REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH

National Human Resources for Health Strategic Plan 2011 – 2015

Ministry of Health

Lusaka

December 2011

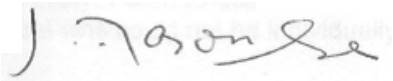
MESSAGE FROM THE MINISTER

Since 1992, the Zambian Government has remained committed to improving the health status of the Zambian population by implementing health sector reforms aimed at improving health service delivery. The mission of the Ministry of Health is to provide equitable access to cost-effective, quality health services as close to the family as possible. The Ministry recognises that an equitable distribution of adequately skilled and supported health workers is critical to providing quality healthcare.

The Zambian health sector faces an inadequate distribution and severe shortage of skilled healthcare workers. To address this issue, the Ministry has developed this Plan, which prioritizes the needs and activities that relate to the human resources for health crisis. This is the second National Human Resources for Health Strategic Plan (NHRH SP).Covering the period of 2011 to 2015, it attempts to provide a clear, feasible, affordable and coherent framework for addressing the needs of the Zambian health workforce.

I am aware of the enormity of the challenges we may face in the implementation of this Plan. However, I am confident that – with the collective efforts and sustained support of our Government, managers and staff at all levels – we will indeed succeed. The Ministry of Health and the Government of Zambia are sincerely committed to completing the activities outlined in this plan and to ensuring improved health service delivery for all Zambians.

I invite our Cooperating Partners and stakeholders to support our endeavours by contributing to the successful implementation of this plan.



Hon. Dr. Joseph Kasonde
Minister of Health
Lusaka
December, 2011

ACKNOWLEDGEMENTS

The development of the second National Human Resources for Health Strategic Plan 2011-2015 was successful due to the active support and dedication of multiple consultants, individuals, and stakeholders. I wish to recognize the dedication of all those involved, both directly and indirectly, whose contributions and insights helped to ensure that this Plan is of the highest quality.

This Plan was developed through a participatory and consultative approach, with contributions and insight from management and staff across all levels of the Ministry of Health; public and private health training institutions; public health facilities; members of the various regulatory bodies; the Churches Health Association Zambia; the Health Unions; Cooperating Partners; various Civil Society Organizations; and Village/Neighbourhood Health Committees. In total, 350-400 people were consulted during the development in this Plan, as part of a two-fold process: (i) to review the previous NHRH SP for 2006-2010 to draw critical lessons from it; and (ii) to provide recommendations for the new Plan. We thank all of you for the time, expertise and support provided. My sincere gratitude is extended to the members of the NHRH SP Committee for managing the development process.

On behalf of the Ministry of Health, I also wish to acknowledge the financial and technical support of the Delegation of the European Union in Zambia, the World Health Organisation, the Global Health Workforce Alliance, Canadian International Development Agency, Clinton Health Access Initiative, the Zambian Integrated Systems strengthening Program and all other Cooperating Partners.

Finally, I wish to acknowledge and thank all who contributed to making this Plan a success, but who could not be individually mentioned here.

Dr. Peter Mwaba
Permanent Secretary
Ministry of Health
Lusaka
December, 2011

TABLE OF CONTENTS

MESSAGE FROM THE MINISTER **2**

ACKNOWLEDGEMENTS **3**

TABLE OF CONTENTS **4**

LIST OF TABLES **6**

LIST OF ACRONYMS **7**

1. INTRODUCTION **10**

1.1. Background Information 10
1.2. Links to National Policy Documents 10
1.3. Development Process 11
1.4. Overview of Objectives 12

2. SECTOR PROFILE **12**

2.1. The Definition of Health Workers 12
2.2. Demographic Profile 13
2.3. Health Profile 13
2.4. The Health System 15

3. SITUATIONAL ANALYSIS **15**

3.1. NHRH SP 2006-2010 15
3.2. Health Workforce Capacity and Distribution 16
3.3. Training 20
3.4. Performance Management 22
3.5. HRH Management Functions 23
3.6. SWOT Analysis 255

4. VISION, MISSION, GOAL, OBJECTIVES AND GUIDING PRINCIPLES **27**

4.1. Vision 27
4.2. Mission 27
4.3. Overall HRH Goal 28
4.4. Objectives 28
4.5. Guiding Principles 28

5. OBJECTIVES AND INTERVENTIONS **29**

5.1. Objective A: Increase number of employed and equitably distributed health workforce with appropriate skills mix 29
5.2. Objective B: Increase training outputs harmonized to the sector's needs 31
5.3. Objective C: Improved performance and productivity of HRH 34
5.4. Objective D: Strengthen systems and structures to support HR expansion and performance. 36

6. IMPLEMENTATION AND MONITORING FRAMEWORK **38**

6.1. Coordination Structures 38
6.2. Critical Success Factors 38
6.3. Monitoring Frameworks and Indicators 39

7. COSTING OF NHRH SP 2011-2015 ..... **40**

7.1. Resource Envelope 40
7.2. Costs for the NHRH SP 2011-2015 42
7.3. Financing Options 43

8. ANNEX A: RESULTS FRAMEWORK AND COSTED ACTIVITY PLAN **44**

9. ANNEX B: GRADUATES BY CADRE **66**

10. ANNEX C: ENROLMENTS BY CADRE **67**

11. ANNEX D: TRAINING PROGRAMS AND ENROLMENTS BY TRAINING INSTITUTION **68**

12. ANNEX E: ENTRY REQUIREMENTS AND DURATION OF NURSING AND MIDWIFERY PROGRAMS 71

13. ANNEX F: NURSING AND MIDWIFERY GRADUATES 72

14. ANNEX G: MAP OF TRAINING INSTITUTIONS 73

15. ANNEX H: PEOPLE CONSULTED 74

16. REFERENCES 80

LIST OF TABLES

Table 1: Health workforce classification by sector 12

Figure 1: Population distribution by province, Zambia, 2010 13

Table 2: Number of health staff employed by the MoH, 2005 and 2010 verus the approved MoH Establishment. 16

Figure 2: Physicians per 1,000 population and nurses and midwives per 1,000 puulation for selected SADC countries. 17

Figure 3: estimated number of inflows and outflows of MoH healthcare workers, 2010-2020 18

Table 3: Provincial Distribution of the Health Workforce in 2005 and 2010 18

Table 4: Retirement Projectsions - Health workforce 19

Table 5: Voluntary and involuntary attrition of MoH health workers by geographic category, 2007-2009 19

Table 6: Health workers on the ZHWRS, as of December 2010 20

Table 7: Health workers on the ZHWRS, as of December 2010 20

Table 8: Qualifications offered in Zambia, as of Decemebr 2010 21

Table 9: Proposed targets for funded establishment of health workforce positions, 2011-2015 30

Table 10: Cumulatative new positions within the MTEF financial space 31

Table 11: Proposed target for annual enrolments of clinical cadres 33

Table 12: Allocated resources to the MoH in the SNDP (in mn ZMK) 40

Table 13: MTEF projections for the MoH, 2011-2013 (in mn ZMK) 41

Table 14: Estimated resource envelop for HRH Plan, 2011-2015 (in mn ZMK) 41

Table 15: Summary of costs by HRH SP objective (in USD) 42

LIST OF ACRONYMS

Acronym	Definition
BA	Bachelor of Arts
BSc	Bachelor of Sciences
CBoH	Central Board of Health
CDE	Classified Daily Employee
CHA	Community Health Assistant
CHAI	Clinton Health Access Initiative
CHAZ	Churches Health Association of Zambia
CHW	Community Health Worker
CO	Clinical Officer
CP	Cooperating Partner
CPD	Continuing Professional Development
CSO	Civil Society Organisation
DCC&DS	Directorate of Clinical Care and Diagnostic Services
DfID	Department for International Development (UK)
DHRA	Directorate Human Resources and Administration
DPH&R	Directorate Public Health and Research
DP&P	Directorate of Planning and Policy
DTSS	Directorate of Technical Support Services
DIP	Decentralisation Implementation Plan
DMO	District Medical Officer
EHT	Environmental Health Technologist
EM	Enrolled Midwife
EN	Enrolled Nurse
ERP	Enterprise Resource Planning
EU	European Union
FBO	Faith Based Organisation
FNDP	Fifth National Development Plan
FMIS	Fleet Management Information System
GAP	Governance Action Plan
GHWA	Global Health Workforce Alliance
GNC	General Nursing Council
GRZ	Government of the Republic of Zambia
HC	Health Centre
HCM	Human Capital Management
HCW	Health Care Worker
HMIS	Health Management Information System
HPCZ	Health Professions Council of Zambia
HQ	Headquarters
HR	Human Resources
HRA	Human Resources and Administration
HRD	Human Resources Development
HRDC	Human Resource Development Committee
HRH	Human Resources for Health
NHRH SP	National Human Resources for Health Strategic Plan
HRM	Human Resources Management
HRIS	Human Resources Information System
HR TIMS	Human Resources Training Information Management System
HRTWG	Human Resources Technical Working Group

Acronym	Definition
HTCC	Health Training Coordinating Committee
IFMIS	Integrated Financial Management Information System
JAR	Joint Annual Review
LAMU	Lusaka Apex Medical University
L&M Programme	Leadership and Management Programme
MBB	Marginal Budgeting for Bottlenecks
MDD	Management Development Division
MDG	Millennium Development Goals
MDR	Multi-Drug Resistance
M&E	Monitoring and Evaluation
MEPI	Medical Education Partnership Initiative
ML	Medical Licentiates
Mimed	Master of Medicine
MoAC	Ministry of Agriculture and Cooperatives
MoD	Ministry of Defence
MoE	Ministry of Education
MoFNP	Ministry of Finance and National Planning
MoH	Ministry of Health
MoJ	Ministry of Justice
MoLG	Ministry of Local Government
MoSTVT	Ministry of Science, Technology and Vocational Training
MoU	Memorandum of Understanding
MoWS	Ministry of Works and Supplies
MPH	Master of Public Health
MTEF	Medium Term Expenditure Framework
MTR	Mid-Term Review
NDP	National Development Plan
NEPI	Nursing Education Partnership Initiative
NGOs	Non Governmental Organisations
NHIS	National Health Insurance Scheme
NHSP	National Health Strategic Plan
NIPA	National Institute for Public Administration
NRDC	Natural Resources Development College
NTD	Neglected Tropical Diseases
NTOP	National Training Operational Plan
OPD	Out- Patients Department
OTN	Operating Theatre Nurse
PA	Performance Assessment
PCS	Public Service Commission
PE	Personal Emoluments
PEPFAR	President's Emergency Plan for AIDS Relief
PHC	Primary Health Care
PMEC	Payroll Management and Establishment Control
PMO	Provincial Medical Officer
PMP	Performance Management Package
PPP	Public Private Partnerships
PSC	Public Service Commission
PSMD	Public Service Management Division
PSRP	Public Sector Reform Programme
PSTDP	Public Service Training and Development Policy

Acronym	Definition
QA	Quality Assurance
RBF	Results-Based Financing
RHC	Rural Health Centre
RM	Registered Midwife
RN	Registered Nurse
SADC	Southern African Development Community
SAG	Sector Advisory Group
SIDA	Swedish International Development Agency
SoM	School of Medicine
SNDP	Sixth National Development Plan
SWAp	Sector Wide Approach
SWOT	Strengths, Weaknesses, Opportunities and Threats
TA	Technical Assistance
TB	Tuberculosis
TBA	Traditional Birth Attendant
TEVETA	Technical Education, Vocational and Entrepreneurship Training Authority
THET	Tropical Health and Education Trust
TI	Training Institution
TIMS	Training Information Management System
TNA	Training Need Assessment
TNDP	Transitional National Development Plan
ToR	Terms of Reference
TQM	Total Quality Management
TWG	Technical Working Group
UHC	Urban Health Centre
UNZA	University of Zambia
USAID	United States Agency for International Development
USD	United States Dollar (currency)
UTH	University Teaching Hospital
WHA	World Health Assembly
WHO	World Health Organisation
WOM	Workforce Optimisation Model
ZAU	Zambia Adventist University
ZDHS	Zambia Demographic and Health Survey
ZHWRS	Zambia Health Workers Retention Scheme
ZISSP	Zambian Integrated Systems Strengthening Program
ZMK	Zambian Kwacha (Zambian currency)

1. INTRODUCTION

1.1. BACKGROUND INFORMATION

The performance of a health system is influenced significantly by the size, distribution, and skill set of its health workforce. Although the 2007 Zambian Demographic Health Survey showed that Zambia has achieved progress in reducing maternal and child mortality, further progress is necessary if the country is to achieve the Millennium Development Goals. This is, to a large measure, dependent upon the alleviation of the human resource shortage within the health sector. Planned interventions within the health sector have not been successfully implemented due to staff shortages, which have been driven by multiple factors, including poor conditions of service, unsatisfactory working conditions, inequitable distribution of staff between urban and rural areas, weak human resources management systems, and inadequate training systems, amongst others.

