulation of health services. Its major responsibilities are the registration and control of health institutions and the regulation of services provided therein or there from; and the conduct of inspections in all health institutions throughout Zimbabwe every year. The certified health institutions are given a certificate.

The authority is also the coordinative and umbrella body for the seven health professional councils (e.g., Medical and Dental Practitioners Council, Nurses Council) which regulate health practitioners who practice their professions/callings in Zimbabwe.

The Directorate of Quality Assurance of the MOHCW is in charge of quality assurance and management. The directorate had not been staffed for a long time and in 2010, a new director was assigned[33]. The mission of the directorate is to introduce and establish a quality assurance system. The directorate aims to develop a national quality assurance and improvement policy and strategy within 2012[34].

The directorate held a one-week workshop in November 2011 and the quality assurance activity plans were developed by 22 hospitals (central hospitals, provincial hospitals, and hospitals selected by the Provincial Health Offices). The directorate intends to introduce quality assurance system in all the 107 hospitals in Zimbabwe. The directorate developed an inventory of existing norms and standards and revised the Patients' Charter, but a full-fledged activity has not been started.

[33] The position of deputy director is still vacant. The current staff are the director and secretary.
[34] A consultant will be hired to develop the policy and strategy. The Maternal and Child Health Integrated Program (MCHIP)/USAID will partly support it (interview with the director of the Directorate of Quality Assurance, May 2012)

Chapter 6 Development Partners Assistance in the Health Sector

The international community has been forthcoming in terms of meeting the unmet humanitarian needs of the population. Increasingly, donors have moved from providing purely humanitarian assistance to supporting recovery and transition. However, under the current political dispensation, most donors continue to channel aid through the UN system and civil society organizations [35].

6.1 Donor Coordination Framework

The Aid Coordination Policy in May 2009 established the national structure of aid coordination. The structure of the aid coordination architecture is as follows:

(i) Cabinet Committee on Aid Coordination: Chaired by the Prime Minister
(ii) Aid Technical Committee: Chaired by the Secretary for Economic Planning and Investment Promotion
(iii) Government Development Forum: Chaired by the Minister of Regional Integration and International Cooperation
(iv) Aid Technical Unit: Located in the Ministry of Finance

The Government Development Forum serves to promote dialogue between the government and development partners, minimizing duplication and aligning aid with national priorities [35].

Health sector donor meetings are held quarterly chaired by the European Union (EU). The participating organizations include the US Agency for International Development (USAID), the UK Department for International Development (DFID), and the Swedish International Development Agency (SIDA). The MOHCW will participate in the meetings. With respect to the Country Coordinating Mechanism (CCM) of the Global Fund, the CCM meetings are held monthly and chaired by the MOHCW. The two memberships of CCM are allocated to development partners. A representative from the UN organizations and USAID are the current CCM members. In addition, the Health, and Water and Sanitation clusters led by the UN Office for the Coordination of Humanitarian Affairs (OCHA) are still active in providing coordinated responses to possible outbreaks (e.g., cholera, measles) [43].

6.2 Activities of Development Partners

6.2.1 Overview

Table 6-1 presents major development partners in the health sector and its priority areas.

Table 6-1 Main Development Partners and their Priority Areas

Organization	Programme Period	Main Areas of Support						
		Child Health	Maternal Health	Nutrition	HIV and AIDS	Malaria	TB	Health System Strengthening
WHO	2008-13[35]	○	○		○	○	○	○
UNICEF	2012-15	○	○	○	○	○		
UNFPA	2012-15	○	○					
DFID	2011-15	○	○		○			○
U.S./USAID		○	○		○	○		○
Global Fund					○	○	○	○

Source: Interviews with the MOHCW and partners.

6.2.2 World Health Organization (WHO)

WHO has been supporting the MOHCW and partners in addressing the major health and developmental challenges. The priorities of the WHO country cooperation strategy are as follows [44]:

(i) Improving health system performance;
(ii) Reducing the burden of the major communicable and non-communicable diseases;
(iii) Enhancing health promotion to reduce the major risk factors, including the promotion of healthy environments; and
(iv) Addressing the vulnerability of the country to emerging health issues such as natural and man-made disasters, disease outbreaks, and different risk factors through the strengthening of the Emergency Preparedness Response capacity of the health sector.

6.2.3 United Nations Children's Fund (UNICEF)

In its 2012- 2015 Country Programme in Zimbabwe, UNICEF works through the following programme areas: 1) Young child survival and development, 2) Basic education and gender equality, 3) Child protection, 4) Water, sanitation and hygiene, 5) Policy advocacy, planning, monitoring and evaluation, and 6) Cross-sectoral issues. The proposed budget is about US$339 million [45].

6.2.4 United Nations Population Fund (UNFPA)

The UNFPA Zimbabwe 6th Country Programme (2012-2015) consists of three core components which are: reproductive health and rights (including HIV prevention and adolescents, sexual and reproductive health), population and development, and gender equality. The proposed budget is US$39.6 million [46].

[35] The programme period will be revised and extended up to 2015 aligned to the United Nations Development Assistance Framework (UNDAF) (Interview with WHO in May 2012).

6.2.5 The Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund)

The Global Fund has been supporting Zimbabwe for the control of HIV, tuberculosis and malaria. Table 6-2 shows the current status of the Global Fund support.

Table 6-2 Global Fund Support to Zimbabwe

Type	Round	Title	Principal Recipient	Total Signed Amount	Phase and Status
HIV/AIDS	5	Program to Support the Scale-up of ART and HIV Testing and Counseling Services in 22 districts in Zimbabwe	UNDP	US$41,474,028	Phase II - In Closure
	8	Addressing Critical Gaps in HIV Prevention, Treatment, Care and Support	UNDP	US$84,641,215	Phase I - In Progress
TB	5	National Program to Reduce TB Morbidity and Mortality in Zimbabwe	UNDP	US$7,132,282	Phase II - In Closure
	8	Towards Universal Access: Improving Accessibility to High Quality DOTS in Zimbabwe	UNDP	US$28,236,113	Phase I - In Progress
Malaria	5	Program to Make ACT Available for the Treatment of Malaria in 51 Districts of Zimbabwe	UNDP	US$15,443,123	Phase II - In Closure
	8	Scaling up Effective Malaria Control Interventions in Zimbabwe	UNDP	US$32,810,290	Phase I - In Progress
	8	Health Systems Strengthening Cross-Cutting Interventions	UNDP	US$34,271,524	Phase I - In Progress
	10	Towards Achieving Pre-elimination in the Southern Region of Zimbabwe and Consolidating Malaria Control in the Rest of the Country	UNDP	US$13,739,115	Phase I - In Progress

Source: GFATM Grant Portfolio Zimbabwe [47]

6.2.6 The UK Department for International Development (DFID)

DFID is the biggest bilateral donor in the health sector in Zimbabwe in 2009 [48]. In light of the political context, all UK resources are currently directed through donor partners (e.g. UN), civil society organizations or the private sector. None of the funds provided by the UK are channeled through the Government of Zimbabwe [49]. The following table shows the current projects in the health sector.

Table 6-3 DFID's Projects in the Health Sector

Project Title	Description	Budget
Expanded Support Programme	To strengthen and broaden Zimbabwe's response to HIV.	£35,000,000
Population Services International (PSI) - HIV Prevention Programme	To encourage safer sexual behaviour in Zimbabwe.	£24,025,810
Zimbabwe Saving Maternal and Newborn Lives Project	To maintain access to family planning services and to protect the lives of mothers and newborns affected by HIV.	£27,200,000
Emergency Vital Medicines Support to Zimbabwe II	Accessibility of services increased through provision of free vital and essential medicines.	£16,500,000
Impact of Improved Sanitation/ Hygiene and Infant Nutrition on Environmental Enteropathy, Growth, and Anemia among Young Children in Zimbabwe.	New knowledge in water/sanitation/hygiene, infant nutrition, and health systems management is generated and disseminated and informs child health programmes in Zimbabwe and globally.	£3,000,000
Retaining Human Resources for Health in Zimbabwe	Strengthen the capacity of the health system to deliver health services to the poorest and most vulnerable in Zimbabwe.	£3,000,000

Source: http://projects.dfid.gov.uk/Default.aspx

6.2.7 The U.S. Agency for International Development (USAID)

The USAID's HIV/AIDS programs are implemented as part of the President's Emergency Plan for AIDS Relief (PEPFAR). USAID's assistance also strengthens the health systems such as supply chain management [50]. In addition, in mid-2011, Zimbabwe was selected as a President's Malaria Initiative (PMI) country. The full implementation of activities began in FY 2011. The proposed FY 2012 PMI budget is US$12 million [22].

6.2.8 Health Transition Fund

The Health Transition Fund (2011-2015) is a multi-donor pooled fund. The initial donors include the governments of UK, Norway, and Sweden. The funds required for over five years are approximately US$435 million. The fund is managed by UNICEF. The objective of the fund is to reduce maternal and child mortality through abolishing user fees and supporting high impact interventions and health system strengthening as outlined in the Zimbabwe National Health Strategy. The four key thematic areas of the Health Transition Fund are as follows [33]:

1) Maternal, newborn, and child health and nutrition;
   - Enhance obstetric and newborn care capacity of the health system.
   - Improve the community health services system for maternal, newborn and child health and nutrition.
   - Improve child health through strengthening the Expanded Programme on Immunization (EPI) and Integrated Management of Neonatal and Childhood Illness (IMNCI).
   - Strengthen national capacity for maternal, infant, and young child nutrition.
2) Medical products, vaccines and technologies;
3) Human resources for health (including health worker management, training, and retention scheme); and
4) Health policy, planning and finance.

6.3 Japan's Cooperation to Zimbabwe

6.3.1 Japan's Assistance Policy to Zimbabwe

Since 2000, formulation of new general grant aid projects has been suspended except for humanitarian aid. However, given the recent stability of the political and economic situation, bilateral general grant aid and technical cooperation projects, which contribute to humanitarian purposes, will be resumed. Japan will consider concrete cooperation projects which could be implemented at an early stage. Japan's assistance will be, in addition to emergency humanitarian aid, in prioritized areas such as health and medical services, promotion of agriculture, making conducive environment for industrial promotion that leads to income generation, and environmental conservation, including water [51] [52].

6.3.2 Japan's Cooperation in the Health Sector

According to the above mentioned policy, humanitarian assistance continues to be a priority within the constraint of limited aid resources, and emphasis is put on assistance, such as grassroots aid through NGOs, emergency assistance of food aid, health and education through international organizations, etc.

Table 6-4 presents Japan's cooperation since 2005. Japan has been providing support such as vaccines and mosquito nets though UNICEF, and technical assistance in the field of HIV. In addition, JICA provides support in the field of health through the Japan Overseas Cooperation Volunteers (JOCVs) (HIV response, etc.) and training activities.