To address these issues, the Zambian health sector has recognized that health workforce planning is a critical component of a comprehensive health strategy. In this vein, the sector developed its first National HRH Strategic Plan for the period 2006-2010 with the overall objective of ensuring an adequate and equitable distribution of appropriately skilled and motivated health workers to provide quality health services. The second National Human Resources for Health Strategic Plan (NHRH SP), 2011-2015, will build on the key lessons from the first Human Resources for Health Strategic Plan and attempt to address all constraining factors, while providing a comprehensive, coherent, and feasible Health Workforce Plan.

1.2. LINKS TO NATIONAL POLICY DOCUMENTS

This Plan derives its mandate from various national policy and planning documents, such as the Vision 2030 Declaration, the Sixth National Development Plan (SNDP), the National Health Policy and the National Health Strategic Plan (NHSP), as well as area-specific policy documents. In the Vision 2030 Declaration, which has an overarching goal statement of *"A Prosperous Middle Income Nation by 2030,"* Zambia reaffirmed its commitment to achieving the Millennium Development Goals (MDGs). The improvement of health worker to population ratio is a key means of improving key health outcome indicators.

The SNDP for 2011-2015 (SNDP) provides the overall development framework and contains a summarised version of the NHSP within its health chapter. In the health chapter, the third objective is to improve the availability and distribution of qualified health workers in the country through the expansion of training capacity, reduction of health worker retention, improvement of HR management, and implementation of the Community Health Worker Strategy.

The National Health Strategic Plan 2011-2015 is built from six primary building blocks, each with specific objectives, as outlined below.

No.	Program	Objectives
1	**Service Delivery**	
	Primary Health Care Services	To provide cost-effective, quality and gender sensitive primary health care services to all as defined in the Basic Health Care Package
	Hospital and Referral services	To increase access to and quality of advanced referral medical care services
2	**Human Resource for Health**	To improve the availability of and distribution of qualified health workers in the country

No.	Program	Objectives
3	**Medical Products, Vaccines, Infrastructure, Equipment and Transport**	
	Medical Commodities & Logistical Systems	To ensure availability and access to essential health commodities for clients and service providers
	Infrastructure	To provide sustainable infrastructure conducive for the delivery of quality health services at all levels of the health care system
	Equipment, Transport and ICTs	To ensure the availability of adequate, appropriate and well-maintained medical equipment and accessories in accordance with service delivery needs at all levels
	Specialised Support Services	To strengthen and scale up other medical support services, to ensure efficient and effective support
4	**Health Management Information System (HMIS)**	To ensure availability of relevant, accurate, timely and accessible health care data to support the planning, coordination, monitoring and evaluation of health care services
5	**Health Care Financing**	To mobilise resources through sustainable means and to ensure efficient use of those resources to facilitate provision of quality health services
6	**Leadership and Governance**	To implement accountable, efficient and transparent management systems at all levels of the Health Sector

The NHRH SP 2011-2015 is therefore not a standalone document, but an integral part of the overall national development and Ministry of Health planning framework. It supports the health policy vision of "**a *nation of healthy and productive Zambians***" and builds upon the NHSP by elaborating on the planned activities and targets within the human resources for health sector. It provides a more detailed analysis of the HRH situation, priorities, proposed strategies and expected results.

The MoH has also attempted to align this Plan with several other important international agreements and documents that impact on the health sector, including:

- The Abuja Declaration
- The African Union Ministers of Health reports
- The Global Health Workforce Alliance reports
- The World Health Organization reports
- The Africa Health Strategy 2007-2015
- The World Health Assembly resolution WHA57-19
- The decisions and reports of the two GHWA Forums, and
- The Kampala Declaration 2008

1.3. DEVELOPMENT PROCESS

This Plan was developed through a participatory and consultative approach, with contributions and insight from 350-400 people representing various Government agencies, regulatory bodies, civil society organization and cooperating partners.

1.4. OVERVIEW OF OBJECTIVES

To support the National Health Strategic Plan 2011-2015, the following four national Human Resources objectives have been developed:

1. Increase the number of employed and equitably distributed health workforce with appropriate skills mix
2. Increase training outputs harmonised to the sectors needs
3. Improve performance and productivity of health workforce
4. Strengthen systems and structures to support HR expansion and performance

2. SECTOR PROFILE

2.1. THE DEFINITION OF HEALTH WORKERS

The definition of health workers is not straightforward. The World Health Organization (WHO) defines 'health workers', or human resources for health (HRH), as "all people whose main activities are aimed at promoting, protecting and improving health".[1] Yet, the WHO makes the following classifications: "those who are working within the health sector and those who work in other sectors". Within the health sector, the following sub classifications have been identified: health service providers (including 'professionals' like Medical Doctors and 'other community providers' like traditional practitioners) and health management and support workers. This latter sub-classification also includes craft and trade workers that support the health system, as reflected in the table below.

Table 1: Health workforce classification by sector

All Economic Sectors			
Health sector		**All other sectors**	
Health service providers	**Health management and support workers**	**Health service providers**	**All other occupations**
Professionals: e.g. Medical Doctors, Nurses,	**Professionals:** e.g. Accountants in health facilities	**Professional and associates:** e.g. Medical Doctors employed by mining company, Nurses working in schools and Nurse Tutors in training institutions not owned by the MoH	
Associates: e.g. Laboratory Technicians	**Associates:** e.g. Administrative professionals in health centres		
Other community providers: e.g. Traditional Practitioners	**Support staff:** e.g. clerical workers, Ambulance Drivers		
	Craft and trade workers: e.g. Gardeners in hospital		

Source: Based on WHOM 2007: 3.

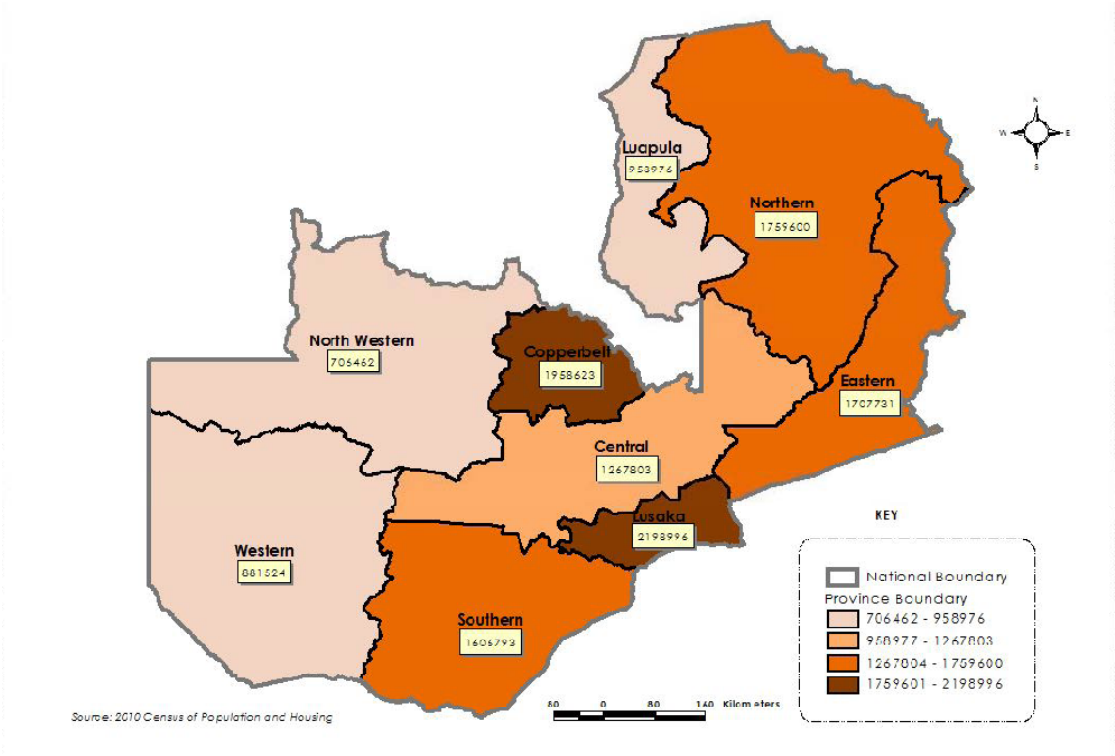
[1] WHO 2006.

Thus, the WHO includes within HRH each of the following: (i) people who provide health services, such as Medical Doctors, Nurses, Midwives, Clinical Officers, Pharmacists and Laboratory Technicians; (ii) health related training staff, such as Lecturers and Tutors who work in health training institutions; (iii) management and support workers, such as Accounts Officers, HR staff, and MoH directors; and (iv) support staff, such as cooks, drivers and other classified daily employees (CDEs). All of these health workers may work in the public sector, non-governmental organizations (NGOs), Faith-Based Organizations (FBOs), and/or private-for-profit facilities and institutions.

2.2. DEMOGRAPHIC PROFILE

The population count from the Preliminary Results of the 2010 Census of Population and Housing for Zambia is 13,046,508, as of October 2010. Of the 13,046,508 persons, 6,394,455 were male and 6,652,053 were female. The regional distribution of the population is as depicted in the map below. Zambia's population grew at an average annual rate of 2.8 percent during the 2000-2010 inter-census period, compared to a growth of 2.4 percent in the 1990-2000 period.[2]

Figure 1: Population distribution by province, Zambia, 2010



2.3. HEALTH PROFILE

The country is facing an epidemiological transition toward a dual disease burden. Although communicable diseases, such as HIV/AIDS, Tuberculosis and Malaria, have had a major impact on the health of the population, an increasing prevalence of non-communicable diseases has been reported, predominantly due to changes in demographic, behavioural, and social trends, as well as large-scale population shifts from rural to urban areas.

[2] CSO, 2011

The Zambia Demographic and Health Survey (ZDHS) of 2007 provided evidence that investment in primary health care programs has begun to yield positive results, with a drop in infant, under-five, neonatal and maternal mortality rates between 2002 and 2006: for every 1000 live births, the infant mortality decreased from 95 to 70, under-five mortality from 168 to 119, neonatal mortality from 37 to 34, and maternal mortality from 729 to 591.[3] However, the neonatal death rate did not decrease significantly over this period, leading to concerns of poor peri-natal care in the country.

Malnutrition is the primary cause of under-five deaths in Zambia, attributable to up to 52%. The stunting rate in under-five children is 45%, with 5% acutely malnourished (wasted) and 15% underweight. The rates of micronutrient deficiencies are also high: 53% of children have a vitamin A deficiency, 4% of school-age children have an iodine deficiency disorder, and 46% have iron deficiency anaemia.[4]

Malaria accounts for over 40% of all visits to health facilities and poses a severe social and economic burden on communities living in malaria endemic areas. Malaria is a key driver of morbidity and mortality rates. In 2009, 3.2 million cases of malaria (confirmed and unconfirmed) were reported countrywide, of which 4,000 resulted in death. The annual malaria incidence was estimated at 246 cases per 1,000 population in 2009, a slight drop from 252 cases per 1,000 population in 2008. Expanded use of rapid diagnostic tests may explain this slight drop, among other explanations.