Table 6-4 Japan's Cooperation in the Health Sector (since 2005)

Modality	Cooperation Period	Title
Grant Aid	2005	Project for Infectious Diseases Prevention for Children (through UNICEF)
	2006	Project for Infectious Diseases Prevention for Children (through UNICEF)
	2007	Project for Infectious Diseases Prevention for Children (through UNICEF)
	2008	Emergency Grant Aid to Tackle the Cholera Outbreak
	2008	Project for Infectious Diseases Prevention for Children (through UNICEF)
	2009	Project for Infectious Diseases Prevention for Children (through UNICEF)
	2010	Project for Infectious Diseases Prevention for Children (through UNICEF)
Grassroots Human Security Grand Aid	2010	The Project for Livelihoods Support for Orphaned and Vulnerable Children in Murewa District
	2011	The Project for Improvement of Health Facilities in Beitbridge District
Grant Aid for Japanese NGO Projects	2010-2011	Water, Sanitation and Hygiene Project for Prevention against Cholera
Technical Cooperation Project	2003-2006	Project for the Prevention of HIV/AIDS Transmission in the Mabvuku/Tafara Area in the City of Harare
	2005-2008	Project for Prevention of Parent to Child Transmission of HIV in Masvingo Province

Source: Ministry of Foreign Affairs (2010) Country Data Book [52], Ministry of Foreign Affairs HP [53]

The following projects are planned to be implemented:

- Expert on PMTCT through strengthening integrated Maternal and Child Health Service
- Strengthening Monitoring and Evaluation Capacity for HIV/AIDS Response Programmes (In-Country Training)
- Follow-up Cooperation for the Project for the Rehabilitation of the Medical Facilities of the Central Hospital, the Project for Construction of the Pediatric Facilities of Harare Central Hospital and the Project for Construction of Pediatric Facilities of Mpiro Central Hospital

Chapter 7 Priority Issues in the Health Sector

7.1 Priority Issues and Background

Figure 7-1 shows the health problems and their background factors as described in Chapters 1 to 6.

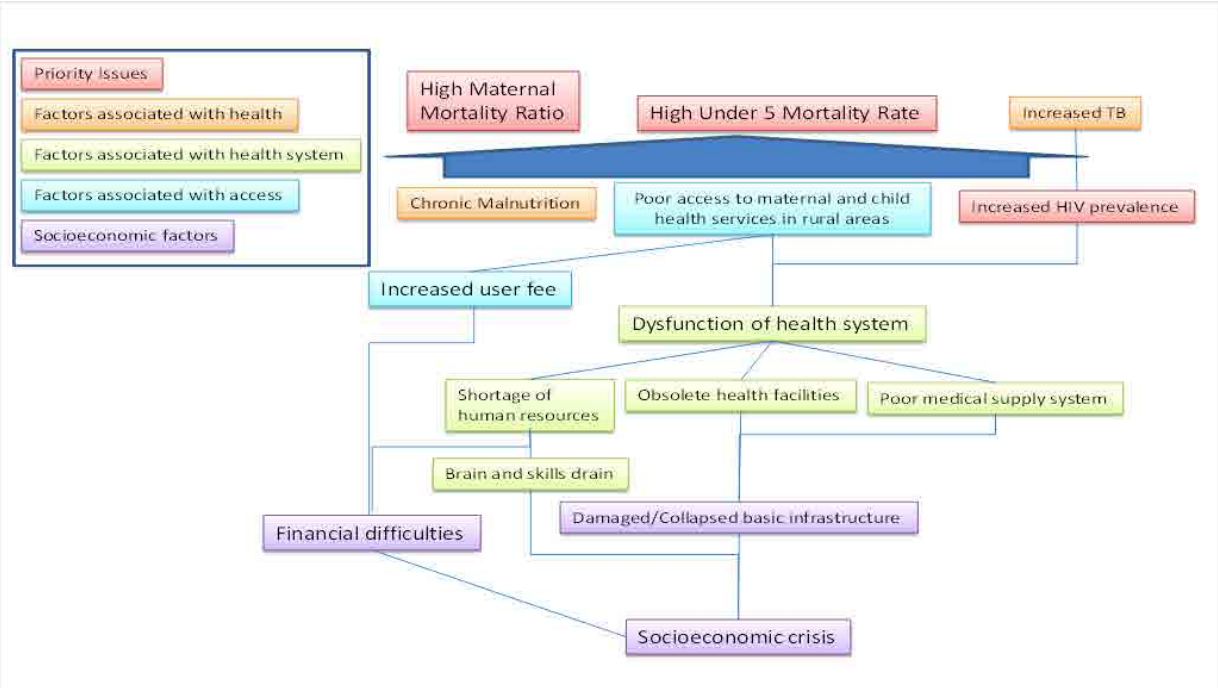


Figure 7-1 Priority Issues and Background Factors in the Health Sector in Zimbabwe

7.1.1 Health Problems

Concerning the health indicators, maternal mortality ratio has deteriorated. Furthermore, the under-five mortality rate has not improved. High maternal mortality ratio and under-five mortality rate are major health problems in Zimbabwe.

In addition, while adult HIV prevalence has been declining, the number of PLHIV is estimated to be increasing. The burden of HIV and AIDS remains high from the fact that 26-39% of maternal deaths and 21% of under-five deaths are attributed to HIV. Therefore, the importance of maintaining the health status of PLHIW by providing nutritional support, ensuring the continuous of ART, and prevention of new infections remains high. There is also the risk of infectious disease outbreak such as cholera due to weak basic infrastructure and other factors.

7.1.2 Background of Maternal and Child Mortality

The establishment of the Inclusive Government, together with the stabilization of the economy in 2009, has created an enabling environment for the health sector to move from emergency planning mode to the completion of an ambitious five-year National Health Strategy (2009-2013). However, the health system is challenged in terms of all its components (i.e., human resources, infrastructure and medical products, health financing, health information, service delivery, and leadership and governance) that are prerequisites for a functional service delivery system.

Indicators such as vaccination rate and institutional delivery rate have been deteriorating compared with the 1990s level. This is due to the dysfunctional health system caused by the decreased access to health facilities by increased financial burden on patients and the deteriorated service provision because of the shortage of human resources, medicines, and medical supplies in the political, social, and economic crisis situation.

In addition, HIV epidemics posed further burdens on the health system since the 1990s. At health facilities, the unstable basic infrastructure such as water and electricity, in addition to the problems described above, has been affecting the service provision.

7.1.3 Government and Partners' Response to Priority Issues and Future Challenges

The government and development partners have been committed to improve maternal and child health, and to respond to infectious diseases such as HIV and TB. They also have been making efforts to strengthen the health system recognizing its importance. Especially, the government set a goal to increase the health budget by allocating 15% of the national budget to the health sector.

The government and development partners have been making concerted efforts such as the creation of the Health Transitional Fund. The Human Resources Retention Scheme is planned to be managed by the said fund. However, the amount of partners' support will be reduced gradually and at the final stage, the Government will pay hundred percent. Therefore, financial sustainability will be a major challenge.

7.2 Possible Japan's Cooperation in the Health Sector

As mentioned above, Japan has been providing support in the field of infectious disease prevention for children and HIV control. Also, assistance to prevention of mother to child transmission (PMTCT) of HIV and monitoring and evaluation in the field of HIV are planned.

The disease burden of HIV and AIDS remains heavy. Therefore, prevention of new HIV infections, especially PMTCT, is important. Strengthening of PMTCT services contributes to the improvement of maternal and child health services since these two services are integrated into one another, such as the ANC services. Therefore, it is reasonable for Japan to continue its cooperation based on the past cooperation in the area of PMTCT.

ATTACHMENTS

Attachment 1: Major Health Indicators

Attachment 2: References

Attachment 1: Major Health Indicators (Republic of Zimbabwe)