Zambia has a generalized HIV epidemic fuelled by structural factors such as gender-inequality, social norms that encourage multiple concurrent sexual partnerships for men and unequal distribution of wealth between men and women. HIV/AIDS ranks high as a key cause of morbidity and mortality for both women and children. Females (16.1% prevalence rate) are more likely to be HIV positive than males (12.3%) due to biological, economic and social factors. Urban-rural differentials exist, with urban areas having a higher prevalence (20%) than rural areas (10%). Partly as a consequence of HIV/AIDS, tuberculosis (TB) continues to be a major public health problem in the country. In addition, the prevalence of Multi-Drug Resistant (MDR) for TB has increased.[5]

Zambia also experiences seasonal epidemics, like cholera, which are driven by inequitable access to improved water sources, safe sanitation and insufficient hygiene practices. According to the 2007 ZDHS, only 41% of the households have access to improved sources of water and 25% of households have no toilet facilities.[6]

The country's huge disease burden is partly attributable to poverty, inequity, inadequate food, poor environmental health and sanitation, and limited promotion of healthy lifestyles and prevention techniques.

Non-communicable diseases include heart disease, stroke, cancer, diabetes, mental illness, consequences of alcohol and substance abuse, tobacco-smoking related illnesses, epilepsy, trauma, asthma, oral health problems and nutrition problems. Against this background, the Government of the Republic of Zambia (GRZ) has taken non-communicable diseases as a crucial component of primary health care, the referral system and the overall health service delivery reform strategy.[7]

[3] CSO *et al*., 2009.
[4] MoH 2011.
[5] CSO *et a*l., 2009.
[6] CSO *et al*., 2009.
[7] MoH 2011.

2.4. THE HEALTH SYSTEM

In the formal health sector, the main providers of health care services include public health facilities under the MoH, the Ministry of Defence (MoD) and the Ministry of Home Affairs. CHAZ is a faith-based umbrella organisation with many clinics and hospitals, spread over the entire country, predominantly in rural and hard-to-reach areas. The majority of its workforce is on the payroll of the MoH. Other providers in the formal system include private-for-profit clinics, drug stores, diagnostic centres and hospitals.

The informal health sector is large and unregulated. It consists of numerous trained and untrained traditional birth attendants and traditional healers, and a wide range of community health workers. Some people in rural and remote areas consult informal health service providers. Yet, even some urban people with formal education also consult them for specific health concerns.

In the formal health sector, the lowest level facility is a health post, intended to cater for populations of 500 households (3,500 people) in rural areas and 1,000 households (7,000 people) in the urban areas, or to be within reach within a 5 kilometre radius for sparsely populated areas. The next level is the health centre (HC). Urban HCs are intended to serve a catchment population of 30,000 to 50,000 people. Rural HCs are intended to serve a catchment area of a 29 kilometre radius or a population target of about 10,000 people. Basic level health care facilities are supported by the following referral structure:

Level	Description
Level 1	Hospitals serve a population of between 80,000 and 200,000 with medical, surgical, obstetric and diagnostic services, including all clinical services to support HC referrals. Most of the 72 districts have a level 1 or a district hospital. Although CHAZ has level 1 hospitals, these do not (yet) serve as district hospitals, thus possibly causing duplication of services within the same catchment area. The country has 85 level 1 hospitals.
Level 2	Hospitals, or general hospitals, at provincial level, have a catchment area of 200,000 to 800,000 people, with services in internal medicine, general surgery, paediatrics, obstetrics and gynaecology, dental, psychiatry and intensive care services. These hospitals also function as referral centres for the first level hospitals, including the provision of technical back-up and training functions. The country has 21 level 2 hospitals.
Level 3	Hospitals, or central hospitals, serve a catchment population of 800,000 people and above. These facilities are referral centres for level 2 hospitals and have sub-specializations in internal medicine, surgery, paediatrics, obstetrics, gynaecology, intensive care, psychiatry, training and research. The country has 6 level 3 hospitals.

3. SITUATIONAL ANALYSIS

3.1. NHRH SP 2006-2010

In preparation for the creation of this Plan, the NHRH SP 2006-2010 and its implementation was reviewed by independent consultants in early 2011. The review found that the NHRH SP 2006-2010 had been implemented to a limited extent and, as a result, Zambia continues to face a severe skilled health workforce shortage. The two primary variables that contributed to the limited implementation of the NHRH SP 2006-2010 were: (i) limited funding, approximately 17% of the required funding was received, and (ii) limited output from health-related training institutions.

Other factors that negatively impacted the implementation of the NHRH SP 2006-2010 included the restructuring of the Ministry and the migration of the Ministry to a new Establishment, which consumed time and administrative capacity. Additionally, the withdrawal of funding by several Cooperating Partners in 2009 due to allegations of misappropriation of funds resulted in significant delays in programme implementation.

3.2. HEALTH WORKFORCE CAPACITY AND DISTRIBUTION

3.2.1. Health Workforce Baseline 2010 and future needs

Although there has been an increase in the number of health staff employed by the Ministry over the past five years, there is still a serious shortage of staff as compared to the Establishment in all health staff categories except pharmacy. Further, although the recommended ratio of clinical to administrative staff is 60-65% to 35-40%, respectively, the existing ratio is 53% clinical to 47% administrative.

Table 2: Number of health staff employed by the MoH, 2005 and 2010 versus the approved MoH Establishment.

Staff category	Number of staff 2005	Number of staff 2010	Net Increase	Establishment 2010	Gap to Establishment, No.	Gap to Establishment %
Clinical Officer	1,161	1,535	374	4,000	2,465	62%
Dentistry	56	257	201	633	376	59%
Doctors	646	911	265	2,391	1,480	62%
Nutrition	65	139	74	209	70	33%
Lab Services	417	639	222	1,560	921	59%
Pharmacy	108	371	263	425	54	13%
Physiotherapy	86	239	153	300	61	20%
Radiography	142	259	117	233	-26	-11%
Midwives	2,273	2,671	398	5,600	2,929	52%
Nurses	6,096	7,669	1,573	16,732	9,063	54%
Environmental Health	803	1,203	400	1,640	437	27%
Other health workers	320	363	43	5,865	5,502	94%
Total clinical	**12,173**	**16,256**	**4,083**	**39,588**	**23,332**	**59%**
Administration	11,003	14,457	3,454	12,054	-2,403	-20%
Overall Total	**23,176**	**30,713**	**7,537**	**51,642**	**20,929**	**41%**

Source: MoH 2010.

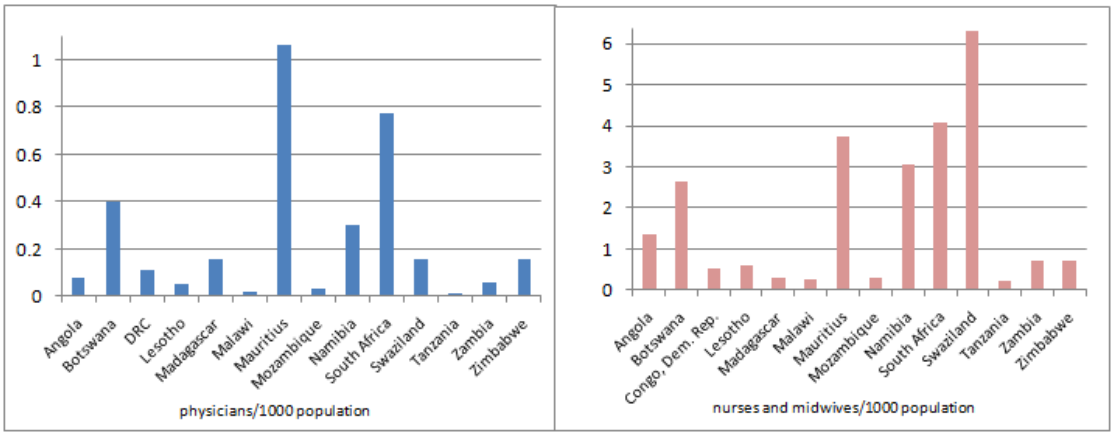
The Establishment that is presented above represents the number of clinical and administrative positions that have been approved by Cabinet Office. However, positions in the Establishment can only be filled when Treasury Authority is granted. The funded establishment represents positions with Treasury Authority from the MoFNP. In this regard, the head count in the table represents the number of funded positions in that particular year. Funded positions on the establishment increase depending on funds allocated in the national budget for net recruitment each year. The “gap in the Establishment” represents positions that were not funded. The approved Establishment was initially developed during the restructuring process of the MoH in 2006 and has been adjusted on an annual basis based on approvals of structures for new health facilities.

Over the years, the MoH has observed that the distribution of positions in the current Establishment may not meet the requirements for effective service delivery. In an attempt to develop a demand-based staffing tool, the MoH developed the Workforce Optimization Analysis (WOM) in 2009, which identifies the health facilities and districts that have greatest need of additional health staff. The WOM uses Health Management Information System

(HMIS) data regarding patient admissions, health worker productivity, and activity time standards to define the "optimal" number of health staff, by cadre, required at each public health facility in the country.[8] The WOM has been utilized by the MoH since 2009 to inform the deployment methodology.

As compared to its regional neighbours, Zambia is in the middle of the ranking for the Nurses per 1,000 population ratio (7th out of 14th countries), while it fares relatively worse than its neighbours on the physicians per 1,000 population ratio (10th out of 14th countries). Although the WHO recommends a proxy ratio of two medical doctors and 14.3 nurses per 1,000 population to achieve the MDGs, none of the Southern Africa Development Community (SADC) countries have met that benchmark.[9]

Figure 2: Physicians per 1,000 population and nurses and midwives per 1,000 population for selected SADC countries.



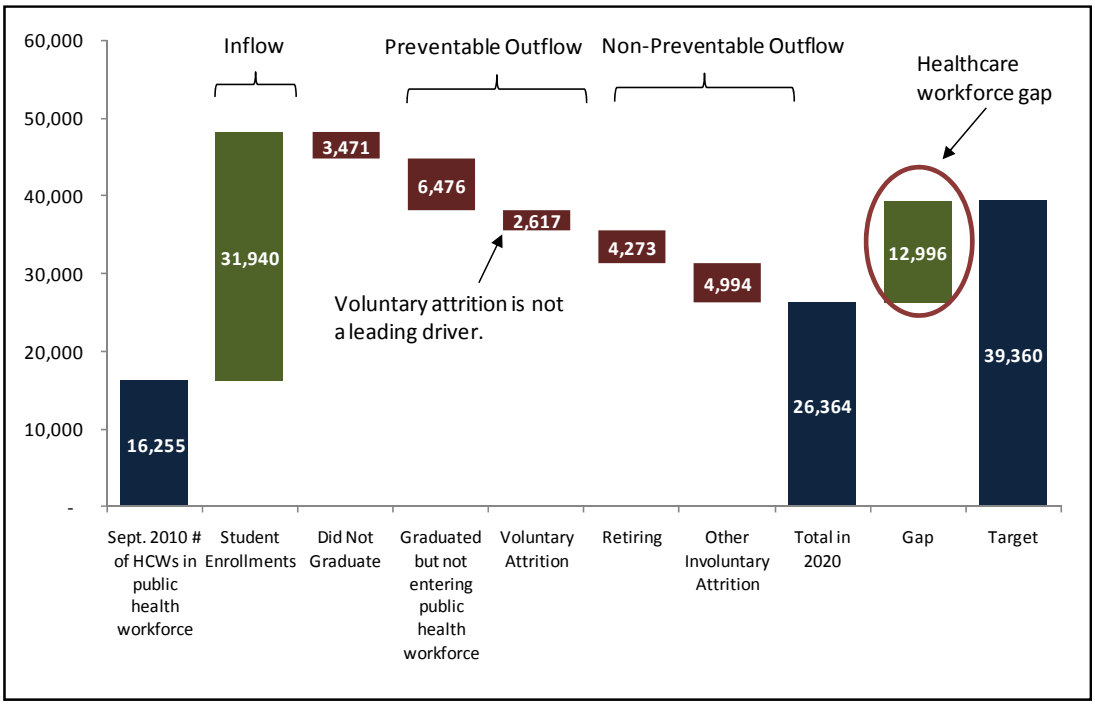
Source: MoH/ World Bank African Region Human Development 2010

To mitigate the shortage of public health staff, health facilities are supported by expatriate and volunteer staff. As the current annual production of medical officers is too low to meet the country's need, the MoH has appointed expatriate doctors throughout the country to alleviate the shortage. Approximately 30% of the doctors serving in Zambian health facilities are expatriates (PMEC data). Untrained volunteer health workers also play an important role in the provision of community level health services. In the past, untrained volunteer health workers have been provided short-term (two weeks to three months) training by CPs and employed throughout the country. In an effort to formalise this health cadre and provide Government oversight and standardization, the MoH has developed and begun the implementation of the Community Health Assistant Strategy. The strategy will be rolled out in phases, the first of which is a pilot phase. The pilot will generate evidence and learnings to inform a national scale up.