Republic of Zimbabwe				MDGs	Sources	1990	2000	Latest	Latest year	Latest in Region	(Latest year)	Region
0 General Information	0.1 Demography	0.1.01	Population, total		WDI	10,469,202	12,509,477	12,571,000	2010	853,434,000	(2010)	Sub-Saharan Africa (developing only)
		0.1.02	Population growth (annual %)		WDI	2.9	0.8	0.8	2010	2.5	(2010)	Sub-Saharan Africa (developing only)
		0.1.03	Life expectancy at birth, total (years)		WDI	60.5	44.6	49.9	2010	54.3	(2010)	Sub-Saharan Africa (developing only)
		0.1.04	Birth rate, crude (per 1,000 people)		WDI	37.2	30.3	29.2	2010	37.4	(2010)	Sub-Saharan Africa (developing only)
		0.1.05	Death rate, crude (per 1,000 people)		WDI	8.7	16.6	13.3	2010	12.6	(2010)	Sub-Saharan Africa (developing only)
		0.1.06	Urban population (% of total)		WDI	29.0	33.8	38.3	2010	37.4	(2010)	Sub-Saharan Africa (developing only)
	0.2 Economic・Development Condition	0.2.01	GNI per capita, Atlas method (current US$)		WDI	860	490	460	2010	1,188.5	(2010)	Sub-Saharan Africa (developing only)
		0.2.02	GNI growth (annual %)		WDI	6.4	(3.3)	10.0	2010	4.1	(2010)	Sub-Saharan Africa (developing only)
		0.2.03	Total enrollment, primary (% net)	2.1	WDI				2010	76.3	(2009)	Sub-Saharan Africa (developing only)
		0.2.04	Ratio of female to male primary enrollment (%)	3.1	WDI	99.0	96.9	99.0	2006	91.6	(2009)	Sub-Saharan Africa (developing only)
		0.2.05	Literacy rate, adult total (% of people ages 15 and above)		WDI					62.3	(2009)	Sub-Saharan Africa (developing only)
		0.2.06	Human Development Index		HDR	0.37	0.43	0.38	2011	0.46	(2011)	Sub-Saharan Africa
		0.2.07	Human Development Index (rank)		HDR	108 / 160	128 / 173	173 / 187	2011			
		0.2.08	Poverty gap at $1.25 a day (PPP) (%)		WDI					20.6	(2008)	Sub-Saharan Africa (developing only)
	0.3 Water and Sanitation	0.3.01	Improved water source (% of population with access)	7.8	HNP Stats	79	80	80	2010	61.1	(2010)	Sub-Saharan Africa (developing only)
		0.3.02	Improved sanitation facilities (% of population with access)	7.9	HNP Stats	41	40	40	2010	30.6	(2010)	Sub-Saharan Africa (developing only)
1 Health Status of People	1.1 Mortality and Morbidity	1.1.01	Age-standardized mortality rate by cause (per 100,000 population) - Communicable		GHO			1,552	2008	798	(2008)	Africa
		1.1.02	Age-standardized mortality rate by cause (per 100,000 population) - Noncommunicable		GHO			622	2008	779	(2008)	Africa
		1.1.03	Age-standardized mortality rate by cause (per 100,000 population) - Injuries		GHO			73	2008	107	(2008)	Africa
		1.1.04	Cause of death, by communicable diseases and maternal, prenatal and nutrition conditions (% of total)		HNP Stats			75.4	2008	64.6	(2008)	Sub-Saharan Africa (developing only)
		1.1.05	Cause of death, by non-communicable diseases (% of total)		HNP Stats			20.8	2008	28.3	(2008)	Sub-Saharan Africa (developing only)
		1.1.06	Cause of death, by injury (% of total)		HNP Stats			3.8	2008	7.1	(2008)	Sub-Saharan Africa (developing only)
		1.1.07	Distribution of years of life lost by broader causes (%) - Communicable		GHO			87	2008	78	(2008)	Africa
		1.1.08	Distribution of years of life lost by broader causes (%) - Noncommunicable		GHO			9	2008	15	(2008)	Africa
		1.1.09	Distribution of years of life lost by broader causes (%) - Injuries		GHO			4	2008	17	(2008)	Africa
	1.2 Maternal and Child Health	1.2.01	Maternal mortality ratio (modeled estimate, per 100,000 live births)	5.1	MDGs	390	670	790	2008	650	(2008)	Sub-Saharan Africa (developing only)
		1.2.02	Adolescent fertility rate (births per 1,000 women ages 15-19)	5.4	MDGs		87.6	57.9	2010	107.6	(2010)	Sub-Saharan Africa (developing only)
		1.2.03	Mortality rate, under-5 (per 1,000)	4.1	MDGs	77.6	115.0	79.8	2010	121.2	(2010)	Sub-Saharan Africa (developing only)
		1.2.04	Mortality rate, infant (per 1,000 live births)	4.2	MDGs	52.1	68.8	50.9	2010	76.4	(2010)	Sub-Saharan Africa (developing only)
		1.2.05	Low-birthweight babies (% of births)		HNP Stats			11.4	2006	13.3	(2010)	Sub-Saharan Africa (developing only)
		1.2.06	Fertility rate, total (birth per woman)		HNP Stats	5.2	3.9	3.3	2010	4.9	(2010)	Sub-Saharan Africa (developing only)
	1.3 Infectious Diseases	1.3.01	a) Prevalence of HIV, male (% ages 15-24)	6.1	MDGs			3.3	2009	1.5	(2009)	Sub-Saharan Africa (developing only)
			b) Prevalence of HIV, female (% ages 15-24)	6.1	MDGs			6.9	2009	3.8	(2009)	Sub-Saharan Africa (developing only)
		1.3.02	Notified cases of malaria per 100,000 population	6.6	MDGs Database			7,480	2008			
		1.3.03	a) Malaria death rate per 100,000 population, all ages	6.6	MDGs Database			33	2008	96	(2009)	Sub-Saharan Africa
			b) Malaria death rate per 100,000 population, ages 0-4	6.6	MDGs Database			10	2008	519	(2009)	Sub-Saharan Africa
		1.3.04	Tuberculosis prevalence rate per 100,000 population (mid-point)	6.9	MDGs Database	272	353	402	2010	479	(2009)	Sub-Saharan Africa
		1.3.05	Incidence of tuberculosis (per 100,000 people)	6.9	MDGs	296	726	633	2010	271	(2010)	Sub-Saharan Africa (developing only)
		1.3.06	Tuberculosis death rate (per 100,000 people)	6.9	MDGs	27	17	27	2010	28	(2010)	Sub-Saharan Africa (developing only)
		1.3.07	Prevalence of HIV, total (% of population ages 15-49)		HNP Stats	10.1	24.8	14.3	2009	5.5	(2009)	Sub-Saharan Africa (developing only)
		1.3.08	AIDS estimated deaths (UNAIDS estimates)		HNP Stats	14,000	130,000	83,000	2009			
		1.3.09	HIV incidence rate, 15-49 years old, percentage (mid-point)		MDGs Database	4.29	2.2	0.84	2009			
		1.3.10	Paritial Prioritization Score by the Global Fund (HIV)		GF			12	2012			
			Paritial Prioritization Score by the Global Fund (Malaria)		GF			10	2012			
			Paritial Prioritization Score by the Global Fund (TB)		GF			12	2012			
	1.4 Nutrition	1.4.01	Prevalence of wasting (% of children under 5)		HNP Stats			7.3	2006			
2 Service Delivery	2.1 Maternal and Child Health	2.1.01	Births attended by skilled health personnel, percentage	5.2	MDGs Database			60.22	2009			
		2.1.02	Birth by caesarian section		GHO			4.8	2011	3.5	(2011)	Africa
		2.1.03	Contraceptive prevalence (% of women ages 15-49)	5.3	MDGs			58.5	2011	21.7	(2010)	Sub-Saharan Africa (developing only)
		2.1.04	Pregnant women receiving prenatal care (%)	5.5	HNP Stats			93.4	2009	73.5	(2010)	Sub-Saharan Africa (developing only)
		2.1.05	Pregnant women receiving prenatal care of at least four visits (% of pregnant women)	5.5	HNP Stats		64.3	56.8	2009	45.6	(2010)	Sub-Saharan Africa (developing only)
		2.1.06	Unmet need for family planning, total, percentage	5.6	MDGs Database			12	2006	24.8	(2008)	Sub-Saharan Africa
		2.1.07	1-year-old children immunized against: Measles	4.3	Childinfo	87	75	84	2010	75	(2010)	Sub-Saharan Africa
		2.1.08	1-year-old children immunized against: Tuberculosis		Childinfo	91	85	90	2010	84	(2010)	Sub-Saharan Africa
		2.1.09	a) 1-year-old children immunized against: DPT (percentage of infants who received their first dose of diphtheria, pertussis and tetanus vaccine)		Childinfo	96	85	94	2010	85	(2010)	Sub-Saharan Africa
			b) 1-year-old children immunized against: DPT (percentage of infants who received three doses of diphtheria, pertussis and tetanus vaccine)		Childinfo	88	79	83	2010	77	(2010)	Sub-Saharan Africa
		2.1.10	1-year-old children immunized against: Polio		Childinfo	89	79	84	2010	79	(2010)	Sub-Saharan Africa
		2.1.11	Percentage of infants who received three doses of hepatitis B vaccine		Childinfo		79	83	2010	74	(2010)	Sub-Saharan Africa

Attachment 1: Major Health Indicators (Republic of Zimbabwe)