Despite the increase in health staff since 2005 and the support of expatriate and volunteer health workers, a gap remains between the number of available health staff and the needs of the health sector. A Workforce Review was conducted by the MoH in December 2010, which included an analysis of the inflows and outflows of health workers employed in the public health workforce over a 10-year period.[10] This analysis, illustrated below, was based on the projected student enrolments at each TI, the 2010 graduation rate, the 2009 attrition rate, and the 2010 absorption rate of 80%.

[8] MoH/DHR&A 2009: 6.
[9] WHO/AHWO 2010.
[10] MoH 2010d.

Figure 3: Estimated number of inflows and outflows of MoH healthcare workers, 2010-2020



Source: MoH Workforce Review, Dec. 2010

As illustrated above, if the rates of inflow and outflow of health workers in the public sector remain the same over the next ten years, Zambia will suffer from a shortage of 12,996 health workers in the 2020, as compared to the Recommended Establishment staffing-level of 39,360 clinical health workers. This estimate assumes that Zambia will maintain an annual increase of 1,000 health workers per year net of attrition. To reach the establishment of 39,360 health workers, the public health sector will need to more than double its annual increase of health workers per year, net of attrition, to 2,300. This may be achieved by increasing the number of graduates per year from health training institutions, increasing the percentage of health workers that are absorbed into the public health workforce, and/or decreasing annual attrition.

3.2.2. Distribution of Health Workforce

Although there has been an improvement during the last five years, Zambia continues to suffer from an inequitable distribution of health workers, at the disadvantage of rural provinces.

Table 3: Provincial Distribution of the Health Workforce in 2005 and 2010

	2005			2010			5-year Change
	Population	Clinical health staff	Clinical staff to 1,000 pop	Population	Clinical health staff	Clinical staff to 1,000 pop	
Northern	1,445,730	559	0.39	1,759,600	1,191	0.68	+0.29
Luapula	903,746	545	0.60	958,976	807	0.84	+0.24
Eastern	1,530,118	1,119	0.73	1,707,731	1,385	0.81	+0.08
Western	863294	720	0.83	881,524	984	1.12	+0.29
Central	1,180,124	1,126	0.95	1,267,803	1,442	1.14	+0.19
Southern	1,407,433	1,625	1.15	1,606,793	2,477	1.54	+0.39

	2005			2010			5-year Change
	Population	Clinical health staff	Clinical staff to 1,000 pop	Population	Clinical health staff	Clinical staff to 1,000 pop	
Northwestern	683,367	870	1.27	706,462	1,033	1.46	+0.19
Copperbelt	1,820,443	2,899	1.59	1,958,623	3,260	1.66	+0.07
Lusaka	1,579,769	2,665	1.69	2,198,996	3,648	1.66	-0.03
Total	**11,441,461**	**12,128**	**1.06**	**13,046,508**	**16,227**	**1.24**	**+0.18**

Sources: 2005 population – CSO Population Projections; 2010 population - the Preliminary Report for the 2010 Census; staffing: MoH PMEC

As illustrated above, many of the provinces that suffered from the greatest shortage of clinical health workers in 2005 benefited from the largest increase in clinical staff to population during the 2005 and 2010 period, notably Northern, Luapula, and Western. Similarly, Lusaka Province saw a reduction in its clinical staff to population ratio in an effort to the benefit of rural provinces.

However, there still exists a great discrepancy between the clinical staff to population ratio among the various provinces: the clinical staff to population ratio in Lusaka is more than double to that of Northern Province. Further discrepancies exist among districts within each province.

Table 3 illustrates that the equitable distribution of health workforce must be considered throughout the implementation of HRH initiatives.

3.2.3. Attrition Rate

The total attrition rate of health workers is 3.6% as of 2009, signifying that attrition is not a significant factor on the size of the health workforce in Zambia. According to the MoH's Workforce Review, and illustrated in figure 2 above and table 5 below, 'preventable' or 'voluntary' attrition within the public health sector, which is predominantly resignation, has had a limited impact on the public health workforce, suggesting that increasing training outputs would be a rational approach to increasing the size of health workforce. 'Non-preventable' or 'involuntary' attrition is predominantly caused by death or retirement. The statutory retirement age of 55 years has caused a high turnover of public health workers. However, this is mitigated by the provision for MoH to rehire retired health workers on a three-year contract that may be renewed twice.

Table 4: Retirement Projections - Health workforce

Gender	2011	2012	2013	2014	2015
Female	405	278	369	289	420
Male	279	240	280	262	347
Total	**684**	**518**	**649**	**551**	**767**

Table 5: Voluntary and involuntary attrition of MoH health workers by geographic category, 2007-2009

	2007			2008			2009		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Involuntary	3.7%	2.9%	3.4%	3.7%	3.4%	3.6%	3.0%	2.6%	2.8%
Voluntary	1.7%	0.7%	1.3%	1.3%	0.8%	1.2%	1.0%	0.5%	0.8%
Total	**5.4%**	**3.5%**	**4.7%**	**5.1%**	**4.2%**	**4.7%**	**3.9%**	**3.1%**	**3.6%**

Source: MoH 2010d: 5.

3.2.4. Strategies to Retain Health Workers

Although the Government of Zambia has incorporated incentives within its salary schedule to attract and retain staff in the Public service (i.e. Recruitment and Retention allowance for degree holders, which is 20% of basic salary; Rural and Remote Hardship allowance of 20-25% of basic salary), these allowances have not been sufficient to attract a suitable number of health workers. In 2003, the Zambian Health Workers Retention Scheme (ZHWRS) was initiated to attract Medical Officers to work in the rural and remote areas of the country. In 2007 the ZHWRS was expanded to include other health workers, as reflected below in Table 6. The award payments of the ZHWRS range from 30-75% of the healthcare worker's basic salary per year, based on the level of remoteness of the health facility to which the healthcare worker has been placed. In addition, Health workers on the ZHWRS who successfully complete the three-year contract are awarded with a bonus payment of an amount nine times their monthly allowance.

Table 6: Health workers on the ZHWRS, as of December 2010

Year	2006	2007	2008	2009	2010
Health Workers	103	89	659	860	961

Source: MoH – Zambian Health Workers Retention Scheme database 2010

Table 7: Health workers on the ZHWRS, as of December 2010

Cadres	Participants
Medical Doctor	144
Medical Consultant	20
Medical Licentiate	39
Clinical Officer	36
Tutor/Lecturer	231
Nurse & Midwife	352
Environmental Health Technologist	140
Total	**961**

Source: Zambian Health Workers Retention Scheme database 2010

3.3. TRAINING

3.3.1. Training outputs

During the 2005-2010 period, the MoH and its CPs have implemented several initiatives that have successfully increased the annual number of graduates from health-related training programmes from 1,101 in 2005 to 2,311 in 2010 (a 110% increase). These figures include graduates from public, mission, and private Training Institutions (TIs). A detailed breakdown of these figures is contained in Annex B.. Although, the annual number of graduates from these programmes is envisaged to continue to increase, a large gap still remains between the available number of health workers and the needs of the sector.

In 2010, MoH developed a National Community Health Workers Strategy. The strategy defines training of "Community Health Assistants" (CHAs) for a period of one year. The strategy will be rolled out in four phases, which commenced in June 2011, with the intake of a pilot class of 311 CHAs with a planned expansion of up to 5,214 in phase 4. The pilot will inform decision-making for the national scale up. The first pilot training programme is being hosted by the newly established Ndola Community Health Assistant Training School, hosted on the grounds of Ndola Central Hospital.

3.3.2. Training programmes

As of 2011, there were 22 pre-service, 7 post-basic and 16 post-graduate training programmes available within the country. The table below shows the qualifications provided by TI's in Zambia. Annex D contains a list of the training programmes available for health workers in the country.

Table 8: Qualifications offered in Zambia, as of December 2010

Qualification	Duration	Number of TI's
Certificate	1 to 2 years	24
Diploma	3 years	20
Advanced Diploma	2 years	1
Bachelors Degree	4 years	2
Masters degree	1 ½ to 4 years	1

During the period 2005-2010 the number of programmes at degree-level increased. However, for some programmes, training is only available at diploma level. See Annex E for a brief description of the current programmes available for different workers.

3.3.3. Training institutions

During the period 2005-2010, there were thirty-seven health training institutions in Zambia, offering various programmes. The TI's are in three categories as shown below:

- *Public institutions:* The public TIs are owned, operated, and funded by either the MoH, Ministry of Education (MoE), Ministry of Science, Technology and Vocational Training (MoSTVT), the Ministry of Defence (MoD) or the Ministry of Agriculture and Cooperatives (MoAC). Apart from the nursing schools, TIs are located along the line of rail. Annex D contains a list of the TI's by ownership and programme, while Annex G provides a map illustrating the location of TIs.
- *Mission institutions:* The mission TIs are owned and operated by the Churches Health Association of Zambia (CHAZ) institutions, with funding by MoH. The tutors of mission TIs are employed by the MoH and students are partially sponsored by the MoH. Additionally funding to support mission TIs is received from CHAZ and mission-focused organizations. All graduates of mission TIs are expected to be recruited into the public health sector.
- *Private for-profit institutions:* A number of private-for-profit TIs have opened between 2005 and 2010. The private TIs are primarily located in Lusaka and Copperbelt. The private sector is still highly dependent on the public health sector for tutors. Graduates of private TIs may be employed in the public, private, or international organisations.

In an effort to quantify the infrastructure needs of Zambia's TIs, a comprehensive assessment of the 39 public, mission, and private training institutions in Zambia was completed by MoH in June 2008. Based on the findings, the 2008 National Training Operational Plan was developed. The Plan defined the infrastructure, faculty, and equipment needs of each TI. The NTOP estimated that the annual enrolment of health-related students could be increased from 1,900 to 3,700 by 2012 could be achieved through substantial funding support from MoH and its CPs. However, due to limited funding, the 2008 NTOP has not been fully implemented and TIs continue to face considerable infrastructure constraints impeding the ability to increase intakes.

A number of TIs have commenced with new programmes and increased on the numbers of student enrolment. However, the increase in enrolments and programmes has far outpaced

the number of teaching staff. The average lecturer-to-student ratio is 1:35 and the clinical instructor-to-student is 1:105, against the recommended 1:20 and 1:10, respectively.

3.4. PERFORMANCE MANAGEMENT

3.4.1. Performance assessment and performance management

The MoH has implemented several processes for monitoring and assessing the performance of its workforce, including bi-annual Performance Assessments (PAs), bi-annual Technical Supportive Supervisions, and annual Joint Annual Reviews (JARs).

Further, the PSMD has developed relevant guidelines, procedures and codes to guide managers in encouraging good performance and handling offences within the public service.[11] The Disciplinary Code, or 'Red Book', has identified eight major categories of offences.[12] All categories deal with offences that directly or indirectly affect the performance of the workforce. However, there is no system for rewarding good performance, such as a performance-based reward and remuneration system.

In an effort to improve the performance management system, the Public Service has developed the Performance Management Package (PMP), which represents a move away from annual individual confidential assessments. In collaboration with the PSMD, the MoH has commenced the roll-out of a training programme on PMP, including a training of trainers programme for PMO senior staff on the use of the PMP tools.

Although performance management systems (PMP, PA, Technical Supportive Supervision) are in place for monitoring and assessing performance, there is need to strengthen enforcement of the regulations and standards as well as action on issues raised during assessments.

3.4.2. Leadership and management

After the re-structuring of the MoH in 2006, it was decided that only Medical Doctors and Medical Specialists may be hired for senior management positions, such as Provincial Medical Officers, District Medical Officers and Medical Superintendents. However, many of the Medical Doctors assigned with managerial and administrative responsibilities have limited or no training in management.[13] In support of the need for Management and Leadership training, the Zambia Integrated Systems Strengthening Programme (ZISSP) is providing the management training for senior positions in conjunction with local academic institutions, including the National Institute for Public Administration (NIPA).