Republic of Zimbabwe				MDGs	Sources	1990	2000	Latest	Latest year	Latest in Region	(Latest year)	Region
	2.2 Infectious Diseases	2.2.01	Condom use with non regular partner, % adults (15-49), male	6.2	MDGs			71.2	2006			Sub-Saharan Africa (developing only)
		2.2.02	Condom use with non regular partner, % adults (15-49), female	6.2	MDGs			46.7	2006			Sub-Saharan Africa
		2.2.03	Men 15-24 years old with comprehensive correct knowledge of HIV/AIDS, percentage	6.3	MDGs Database			45.6	2006	33	(2005-2010)	Sub-Saharan Africa
		2.2.04	Women 15-24 years old with comprehensive correct knowledge of HIV/AIDS, percentage	6.3	MDGs Database			53.3	2009	26	(2005-2011)	Sub-Saharan Africa
		2.2.05	Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years	6.4	MDGs Database			0.95	2009	0.92	(2005-2012)	Sub-Saharan Africa
		2.2.06	Use of insecticide-treated bed nets (% of under-5 population)	6.7	HNP Stats			17.3	2009	34.0	(2010)	Sub-Saharan Africa (developing only)
		2.2.07	Children under 5 with fever being treated with anti-malarial drugs, percentage	6.8	MDGs Database			23.6	2009	36	(2008-2010)	Sub-Saharan Africa
		2.2.08	Tuberculosis treatment success rate under DOTS, percentage	6.10	MDGs Database		69	74	2008	80	(2008)	Sub-Saharan Africa
		2.2.09	Antiretroviral therapy coverage (% of people with advanced HIV infection)	6.5	MDGs			34.0	2009			
		2.2.10	People aged 15 years and over who received HIV testing and counselling, estimated number per 1,000 adult population		GHOr			254.8	2010			
		2.2.11	Testing and counselling facilities, estimated number per 100,000 adult population		GHOr			19.2	2010			
		2.2.12	Pregnant women tested for HIV, estimated coverage (%)		GHOr			90	2010			
		2.2.13	Percentage of HIV-infected pregnant women who received antiretroviral drugs to reduce the risk for mother-to-child transmission (Mid point)	6.5	MDGs Database			56	2009			
		2.2.14	Tuberculosis case detection rate (all forms)		HNP Stats	29.0	56.0	56.0	2010	60	(2010)	Sub-Saharan Africa (developing only)
		2.2.15	Tuberculosis treatment success rate (% of registered cases)	6.10	MDGs		69.0	78.0	2009	79	(2009)	Sub-Saharan Africa (developing only)
	2.3 Nutrition	2.3.01	Vitamin A supplementation coverage rate (% of children ages 6-59 months)		HNP Stats			49.3	2010	85.8	(2010)	Sub-Saharan Africa (developing only)
		2.3.02	Consumption of iodized salt (% of households)		HNP Stats			90.9	2007	49.8	(2010)	Sub-Saharan Africa (developing only)
	2.4 Quality and Coverage	2.4.01	Estimate of health formal coverage		ILO							
		2.4.02	Population not covered (%) due to financial resources deficit		ILO							
		2.4.03	Population not covered (%) due to professional health staff dificit		ILO							
3 Health System	3.1 Human Resources	3.1.01	Physicians (per 1,000 people)		HNP Stats	0.14		0.16	2004	0.2	(2010)	Sub-Saharan Africa (developing only)
		3.1.02	Midwives (per 1,000 people)		HNP Stats							
		3.1.03	Nurses (per 1,000 people)		HNP Stats			0.7	2004			
		3.1.04	Dentistry personnel density (per 10,000 population)		GHO			0.2	2004	0	(2007)	Africa
		3.1.05	Density of pharmaceutical personnel (per 10,000 population)		GHO			0.7	2004	1.0	(2007)	Africa
	3.2 Health Financing	3.2.01	Health expenditure, total (% of GDP)		HNP Stats		0.0	0.0	2001	6.5	(2010)	Sub-Saharan Africa (developing only)
		3.2.02	Health expenditure, public (% of total health expenditure)		HNP Stats		52.8	38.4	2001	45.1	(2010)	Sub-Saharan Africa (developing only)
		3.2.03	Health expenditure, private (%) of total health expenditure)		HNP Stats		47.2	61.6	2001	54.9	(2010)	Sub-Saharan Africa (developing only)
		3.2.04	Out-of-pocket health expenditure (% of private expenditure on health)		HNP Stats		47.9	50.3	2001	64.7	(2010)	Sub-Saharan Africa (developing only)
		3.2.05	Health expenditure, public (% of government expenditure)		HNP Stats		0.0	0.0	2001	10.0	(2005)	Sub-Saharan Africa (developing only)
		3.2.06	External resources for health (% of total expenditure on health)		HNP Stats		1.3	5.5	2001	10.5	(2010)	Sub-Saharan Africa (developing only)
		3.2.07	Social security expenditure on health as a percentage of general government expenditure on health		GHO			0.0	2010	7	(2009)	Africa
		3.2.08	a) Health expenditure per capita (current US$)		HNP Stats		59.4	66.4	2001	84.3	(2010)	Sub-Saharan Africa (developing only)
			b) Per capita total expenditure on health (PPP int. $)		GHO					157	(2009)	Africa
		3.2.09	Per capita government expenditure on health at average exchange rate (US$)		GHO					41	(2009)	Africa
	3.3 Facilities, Equipments and Supplies	3.3.01	a) Median availability of selected generic medicines (%) - Public		GHO							
			b) Median availability of selected generic medicines (%) - Private		GHO							
		3.3.02	a) Median consumer price ratio of selected generic medicines - Public		GHO							
			b) Median consumer price ratio of selected generic medicines - Private		GHO							
		3.3.03	Hospital beds (per 1,000 population)		HNP Stats	0.5		3.0	2006	1.2	(1990)	Sub-Saharan Africa (developing only)