3.4.3. In-service training

The Public Service Training and Development Policy (PSTDP) and the Procedures and Guidelines for Human Resource Development in the Public Service provide the framework for the training and development of civil servants. This framework defines a systematic training cycle and the procedures concerning in-service training (i.e. health professionals wishing to upgrade their skills). It also clarifies the roles and responsibilities of various actors and provides a link between performance and in-service training as well as training and career development. According to this framework, the annual number of health professionals that may begin in-service training is based on the needs of the MoH, as an organisation. To determine the needs of MoH, each district, hospital, and province develops an 'Annual

[11] These include the Terms and Conditions of Service, Code of Ethics and Disciplinary Code for the Public Service.
[12] GRZ 2003: 3-9.
[13] Some health training programmes have included management modules, including for RNs, RMs and COs.

Training and Development Plan,' which outlines its in-service training requests and submits it to MoH Headquarters annually. The MoH compiles the requests and develops a 'Ministerial Training Plan,' which highlights the programs that are of greatest need and the number of health professionals that may enter in-service training.

According to the PSTDP, the Government is expected to provide sponsorship to public professionals to undertake training that is relevant to the Public Service, within the constraint of available monetary resources. In addition to MoH sponsorships, CPs, including FBOs, NGOs, and other private institutions, also provides scholarships. Although in-service training provides an opportunity for the public health sector to upgrade and improve its skills, there is need to strengthen coordination and control mechanisms to avoid temporary depletion of health workers and to ensure strategic staffing and need-based decisions are made regarding the cadres that are sent for training from each facility.

3.5. HRH MANAGEMENT FUNCTIONS

Human resource (HR) management in the public service is governed by the procedures and processes of the Public Service Management Division (PSMD). Prior to the restructuring of MoH in 2006, the Central Board of Health (CBoH) held significant power to manage human resources decisions.[14] However, since the restructuring of the MoH, the Public Service Commission (PCS) has normalised all HRH 'cases,' requiring that PSMD approve all HRH management decisions. Consequently, major HR functions have become more centralised, resulting in additional, labour-intensive work for the MoH headquarters. The description below presents different aspects of key MoH HR management functions.

3.5.1. Governance and regulatory functions

In accordance with the Sector Wide Approach (SWAp), the MoH with its partners have established the Human Resource Technical Working Group (HRTWG), which provides strategic direction and support for the programs and processes related to human resources for health. The membership of the HRTWG includes representatives from MoH, CPs, the Ministry of Finance and National Planning (MoFNP), PSMD, MDD, the health unions and the regulatory bodies. There are plans to include the Ministry of Education (MoE) and the Ministry of Science and Technology. The HRTWG has 'Task Groups' that are responsible for managing, implementing, and reporting on projects within a particular sector of human resources.

In an effort to reduce the burden on the MoH headquarters, a national decentralisation strategy has been developed and implementation has begun. Delegation of certain duties to lower levels of MoH will enable the DHRA to concentrate on other aspects of their mandate, including policy and strategic issues, M&E, capacity strengthening, mentoring and coaching of HR officers, and assessing workforce performance. Since 2009, the MoH has recruited approximately 230 HR officers, each with a minimum qualification of a Bachelor of Arts (BA) degree, that have been deployed to the MoH central level, larger hospitals, the PMOs, and the District Medical Offices (DMOs).

There are three primary regulatory bodies for the health sector:

1. *The Technical Education, Vocational and Entrepreneurship Training Authority* (TEVETA), which regulates the teaching staff and training programs offered under TEVETA,
2. *The General Nursing Council* (GNC), which regulates the nursing and midwifery, teaching staff and training programs, and;

[14] The boards were in place between 1995 and March 2006.

3. *The Health Professions Council of Zambia* (HPCZ), which regulates all other health professions, teaching staff, and training institutions. Additionally, HPCZ is responsible for inspecting and accrediting public, private, and mission health facilities.

These regulatory bodies are responsible for approving training programs in both public and private training institutions, including approving curricula, setting quality standards, and accrediting training institutions and sites for internships and practical training. However, all of the regulatory bodies are facing challenges in the fulfilment of their roles and responsibilities.

3.5.2. Recruitment

With the dissolution of the Central Board of Health, the PSC was given the sole responsibility for the recruitment of professional staff. Therefore, although MoH may recommend an individual to be recruited for a particular position, the final authority is given by PSC.

The MoH holds recruitment and induction programmes at appropriate times annually, where recent health-related graduates and qualified professions who wish to enter the public health sector are inducted and posted to available funded, vacant positions in the country.

3.5.3. HRH Planning

The health sector has a comprehensive planning framework that includes human resource issues and runs from the district and provincial levels to the national level. The NHSP 2011-2015 will be implemented through a series of Mid-Term Expenditure Frameworks (MTEF) that will give expenditure ceilings for the various sectors of the Ministry of Health. The MoH will ensure that the activities proposed in this Plan will be included within the MoH's Annual Action Plan and budgets.

Furthermore, in 2008, the MoH established a Planning Unit within the DHRA responsible for human resource planning and information. It is expected that this Unit will function as a 'Think Tank' for the Directorate, focusing on strategic issues.

3.5.4. Human Resources Management Information System

For monitoring and evaluation, the MoH and its partners have introduced a common results framework, which presents a set of selected key indicators for joint monitoring and evaluation (M&E) of the sector's performance against the NHSP and the health related MDGs. In addition, the Joint Annual Reviews (JARs) have served as mechanisms for monitoring the NHRH SP since 2006. However, the JAR tools for HRH will need to be aligned with the new NHRH SP to ensure standardization and alignment with the bi-annual Performance Assessments (PAs) tools.

The Public Service has a comprehensive human resources management information system. The system is the SAP-based Enterprise Resource Planning (ERP) model within the software-suite called Human Capital Management (HCM). GRZ has purchased the Payroll Management and Establishment Control (PMEC) module of HCM for managing the payroll and administrative issues of all GRZ ministries. Although the system is centrally housed at the PSMD offices, plans are in place to provide direct access to PMEC to each line ministry by December 2011. This will allow MoH to generate its own reports and have direct access to payroll data. However, the health sector in Zambia also lacks a comprehensive HRIS database to provide a national picture on health workforce trends.

3.6. SWOT ANALYSIS

Strengths	Weaknesses
Overall ▪ GRZ has demonstrated strong commitment to addressing the country's HRH crisis ▪ Large numbers of dedicated health staff are working at all levels of MoH	*Overall* ▪ Funding constraints throughout MoH limit its ability to implement effective improvements ▪ Programme planning, implementation, and monitoring is limited by weak systems throughout MoH
Training ▪ The capacity for training of HRH has increased substantially in recent years ▪ The 2008 National Training Operational Plan (NTOP) for scaling-up the production of additional health staff has been developed, with clearly defined infrastructure, equipment and teaching staff requirements ▪ New training programmes have been and continue to be developed and implemented, including the Community Health Assistant training programme	*Training* ▪ Weak coordination mechanisms are in place for collaboration among stakeholders, TIs, and the MoH ▪ Insufficient funding is available from MoH to support the training of critical cadres ▪ Training for certain health professions and specialties is not available in country ▪ Newly developed training programmes do not meet the needs of the country nor correspond to available positions in the Establishment ▪ An urban-biased geographical distribution of health training institutions has reduced rural retention ▪ There exists shortages of faculty and student accommodation, classroom infrastructure, and transport to practical sites ▪ MoH has substantially decreased its funding to support the MoH in-service scholarship programme ▪ No bonding system in place for graduates of pre-service training programs and enforcement of the bonding scheme for graduates of in-service training is weak
Planning ▪ Comprehensive planning framework is in place ▪ Workforce Optimization Model is in use for determining staffing needs and deployment methodologies ▪ Decreased attrition rate among health workers ▪ Data metrics have provided for improved planning and management of human resources ▪ Two payroll verification exercises have been conducted across more than 90% of the public health facilities	*Planning* ▪ Only 60% of the positions provided on the approved Establishment are filled, resulting in continued shortages of health staff ▪ The approved Establishment does not represent the needs on the ground ▪ There is an inequitable distribution of health workers between provinces and districts; rural areas are particularly affected ▪ HR functions are not well articulated within the planning framework ▪ Inadequate harmonization of planning between the various Directorates of MoH for new infrastructure, new equipment, and additional staffing ▪ Centralised HR functions No direct access to the PMEC system within MoH, as PMEC is housed in the PSMD

Strengths	Weaknesses
Management ▪ Many relevant procedures and guidelines for guidance of HR management are in place ▪ Opportunities to monitor and assess performance of human resources through integrated tools, such as the PMP, PAs and JAR ▪ Zambia Health Workers Retention Scheme (ZHWRS) in place to increase retention of health workers in rural and remote areas	*Management* ▪ No consistent enforcement of the PSMD's guidelines, including monitoring of absenteeism and tardiness ▪ HR functions not well articulated within the monitoring tools for PAs and JARs ▪ Inadequate human resource documentation and information management systems ▪ Leave schedules are not well managed ▪ Limited leadership and management competencies among managers, supervisors, and HROs ▪ Lack of efficient communication structures throughout the various levels of MoH ▪ Inadequate career development/progression opportunities for medical cadres ▪ Performance-based remuneration is not part of the Performance Management Package, resulting in reduced morale and productivity ▪ Inadequate staff houses in rural and remote areas ▪ Job descriptions for certain positions are missing

Opportunities	Threats
Overall ▪ Zambia is a signatory to a number of international declarations and conventions, including the Abuja and Kampala Declarations ▪ The political will to address the HRH crisis is clearly articulated both in the SNDP and the NHSP 2011-2015	*Overall* ▪ Inadequate, irregular and consistently decreasing funding for the health sector ▪ Restriction on overall public wage bill (i.e. the PE/GDP ratio) ▪ Poor governance structures exist, allowing for improper fund management ▪ Donor fatigue for pooled funding mechanisms after the 'funding freeze' of 2009-2010 ▪ Uncoordinated CP financial incentives to health workers working on donor-supported interventions, resulting in disinterest in conducting MoH responsibilities ▪ The threat of multi-drug resistance affecting the MoH health workers ▪ Increased numbers of health workers becoming sick or dying prematurely ▪ Very lenient annual sick leave allocation of 180 days per year ▪ Poor management of performance throughout the MoH with a lax attitude to poor performers

Opportunities	Threats
Training ▪ CPs support the design and implementation of new training programmes and the strengthening and scaling up of the training capacity ▪ The potential to offer new training programmes that are currently not offered in the country ▪ The private for-profit sector of health training is growing	*Training* ▪ The high cost of scaling up of training capacity relative to the quality of the training ▪ Poor overall management of in-service training ▪ No control over how many health workers from the same facility attend training, resulting in a depletion of the available workforce
Planning ▪ The GRZ's commitment to annually increase the number of funded positions through the 'net recruitment fund' ▪ An active HRTWG, with representatives from relevant stakeholders and CPs; a revised HRTWG ToR to facilitate funding, implementation and monitoring of the NHRH SP 2011-2015	*Planning* ▪ Severe funding constraints with a shrinking health sector budget
Management ▪ Establishment of "Restructuring Report Review and Technical Committee", the "Salaries Review Commission" and the "Job Review Commission" to review the establishment, public servants salaries and the jobs required for service delivery ▪ Training in PMP rolled out to provincial level on a 'train the trainer' basis ▪ Increased collaboration with non-state actors private-for-profit and private not-for-profit ▪ Decentralisation Implementation Plan (DIP) provides opportunities for a de-centralised health sector and advocates for using a multi-sector approach	*Management* ▪ Slacking of professional ethics and ineffective management of poor and unethical performance ▪ Unclear devolution process in the DIP on how centralized HR functions like recruitment, placements, promotions, leaves and retirements will be addressed within the DIP

4. VISION, MISSION, GOAL, OBJECTIVES AND GUIDING PRINCIPLES

4.1. VISION

The national vision for health, as expressed in the National Health Policy (NHP, 2011) is:

A Nation of healthy and productive Zambians.

4.2. MISSION

The Ministry's mission statement, stipulated in the NHSP 2011-2015, reads as follows:

To provide equity of access to cost-effective quality health services as close to the family as possible.