WDI: World Development Indicators & Global Development Finance (http://databank.worldbank.org/ddp/home.do) (Accessed 07/2012)
HDR: Human Development Reports (http://hdr.undp.org/) (Accessed 07/2012)
HNP Stats: Health Nutrition and Population Statistics (http://databank.worldbank.org/ddp/home.do) (Accessed 07/2012)
GF: Global Fund eligibility list for 2012 funding channels, the Global Fund to Fight AIDS, Tuberculosis and Malaria (http://www.theglobalfund.org/en/application/applying/ecfp/) (Accessed 07/2012)
GHO: Global Health Observatory Country Statistics (http://www.who.int/gho/countries/en/) (Accessed 07/2012)
GHOr: Global Health Observatory Repository (http://apps.who.int/ghodata/) (Accessed 07/2012)
MDGs: Millennium Development Goals (http://databank.worldbank.org/ddp/home.do) (Accessed 07/2012)
MDG database: Millennium Development Goals Indicators (http://mdgs.un.org/unsd/mdg/) (Accessed 07/2012). Regional data is available on The Millennium Development Goals Report Statistical Annex 2011 (United Nations).
Childinfo: Childinfo UNICEF (http://www.childinfo.org/) (Accessed 07/2012)
ILO: World Social Security Report 2010/11: Providing coverage in times of crisis and beyond. International Labour Office Geneva: ILO 2010.

1.3.10 Partial Prioritization Score is composed of the income level score for the country and the disease burden score for the particular disease in the country. The minimum score is 3 and the maximum score is 12.

2.4.01 Estimate of health formal coverage is indicated as percentage of population covered by state, social, private, company-based, trade union, mutual and other health insurance scheme.

2.4.02 Population not covered (%) due to financial resources deficit (based on median value in low-vulnerability group of countries) uses the relative difference between the national health expenditure in international $ PPP (excluding out-of-pocket) and the median density observed in the country group with low levels of vulnerability as a benchmark for developing countries. The rate can be calculated using the following formula:

Per capita health expenditure not financed by private households' out-of-pocket payments (PPP in int. $) [A]
Population (in thousands) total [B]
Total health expenditure not financed by out of pocket in int. $ PPP (thousands) [C = A x B]
Population covered by total health expenditure not financed by out-of pocket if applying Benchmark* (thousands) [D = C ÷ Benchmark]**
Percentage of the population not covered due to financial resources deficit (%) [F = (B - D) ÷ B x 100]
*Benchmark: Total health expenditure not financed by out-of-pocket per capita = 350 international $ PPP.
**This formula was partially modified from the original in the source to suit an actual calculation.

2.4.03 Population not covered (%) due to professional health staff dificit uses as a proxy the relative difference between the density of health professionals in a given countries and its median value in countries with a low level of vulnerability. The rate can be calculated using the following formula:

Total of health professional staff [A = B + C]
Number of nursing and midwifery personnel [B]
Number of physicians [C]
Total population (in thousands) [D]
Number of health professional per 10,000 persons [F = A ÷ D x 10]
Total population covered if applying Benchmark* (thousands) [E = A ÷ Benchmark x 10]
Percentage of total population not covered due to health professional staff deficit [G = (D - E) ÷ D x100]
Benchmark: 40 professional health staff per 10,000 persons.

Attachment 2：References (Republic of Zimbabwe)

	TITLE	AUTHOR	URL	YEAR
1	Development Indicators Online	World Bank	http://data.worldbank.org/data-catalog/world-development-indicators	2012
2	Consolidated Appeal for Zimbabwe 2012	OCHA	http://www.unocha.org/cap/appeals/consolidated-appeal-zimbabwe-2012	2011
3	Human Development Report	UNDP	http://hdr.undp.org/en/	2011
4	Medium Term Plan (MTP) January 2010-December 2015	Government of Zimbabwe	http://www.zimtrade.co.zw/pdf/Government%20policies/ZERO%20DRAFT%20Medium%20Term%20Plan%202010-2015.pdf	2010
5	The National Health Strategy for Zimbabwe 2009-2013	MOHCW	http://www.zadhr.org/national-documents/53-zim-health-policy.html	
6	NCD Country Profile	WHO	http://www.who.int/nmh/publications/ncd_profiles2011/en/index.html	2011
7	National Health Profile	MOHCW		2008
8	Zimbabwe Demographic and Health Survey (ZDHS) 1994	CSO and Macro International Inc	http://www.measuredhs.com/pubs/pdf/SR48/SR48.pdf	
9	Zimbabwe Demographic and Health Survey (ZDHS) 1999	CSO and Macro International Inc	http://www.measuredhs.com/pubs/pdf/SR83/SR83.pdf	2000
10	Zimbabwe Demographic and Health Survey (ZDHS) 2005-06	CSO and Macro International Inc	http://www.measuredhs.com/pubs/pdf/FR186/FR186.pdf	2007
11	Maternal and Perinatal Mortality Study 2007	MOHCW	http://countryoffice.unfpa.org/zimbabwe/drive/ZMPMSreport.pdf	
12	Zimbabwe Demographic and Health Survey 2010-11	Zimbabwe National Statistics Agency and ICF International Inc	http://countryoffice.unfpa.org/zimbabwe/drive/2010-11ZDHSPreliminaryReport-FINAL.pdf	2012
13	Trends in estimates of maternal mortality ratio (MMR, maternal deaths per 100 000 live births) by 5-year intervals, 1990–2010, by country	UN Maternal Mortality Estimation Inter-agency Group (MMEIG) WHO, UNICEF, UNFPA, WB	http://www.childinfo.org/maternal_mortality_ratio.php	
14	Trends in under-five mortality rates, 1960–2010	Inter-agency Group for Child Mortality Estimation (IGME)	http://www.childinfo.org/mortality_ufmrcountrydata.php	
15	The State of the World's Children 2012: Children in an Urban World	UNICEF	http://www.unicef.org/sowc/files/SOWC_2012-Main_Report_EN_21Dec2011.pdf	2012
16	2010 Report Zimbabwe	Countdown to 2015	http://www.countdown2015mnch.org/country-profiles/zimbabwe	2010
17	Zimbabwe National HIV and AIDS Strategic Plan [ZNASP II] 2011-2015	National AIDS Council	http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_177739.pdf	2011
18	United Nations General Assembly Special Session Report on HIV and AIDS Follow-up to the Declaration of Commitment on HIV and AIDS, Zimbabwe Country Report	The Government of Zimbabwe		
19	A Surprising Prevention Success: Why Did the HIV Epidemic Decline in Zimbabwe?	Halperin DTO, Hallett TB, Muchini B, Campbell B, et al.Mugurungi	PLoS Med 8(2): e1000414. doi:10.1371/journal.pmed.1000414	2011
20	World Malaria Report 2011	WHO	http://www.who.int/malaria/world_malaria_report_2011/en/	2011