4.3. OVERALL HRH GOAL

To have an adequate, competent, well-supported and motivated health workforce to ensure provision of safe, ethical, cost effective and quality health services.

4.4. OBJECTIVES

To achieve the goal, the following specific objectives have been defined:

1. Increase the number of employed and equitably distributed health workforce with appropriate skills mix

2. Increase training outputs harmonized to the sector's needs

3. Improve the performance and productivity of health workers

4. Strengthen systems and structures to support HR expansion and performance

4.5. GUIDING PRINCIPLES

The following are the guiding principles for the NHRH SP 2011-2015:

Equity: reduction of inequities in access to health services through the equitable distribution of competent, supported and well-motivated HRH at all levels of the health system.

Feasibility and sustainability: interventions are designed to be achievable within the expected resource envelope and integrated within the overall health sector planning and monitoring framework, taking into account other external factors.

Cost effectiveness: the selected strategies and interventions have been designed to produce the best value for money.

Health system approach: strategies and interventions will be mainstreamed and integrated with other components of the health system.

Gender equality: selected strategies promote activities that favour equal opportunities for both women and men.

Accountability and transparency: accountability and transparency to the political administrative system and clients will be maintained throughout the implementation of the plan.

Coordination: The plan recognises contributions by key stakeholders and will strengthen coordination mechanisms to achieve the objectives.

5. OBJECTIVES AND INTERVENTIONS

5.1. OBJECTIVE A: INCREASE NUMBER OF EMPLOYED AND EQUITABLY DISTRIBUTED HEALTH WORKFORCE WITH APPROPRIATE SKILLS MIX

5.1.1. Rationale

By all metrics, Zambia suffers from a shortage of clinical health staff within its public health sector:

- The current number of doctors, clinical officers, midwives and nurses of 12,786 is only 43.0% of the WHO recommended staffing level of 2.28 health workers per 1,000 population.[15]
- The existing ratio of population to nurses is 2.2x the target set in GRZ Vision 2030 Plan.
- The existing ratio of population to doctors is 2.7x the target set in the GRZ Vision 2030 Plan.
- The current clinical health workforce of the six main cadres[16] of 13,574 is 66.6% of the "optimal number of health workers," as determined during the 2008 Workforce Optimization analysis.
- The existing clinical health workforce of 16,256 is 41.1% of the MoH Recommended Establishment of 39,360.[17]

Due to this shortage, the accessibility and quality of Zambia's health service provision has been compromised. Whilst the shortage of staff is a national phenomenon, the situation is particularly dire in the rural and remote areas. Further, Zambia still needs to determine the optimal staffing requirements for adequate health service delivery.

5.1.2. Interventions

To achieve this objective, the health sector will pursue the following strategies for the attainment of the objectives set out in the NHRH SP 2011-2015:

Intervention A.1 Increase the number of the health workforce.

While recognising the expansion in the private sector, the public sector will continue to advocate for an increased share of the budget to meet the human resource needs of the health sector. While it is recognized that an expansion of the general workforce is likely and welcome, the result at present is related to the number of funded positions for the public sector. Over time, the introduction of more effective health workforce information systems will enable the sector to set expansion targets to meet the needs of the health workforce.

Intervention A.2: Redefine staff posting and establishment based on need.

The MoH will develop a needs-based model to determine the number of health staff required at each health facility, providing data-based evidence to inform the funding and distribution of the health workforce. Further, the health workforce expansion will be harmonised with the expansion of health facility and training institution infrastructure.

[15] Sources: the health workforce figure was taken from Table 2; the 2010 population figure was taken from the 2010 Census of Population and Housing, Preliminary Population Figures Report; and the WHO recommended staff level was taken from the the WHO World Health Report 2006, pg 11, and was specified for these four cadres only.

[16] The six key cadres, as defined by the 2008 Workforce Optimization Analysis, are doctors, clinical officers and medical licentiates, midwives, nurses, laboratory staff, and pharmacy staff.

[17] Table 2 of this Plan.

Intervention A.3: Distribute human resources equitably and ensure appropriate skills mix for achieving the MDGs.

Considerable imbalances in the distribution of health service providers exist between urban and rural areas, to the disadvantage of rural and remote districts and provinces. A concerted effort needs to be made to improve the working conditions and incentives for health workers in the rural and remote areas of the country.

Intervention A.4: Implement and enforce bonding scheme for all pre- and in-service trainees.

Work with key stakeholders to ensure a rights-centred policy document to enforce compulsory service and ensure that a documentation system with enforcement guidelines is in place to manage the bonding scheme.

Intervention A.5: Improve conditions of service to attract and promote retention of health service providers in rural and remote facilities.

The MoH will continue to actively participate in committees working to improve remuneration packages and working conditions to promote the importance of health workers and the services they deliver.

5.1.3. Targets

Scenario 1: Based on Full Funding for Approved Establishment

The table below indicates the requirement of the public sector for health professionals per cadre, assuming funds were available to fill the approved establishment. It should be noted that these numbers are indicative and should be reviewed and revised on an annual basis, and will be based on the findings of an upcoming study geared to assess Zambia's optimal workforce requirements. This assessment will make use of the WHO tool for workload indicators of staffing need (WISN), and will be undertaken by the MoH in 2012.

Table 9: Proposed targets for funded establishment of health workforce positions, 2011-2015

SN	Cadre	Approved Establishment	Head Count August 2011	Gap	Cost to fill the Gap (ZMK million)
1	Clinical officers	4,600	1,461	3,139	76,765
2	Dentistry	833	263	570	18,439
3	Doctors	2,891	1,076	1,815	226,738
4	Nutrition	309	159	150	2,273
5	Biomedical Sciences	1,960	637	1,323	34,482
6	Pharmacy	997	743	254	1,821
7	Physiotherapy	400	258	142	2,260
8	Radiography	448	268	180	3,155
9	Midwives	5,900	2,745	3,155	96,744
10	Nurses	16,732	7,795	8,937	230,600
11	Environmental Health	1,840	1,293	547	10,763
12	Other Health workers	5,865	1,683	4,182	287,263
13	Administrative	13,846	13,581	265	8,726
Total		**56,621**	**31,962**	**24,659**	**1,000,029**

Scenario 2: Based on Medium-Term Economic Framework Financing Projections

The current Midterm Economic Framework 2011-2013 allocates just above ZMK 200 billion over two years to finance an increase of the health workforce. Assuming that this increase can be maintained over the following two years, close to ZMK 360 billion will be available for health workforce expansion per year over the 2011-2015 period. This would allow for the expansion of the health workforce with 9,675 additional health staff over the next five years. The table below presents a tentative staff-category distribution.

Table 10: Cumulative new positions within the MTEF financial space

Cadre	2011	2012	2013	2014	2015
Clinical officers	87	216	342	468	594
Dentistry	17	42	67	91	116
Doctors	68	169	267	366	464
Nutrition	2	5	8	11	14
Lab sciences	39	97	153	210	266
Pharmacy	55	136	216	296	376
Physiotherapy	14	35	55	75	96
Radiography	7	17	27	38	48
Midwife	126	312	495	678	860
Nurses	706	1,750	2,773	3,797	4,820
Environmental Health	82	203	322	441	560
Other clinical	63	156	247	339	430
Total clinical	**1,266**	**3,138**	**4,973**	**6,809**	**8,644**
Administration	487	625	761	896	1,032
Overall Total	**1,753**	**3,763**	**5,734**	**7,705**	**9,675**
Net recruitment budget (ZMK billion)	**52.7**	**130.5**	**206.8**	**283.2**	**359.5**

Note: Depending on the findings of evaluation of the CHA pilot, additional targets for CHAs may need to be added to the above establishment expansion targets.

5.1.4. Critical success factors

The following issue is critical for achieving the objective and the targets, but is not fully controlled by MoH:

Financing. Without adequate financial resources to both expand the Funded Establishment and the capacity of training institutions nationwide, the targets outlined in this Plan cannot be achieved.

5.2. OBJECTIVE B: INCREASE TRAINING OUTPUTS HARMONIZED TO THE SECTOR'S NEEDS

5.2.1. Rationale

Despite a substantial increase in the number of graduates during the 2005 to 2010 period, a large gap still exists between what is required and what is available. This is specifically notable for Nurses and Midwives, Medical Doctors, Medical Licentiates, Clinical Officers, Laboratory staff, and Pharmacy staff. These needs have been identified through the application of 2008 Workforce Optimization Model (WOM), which indicated that the current workforce has a 44.4% vacancy rate as compared to the optimal staffing level. To close this gap, the training capacity of the various health training institutions needs to be expanded.

Furthermore, the training capacity of health sector should be updated on an annual basis to reflect the required skills for effective and efficient service delivery. Training programs should continually be adjusted to meet future health challenges. New and specialist programs should be created in clinical and basic sciences. All programmes for the training of health professionals need to include education in leadership and management.

5.2.2. Interventions

To achieve this objective, the health sector will pursue the following interventions:

Intervention B.1: Strengthen the coordination among the key actors in training of health workers.

A National Health Training Coordinating Committee (HTCC) is in place, with representation by key stakeholders, and will be responsible for the coordination of training in accordance to the revised Terms of Reference of the HTCC.

Intervention B.2: Expand the national training capacity for production of HRH.

To accommodate the planned expansion of the health workforce, the training capacity needs to be increased. For this, the expansion of the public sector must be in-line with the revised and updated National Training Operational Plan to reflect the current infrastructure needs and other related investments that should be made. Investments in new training institutions should also be considered, such as expanding training for medical officers, clinical officers and registered nurses.

Intervention B.3: Improve access to pre-service programmes for candidates/ students from rural and remote areas.

There is evidence that students from rural and remote areas are more likely to remain in rural and remote regions. However, the majority of the TIs offering programmes for health practitioners are located along the line of rail or in urban areas, which has hampered potential students from rural areas from applying to the health programmes. . Programs that promote rural and remote students, such as positive discrimination practices and quota systems, should be explored and implemented.

In addition, the Community Health Assistant training programme should be supported, as it recruits students from rural and remote communities to serve within their community. Depending on the findings of the evaluation of the CHA pilot, CHA training facilities will need to be expanded to reach the MoH's vision of 5,000 CHAs.

Intervention B.4: Review existing training programmes and certification of health workforce and develop new ones to respond to the sector's needs.

The MoH should work with the regulatory bodies and relevant training institutions to develop new and innovative training programs that respond to the sector's needs. For example, in response to the need for additional anaesthesia and psychiatric specialists, the UNZA School of Medicine introduced degree programmes providing a Master of Medicine in Psychiatry and Anaesthesia. The sector also needs to prepare for the increasing number of patients suffering from non-communicable diseases. Training programmes must prepare students for the new health needs of communities. New masters programmes will, therefore, need to be developed as well as upgrading some training institutions into colleges or universities.

Further details on the implementation of these strategies are presented in the Results Framework and Costed Activity Plan that appears as Annex A.

5.2.3. Targets

The interventions mentioned above will facilitate the achievement of the annual enrolment targets, as defined in the table below. The targets are subject to yearly reviews through MoH annual action plans.

Table 11: Proposed target for annual enrolments of clinical cadres

Projected Annual Enrolments							
No	**Programme**	**2011**	**2012**	**2013**	**2014**	**2015**	**Total**
1	Clinical Officer General	296	230	400	400	400	**1,726**
2	Clinical Officer Psychiatry	14	20	20	20	20	**94**
3	Environmental Health Technologist	212	150	150	150	150	**812**
4	Registered Mental Health Nurse	27	30	30	30	30	**147**
5	Medical Licentiate	25	54	64	64	64	**271**
6	Ophthalmic Clinical Officer	4	10	10	10	10	**44**
7	Clinical Officer Anaesthetist	21	80	80	80	80	**341**
8	Ophthalmic Nurse	8	10	10	10	10	**48**
9	Optometry Technologist	13	15	15	15	15	**73**
10	Counselor	94	50	50	50	50	**294**
11	Medical Laboratory Technologist	103	50	50	50	50	**303**
12	Pharmacy Technologist	168	50	100	50	50	**418**
13	Physiotherapy Technologist	79	50	50	50	50	**279**
14	Radiography Technologist	103	50	50	50	50	**303**
15	Dental Therapist	82	30	82	30	82	**306**
16	BSc. Nursing	70	70	70	70	70	**350**
17	Registered Nurse	571	685	700	700	715	**3,371**
18	Registered Midwives	177	263	280	280	280	**1,280**
19	Operating Theatre Nurses	33	75	75	75	75	**333**
20	Enrolled Nurses	561	533	535	540	550	**2,719**
21	Enrolled Midwives	142	170	205	205	205	**927**
22	HIV Nurse Prescriber	29	35	35	35	35	**169**
23	Certified Midwives	101	110	110	110	110	**541**
24	Critical Care Nurses	0	30	40	40	40	**150**
25	Medical Doctors	160	200	200	200	200	**960**
26	Physiotherapists	24	24	24	24	24	**120**
27	Pharmacists	52	52	52	52	52	**260**
28	Environmental Health Sciences	16	16	16	16	16	**80**
29	Biomedical Sciences	51	51	51	51	51	**255**
30	Internal Medicine	8	8	8	8	8	**40**
31	Obstetrics and Gynaecology	7	7	7	7	7	**35**
32	Psychiatry	3	3	3	3	3	**15**
33	Orthopaedics	6	6	6	6	6	**30**
34	Urology	0	0	0	0	0	**0**
35	Paediatrics and Child Health	10	10	10	10	10	**50**
36	HIV Medicine	7	7	7	7	7	**35**
37	Surgery	15	15	15	15	15	**75**
38	Anesthesia	8	8	8	8	8	**40**
39	Nursing	9	9	9	9	9	**45**

Projected Annual Enrolments							
No	**Programme**	**2011**	**2012**	**2013**	**2014**	**2015**	**Total**
40	Ophthalmology	2	2	2	2	2	**10**
41	Pharmacy	22	22	22	22	22	**110**
42	Pathology	19	19	19	19	19	**95**
43	Microbiology	7	7	7	7	7	**35**
44	Parasitology	5	5	5	5	5	**25**
45	Public Health	0	30	30	30	30	**120**
46	Nutritionist	40	40	40	40	40	**200**
Total		**3,404**	**3,391**	**3,752**	**3,655**	**3,732**	**17,934**

Source: UNZA and other training institutions

Note: Depending on the findings of evaluation of the CHA pilot, additional targets for CHAs may need to be added to the above projected training targets.

5.2.4. Critical success factors

The following issues are critical for achieving the above objective and targets.

1. **Financing:** without resources to complete the listed interventions, the objective and targets may not be achieved.

2. **Availability of teaching staff:** without sufficient supply of adequately trained teaching staff, quality and scale-up of training cannot be guaranteed.

3. **Support from government institutions and other stakeholders:** without collaboration with relevant government institutions and stakeholders, successful implementation of interventions cannot be assured.

5.3. OBJECTIVE C: IMPROVED PERFORMANCE AND PRODUCTIVITY OF HRH

5.3.1. Rationale

Improving health workforce performance and productivity requires multifaceted interventions.

An enabling working and learning environment with the right tools is crucial for increasing motivation, performance and utilization of the health workforce. Among others, these include the provision of water, sanitation, electricity, medical equipment, drugs, and surgical and other supplies.

For improved performance and productivity there is need for continuous professional development.

Management of absence from work due to illness is critical to ensuring adequate health service delivery. There is need to support prevention, treatment and care for communicable and non-communicable diseases.

Further, strengthening the management and leadership skills of managers to ensure adequate supervision of HCWs will facilitate efficient and effective utilisation of resources.
Finally, the competence of the existing health workforce will require continued maintenance through a combined set of interventions that aim at developing and maintaining its competence and capacity to ensure appropriate delivery of services.

5.3.2. Interventions

To achieve the objective, the sector will pursue the following strategies:

Intervention C.1: Strengthen the leadership and management capacities of managers and supervisors at all levels.

The MoH will implement a comprehensive leadership and management (L&M) package, designed to strengthen systems and structures at all levels, including supervision and governance training.

Intervention C.2: Provide enabling and supportive learning and working environments for all health workforce in all health institutions.

Initiatives focused on establishing and maintaining conducive learning and working environments at all health facilities will be supported by the MoH through ensuring the provision of medical and surgical equipment supplies, utility vehicles, housing, water and electricity for health facilities and staff housing. The sector will explore and implement initiatives to improve health and safety in the work environment.

Intervention C.3: Strengthen performance management for improved productivity and quality of work of health workforce.

Consistency in monitoring of staff behaviours will be key to the success of this intervention. The MoH will ensure that PMP and job descriptions are disseminated at all levels. In addition to this, measures for regular coaching, mentorship, and in-service training will be put in place. Initiatives for rewarding performance, such as performance-based incentives, will be encouraged at all levels. The dissemination and sensitisation, enforcement of MoH's "Code of Ethics and Conduct, the "Disciplinary Code," and "Terms and Conditions of Service" will be undertaken to improve productivity in performance at all levels. The performance of the health care workforce will be monitored through the implementation of the PMP at various levels as well as PAs, JARs and TWGs.

Intervention C.4: Increase number of service-oriented and client-centred facilities.

To avoid and minimise the perceived or alleged negative attitudes and poor service delivery by staff members at health facilities, the MoH will give high priority to client and employee satisfaction. To assess reasons for unmet client needs, elaborate on ways to improve customer care, and assess job satisfaction among the health workforce, research will be conducted to design and implement client and job satisfaction programmes.

Intervention C.5: Strengthen planning of In-service Training according to organisational needs.

In-service training[18] is necessary to ensure that staff are adequately trained, have up-to-date competencies for providing quality services and are prepared for career progression. A computerized Training Information Management System (TIMS) for the sector will be developed to ensure a more coordinated and professional approach to in-service training. To meet the sector needs, the management of scholarship programmes needs to be strengthened at all levels.

[18] In-service training means training and development organized and conducted by a Ministry, Province or other Government Institution to upgrade the skills of exisiting health workers.

Further details on the implementation of these strategies are presented in the Results Framework and Costed Action Plan that appears in Annex A.

5.3.3. Targets

Due to the qualitative character and the complexity in achieving this objective, results will be more qualitative than quantitative and the measurable indicators are input- or process-oriented. The Results Framework in Annex A provides indicators in relation to the proposed interventions.

5.3.4. Critical success factors

The following issues are critical for achieving the objective and the targets:

1. **Dialogue with and support from the Public Service Management Division**: the MoH is an integral part of the Government of the Republic of Zambia and must, therefore, adhere to the overarching rules and regulations. Some of the strategies discussed above, however, may require adjustments in government policy, which is outside the jurisdiction of the MoH. Solutions must therefore be sought through dialogue and collaboration with PSMD

2. **Financing:** without financial resources to complete the listed interventions, the objective and targets may not be achieved.

3. **Collaboration with all stakeholders within the sector:** many of the interventions are multi-disciplinary and require cross-functional collaboration within the sector to be adequately implemented. It is crucial that planning and implementation is completed jointly and not regarded as the responsibility of the MoH alone.

5.4. OBJECTIVE D: STRENGTHEN SYSTEMS AND STRUCTURES TO SUPPORT HR EXPANSION AND PERFORMANCE

5.4.1. Rationale

As a consequence of restructuring in the MoH, a number of functions have been centralised. To make the systems and structures at various levels of the health sector responsive to the demands for effective and efficient service delivery, there is a need for strengthening planning and management systems at all levels. The absence of a comprehensive HRIS in the sector has, over the years, posed a challenge for evidence-based planning and decision making.

Apart from the Ministry of Health, the regulatory functions of the sector must be strong enough to set and enforce the standards required for both training of health workers and for the delivery of health services.

5.4.2. Interventions

To achieve the objective, the sector will pursue the following strategies:

Intervention D.1: Strengthen human resources planning, management and information systems.

The sector will strive to promote evidence-based planning and decision making. To achieve this, there is need for the sector to establish functional, comprehensive HRIS. It is critical to ensure that planning tools and guidelines reflect the priorities of the NHRH SP at all levels annually. There is also need to undertake an assessment of the workload at all levels in

order to establish the appropriate number of health workers required at different levels of care. To improve efficiency in the management of health workers, continuous capacity assessment and development of HR's at various levels is necessary.

Intervention D.2: Develop and implement a harmonised communication strategy.

There is a need to develop and implement an effective communication strategy with clear guidelines. This will alleviate frustration among stakeholders, health workers, and communities due to lack of information. The communication strategy will emphasize the need for conducting regular meetings at all levels, institutions and facilities with staff and with representatives of health unions and associations to share information, hear concerns, and develop strategies for working towards a common goal. Email communication should be encouraged, as it is a rapid means of written communication.

Intervention D.3: Strengthen functions and roles of regulatory bodies.

There is need to improve the capacity of regulatory bodies to ensure quality service delivery in the sector. Further, regulatory bodies are a reliable source of data on the activities in training and service delivery in both public and private institutions. They also have the mandate to ensure that standards are adhered to for each cadre.

Intervention D.4: Accelerate implementation of the national gender policy.

The MoH will adhere to the National Gender Policy to redress gender imbalances and attain gender equality in all aspects of the workplace environment, including health worker training, recruitment, deployment and promotion.

Further details on the implementation of these strategies are presented in the Results Framework and Costed Action Plan that appears in Annex A.

5.4.3. Critical success factors

The following issues are critical for achieving the objective:

1. **Delegation** of routine activities to lower levels of the MoH is necessary to allow the MoH headquarters to provide strategic vision, policy guidance, and oversight. The MoH headquarters must free itself from many of the less strategic activities that it is currently occupied with.

2. **Dialogue** with and support from the Public Services Management Division (PSMD). The MoH must adhere to the overarching government-wide rules and regulations. Therefore, some of the strategies discussed above may require dialogue and collaboration with PSMD to find appropriate solutions.

3. **Financing:** without adequate resources to complete the listed interventions, the objective and its targets may not be achieved.

6. IMPLEMENTATION AND MONITORING FRAMEWORK

6.1. COORDINATION STRUCTURES

The NHRH SP 2011-2015 will be implemented, monitored and coordinated through the existing health sector organisational and management structures, including the Health Sector Advisory Group (SAG), the MoH at central level, the PMOs, the DMOs, the Hospital Management Teams, the public and private-for-profit health training institutions, the regulatory bodies, and other stakeholders, including CHAZ, health NGOs, private-for-profit facilities, health unions and civil society.

The MoH, through the DHRA, assisted by the HRTWG, will be responsible for the overall coordination and monitoring of the NHRH SP 2011-2015. Additional mechanisms for consultation and supervision will be established as needed, e.g. experts' *ad hoc* technical working groups with input from relevant stakeholders.

The CPs will be requested to support the NHRH SP by aligning and synchronising their interventions with the MoH priorities and timelines, as specified in the NHRH SP 2011-2015. As a subset of the NHSP, it is expected that the implementation of the NHRH SP will fall within the scope of the Memorandum of Understandings signed between stakeholders and the government in regard to the implementation of the NHSP.

Many stakeholders are instrumental to achieving the objectives of the plan. A list of the key stakeholders is provided in Annex H.

6.2. CRITICAL SUCCESS FACTORS

Experiences in other countries have shown that four factors are instrumental for the successful and timely funding, implementation and monitoring of HRH strategic plans:

- **Sound leadership**: The HRTWG will be the coordinating body for the implementation and monitoring of this Plan, with the DHRA acting as the focal point, serving as secretariat to carry out the required routine coordination, communication and facilitation. To improve the capacity of the HRTWG, its ToR will be reviewed and membership adjusted to ensure stakeholders and senior officials from all relevant government institutions are present.

- **Strong partnerships**: To promote effective collaboration with its stakeholders, partners and beneficiaries, the MoH, will: (i) promote effective communication with stakeholders and beneficiaries in the implementation and monitoring of the NHRH SP 2011-2015, clearly outlining the division of labour and the targets to be met, and (ii) write and share annual action plans with partners, stakeholders and beneficiaries to promote accountability, transparency and collaboration.

- **Evidence-based and cost-indicative annual action plans**: to facilitate the financing, implementation, and monitoring of this Plan, the DHRA will develop cost-indicative Annual HRH Action Plans that reflect realistic targets based on a reliable baseline that are fully integrated within the MoH's general Annual Action Plans.