Attachment 2：References (Republic of Zimbabwe)

	TITLE	AUTHOR	URL	YEAR
21	Zimbabwe Malaria Programme Review Report	National Malaria Control Programme, Ministry of Health and Child Welfare	http://www.sadc.int/files/3013/2091/4394/ZIM-MPR_Report_draft_2_SARN.PDF	2011
22	Malaria Operational Plan- FY 2012, Zimbabwe	President's Malaria Initiative	http://www.pmi.gov/countries/mops/fy12/zimbabwe_mop_fy12.pdf	2011
23	National Health Profile 2008	Ministry of Health and Child Welfare		2008
24	Global tuberculosis control: WHO report 2011	WHO	http://www.who.int/tb/publications/global_report/en/	2011
25	National Tuberculosis Control Programme Five Year Strategic Plan 2009-2013 (Draft)	MOHCW		2009
26	Zimbabwe: Health Priorities – Snapshots (as of 23 February 2012)	OCHA	http://reliefweb.int/sites/reliefweb.int/files/resources/map_1815.pdf	2012
27	First WHO report on neglected tropical diseases: working to overcome the global impact of neglected tropical diseases	WHO	http://www.who.int/neglected_diseases/2010report/en/	2010
28	Zimbabwe National Cancer Registry 2006 Annual Report	E. Chokunonga, Borok, Z.M. Chirenje and A.M. Nyakabau M.Z	http://cancertrust.files.wordpress.com/2011/10/zimbabwe-cancer-registry-2006-annual-report.pdf	2010
29	The Village Health Worker Strategic Direction	Ministry of Health and Child Welfare		2010
30	Maternity Waiting Homes Operational Guidelines	Ministry of Health and Child Welfare		2010
31	The Zimbabwe Health Sector Investment Case (2010-2012): Accelerating progress towards the Millennium Development Goals	MOHCW		2010
32	National Child Survival Strategy for Zimbabwe 2010-2015	MOHCW	http://www.unicef.org/zimbabwe/Young_Child_Survival_Doc-Complete.pdf	
33	Health Transition Fund: A Multi-donor Pooled Fund for Health in Zimbabwe	Ministry of Health and Child Health		2011
34	Multiple Indicator Monitoring Survey (MIMS) 2009 Preliminary Report	Central Statistical Office	http://ochaonline.un.org/Surveys/MIMS2009/tabid/5465/language/en-US/Default.aspx	2009
35	A Situation Analysis on the Status of Women's and Children's Rights in Zimbabwe, 2005 - 2010: A call for Reducing Disparities and Improving Equity	UNICEF and the Government of Zimbabwe		2011
36	Human Resources for Health Country Profile Zimbabwe	Zimbabwe Health Workforce Observatory	http://www.hrh-observatory.afro.who.int/images/Document_Centre/zimbabwe_hrh_country_profile.pdf	2009
37	Annual Report 2011	Health Service Board		2012
38	Impact assessment of the Zimbabwe Health Worker Retention Scheme	Marjolein Dieleman, Mark Watson & Chenjerai Sisimayi with additional help from CCORE		2012
39	The 2012 National Budget	Hon. T. Biti, M.P., Minister of Finance		2011
40	Blue Book	Ministry of Finance		2011

Attachment 2：References (Republic of Zimbabwe)

	TITLE	AUTHOR	URL	YEAR
41	National Health Accounts Zimbabwe	MOHCW		2009
42	National Health Information Strategy 2009-2014	MOHCW		
43	Annex. COMMISSION DECISION of 31.05.2011 on the adoption of a special measure in favour of Zimbabwe, to be financed from the 10th European Development Fund	European Commission		2011
44	WHO Country Cooperation Strategy, 2008-2013, Zimbabwe	WHO	http://www.afro.who.int/en/zimbabwe/country-cooperation-strategy.html	2009
45	Zimbabwe Country Programme Document 2012-2015	UNICEF	http://www.unicef.org/about/execboard/files/Zimbabwe_final_approved_2012-2015_20_Oct_2011.pdf	2011
46	Final country programme document for Zimbabwe	UNFPA		2011
47	Grant Portfolio	The Global Fund to fight AIDS, Tuberculosis and Malaria	http://portfolio.theglobalfund.org/en/Grant/List/ZIM	
48	Official Development Assistance (ODA) for Health to Zimbabwe	WHO		
49	Summary of DFID's work in Zimbabwe 2011-2015	DFID	http://www.dfid.gov.uk/Documents/publications1/op/zimbabwe-2011-summary.pdf	2011
50	HIV/AIDS Health Profile	USAID	http://transition.usaid.gov/our_work/global_health/aids/Countries/africa/zimbabwe_profile.pdf	2010
51	Japan's ODA: Rolling Plan for Zimbabwe	Ministry of Foreign Affairs of Japan		2011
52	ODA Data Book for Zimbabwe (In Japanese)	Ministry of Foreign Affairs of Japan		2010
53	Ministry of Foreign Affairs of Japan HP	Ministry of Foreign Affairs of Japan	http://www.mofa.go.jp/mofaj/gaiko/oda/data/gaiyou/odaproject/africa/zimbabwe/contents_01.html#m012201	