- **Sound and feasible M&E system using measurable indicators against an established baseline**. Please see Section 6.3 for additional information regarding the M&E structures for this Plan.

Based on these structures, the MoH believes it is well-positioned to successfully implement and monitor this Plan within the given targets and deadlines.

6.3. MONITORING FRAMEWORKS AND INDICATORS

6.3.1. M&E systems and structures:

A lesson learned from the previous NHRH SP is that there should not be a separate monitoring system or process for HR, but it should be properly integrated in the MoH general M&E system. Data for the specific indictors proposed for the NHRH SP 2011-2015 should be collected as part of the general M&E system. The following are important parts of the M&E system:

- **Performance Management Package system**: Training in the PMP will be cascaded to assess the performance of individual workers, using job descriptions and individual work plans.
- **Quarterly and annual narrative and financial progress reports:** these reports are required for the overall management of joint financing of the health sector. The DHRA will prepare quarterly reports concerning the implementation of the NHRH SP to be presented to the HRTWG.
- **Facility-based performance assessments:** This assessment is conducted twice a year using semi-structured questionnaires in all health facilities. The assessments follow a Total Quality Management (TQM) approach and are one of the monitoring instruments of the NHRH SP to improve planning and management of the health workforce.
- **Technical Supportive Supervision:** Visits to the sites addressing the weaknesses found in the facility-based performance assessments.
- **The Joint Annual Reviews:** The reviews aim to assess the progress made in implementing the Annual Action Plans, with an emphasis on key thematic areas. During the review, various stakeholders at all levels participate in the assessment. The JAR should follow-up on agreed indicators of the NHRH SP.
- **The Mid-Term Review (MTR) and final evaluation of the implementation of the NHRH SP 2011-2015 and annual action plans:** the implementation of the NHRH SP 2011-2015 will be assessed through a midterm review and a final evaluation.
- **Financial reporting:** financial management software (IFMIS) should be urgently put in place so that the MoH Annual Action Plans, including the NHRH SP, may be mapped against the budget (the Yellow Book). The system should enable the production of monthly, quarterly and annual financial reports on the implementation and expenditure for the NHRH SP.

6.3.2. Indicators

Defined indicators to measure MoH's success in implementing this Plan and monthly PMEC-reports generated by the HR Planning Unit in the DHRA will be evaluated. The Results Framework and Costed Action Plan in Annex A provide key indicators for the NHRH SP.

6.3.3. Reporting

Reporting on activities to achieve the objectives in the NHRH SP will be done using the routine information systems from the sector, both existing and those intended to be introduced as part of this plan's implementation. The DHRA will ensure that the reporting mechanisms will be appropriate to report on progress in plan implementation.

Reporting will be done quarterly to the MoH, who will brief the SAG on progress made through the HRTWG. The DHRA Planning Unit will amalgamate the Quarterly Reports.

These reports will highlight problem areas and suggest actions to be taken to resolve the problems.

Monthly reporting will follow the process below and feed into the quarterly reports:

- The HRIS Committee will set the parameters of the monthly reports to be generated from the Payroll Management and Establishment Control (PMEC) system
- The DHRA Planning Unit will generate the required reports on a monthly basis and present the information to the Director HRA and devise ways to resolve some of the pertinent issues
- The Director of the DHRA will present the information to the Senior Management Meeting, when required
- The HRIS reports will be provided to the members of the Human Resources Technical Working Group (HRTWG)
- The HRTWG Task Group leaders will take the information to their relevant task groups for discussion, solutions and recommendations which are to be made at the main HRTWG
- The Directorate HRA will provide updates on progress at the Human Resources Technical Working Group monthly meetings. In addition, regular monthly and quarterly reports on the NHRH SP indicators, referred to above, will be provided to senior management.

7. COSTING OF NHRH SP 2011-2015

7.1. RESOURCE ENVELOPE

The Zambian government recognises health as one of the sectors that greatly contributes to the well-being of the nation and, therefore, remains committed to providing quality health services to all of its citizens. In this regard, the government has gradually increased its share in the national budget towards the attainment of the Abuja target of 15 percent. Growth in overall national budget, specifically the health budget, has in part been due to a very impressive economic national growth rate, averaging 6 percent in the past decade.

During 2011-2015, a total of ZMK 132,200,000 million is estimated to be available for the implementation of the SNDP. Most Government resources are already committed to personal emoluments and other constitutional expenditures, but a total of 48,004 billion is available for the implementation of the programmes of the Sixth National Development Plan (SNDP), of which 7,111,000 million is earmarked for development programmes of the health sector, including human resources for health, as shown in the table below. These resources correspond to the non-personal emoluments in the MoH budget and do not include grants from CPs.

Table 12: Allocated resources to the MoH in the SNDP (in mn ZMK)

	2011	2012	2013	2014	2015	Total
Health sector	802,000	1,288,000	1,418,000	1,755,000	1,848,000	**7,111,000**
HRH	125,100	200,700	229,400	273,600	288,100	**1,116,900**

Source: GRZ 2010a

The SNDP will be implemented though the Medium Term Expenditure Framework (MTEF) and associated annual activity based budgets. In 2011-2013, the Government states its intention to direct more financial resources to the health sector, especially in the wake of the reduced sector support by a number of the Cooperating Partners. For this period, the allocation to the sector is expected to increase by 58.4% compared to the 2008-2010 MTEF. This will compensate for the reduced support from CPs and ensure that that the sector maintains a funding level of at least 10.5% of total Government expenditure.

Table 13: MTEF projections for the MoH, 2011-2013 (in mn ZMK)

	Budget 2010	Projection 2011	Projection 2012	Projection 2013
Personal emoluments	669,191	956,149	1,134,791	1,327,624
Other programs	702,501	802,443	1,287,450	1,471,658
Total MoH	**1,371,692**	**1,758,592**	**2,422,241**	**2,799,282**
Net Increase		*386,900*	*663,649*	*377,041*
Percent Increase		*28.2%*	*37.7%*	*15.6%*

Source: MTEF 2011-2013

The allocation in the MTEF for 2011-2013 will continue to address challenges of the double disease burden, inadequate clinical staff and equipment and the erratic supply of essential drugs. The MTEF 2011-2013 is also providing financial space for the recruitment of 1,700 health workers per year 2011-2013.

Actual funds received by the entire health sector from CPs, 2006 – 2009 averaged 265,000 million ZMK per year.[19] Based on the estimates in the Sixth National Development Plan and the projected allocation of funds to the health sector, and from within the health sector to the development of HRH, the following estimates can be made regarding the available resources for the NHRH SP 2011 – 2015 (see table below).

Table 14: Estimated resource envelop for HRH Plan, 2011-2015 (in mn ZMK)

	2011	2012	2013	2014	2015	Total
SNDP funds for HRH	125,000	201,000	229,000	274,000	288,000	1,117,000
CP contributions	50,000	52,500	55,125	57,881	60,775	276,282
Total	**175,000**	**253,500**	**284,125**	**331,881**	**348,775**	**1,393,282**

Source: Costing data from Annex A.

After the alleged misuse of funds in 2009, a number of major CPs have reduced or suspended their funding to the health sector. There is thus a high level of uncertainty when attempting to estimate the contributions from CPs in the coming years. . In Table 17, it is estimated that CPs will return to earlier levels of contribution at around 250,000 million ZMK annually to the health sector in 2012 , that about 30% of this will be allocated to the NHRH SP 2011-2015, and that the funds will increase by approximately 5% annually.

Zambia has traditionally had four main sources of financing for health. These include Government funding, donor funding, household contributions, and “other,” which are mainly private sector (employer) contributions to the health sector. Future funding from CPs will depend on the successful implementation of the MoH Governance Management and

[19] CSO *et al.,* 2009.

Capacity Strengthening Plan. The NHRH SP highlights areas of the HRH sector that require support from the CPs.

7.2. COSTS FOR THE NHRH SP 2011-2015

The estimated costs (excluding the baseline costs estimated to be around USD 300 million for salaries and other recurrent costs) for the NHRH SP 2011-2015 translate to K1.56 trillion, only slightly above the estimated resource envelope of K1.39 trillion, with the following breakdown by objective:

Table 15: Summary of costs by HRH SP objective

S/N	Objective/Intervention	Amount (ZMK Mn)	Amount (USD 000)
A	**Increase number of employed and equitably distributed health workforce with appropriate skills mix**	**1,348,947**	**269,789**
1	Increase the number of the health workforce	1,032,700	206,540
2	Redefine staff posting and establishment based on need	200	40
3	Distribute human resources equitably and ensure appropriate skills mix for achieving the MDGs	80,023	16,005
4	Implement and enforce bonding scheme for all pre- and in-service trainees	789	158
5	Improve conditions of service to attract and promote retention of health service providers in rural and remote facilities	235,235	47,047
B	**Increase training outputs harmonized to the sector's needs**	**182,571**	**36,514**
1	Strengthen the coordination among the key actors in training of health workers	240	48
2	Expand the national training capacity for the production of HRH	171,783	34,357
3	Improve access to pre-service programmes for candidates/students from rural and remote areas	83	17
4	Review existing training programmes and certification of health workforce and develop new ones to respond to the sector's needs	10,465	2,093
C	**Improved performance and productivity of HRH**	**24,256**	**4,851**
1	Strengthen the leadership and management capacities of managers and supervisor at all levels	7,200	1,440
2	Provide enabling and sportive learning and working environment for all health workforce in all health institutions	1,835	367
3	Strengthen performance management for improved productivity and quality of work of the health workforce	10,931	2,186
4	Increase number of service-oriented and client-centred facilities	4,290	858 -
5	Strengthen planning of in-service training according to organizational needs	0	-
D	**Strengthen systems and structures to support HR expansion and performance**	**6,889**	**1,378**
1	Strengthen human resources planning, management, and information systems	3,414	683 -
2	Develop and implement a harmonised communication strategy	150	30
3	Strengthen functions and roles of regulatory bodies	3,325	665
4	Accelerate implementation of the national gender policy	0	-
Grand Total		**1,562,663**	**312,533**

CP contributions for financing the plan are suggested to be as follows:

- **For objective A,** the Government has earmarked funds for the recruitment of 1,700 health workers per year within the medium term expenditure framework. CPs are expected to contribute approximately about 40% to this objective which translates to approximately **USD 107 million** for the strategic plan period.

- **For objective B,** CPs are assumed to contribute 35-40%, or **USD 13.7 million,** of estimated costs of implementing the revised National Training Operational Plan (NTOP 2011) (Result A.3). The difference amounting to **USD 22.8 million** is expected to come from GRZ

- **For objective C**, CPs are expected to contribute up to **USD 3 million** towards the financing of the L&M programme. One of the CPs, USAID, through ZISSP, has funds available for L&M training through a sub-contractor BRITE.

- **For objective D,** CPs are expected to contribute up to 50 percent towards the financing of the planning and management systems strengthening.

Total contributions from CPs towards the financing of the NHRH SP 2011-2015 would be about 100 million US dollars over the five years.

7.3. FINANCING OPTIONS

The NHRH SP 2011-2015 is within the estimated resource envelope, but if more resources become available for the second half of the plan period, it is suggested that the midterm review revisit the plan and propose amendments based on progress made and the situation at that time. Activities that can be added to the plan during the latter half of the plan period are:

- Increasing the funded establishment for clinical cadres,
- Increase the training capacity and diversify training institutions
- Increasing the budget for scholarships,
- Building more staff houses and other improvements of staff conditions (DP&P)

8. ANNEX A: RESULTS FRAMEWORK AND COSTED ACTIVITY PLAN

8.1. OBJECTIVE A: INCREASED NUMBER OF EMPLOYED AND EQUITABLY DISTRIBUTED HEALTH WORKFORCE WITH APPROPRIATE SKILLS MIX

8.1.1. Results Framework

Result	Indicators	Baseline	Target by 2015	Source of Verification	Assumptions
Result A.1: Increased health workforce	# of filled clinical positions # of filled administrative positions	16,256 clinical positions 14,457 administrative (Table 2)	24,900 clinical positions 15,488 administrative (Table 10)	– PMEC	– Financing provided – Adequate output from training institutions
Result A.2: Redefine staff posting and establishment based on need	Staffing needs for different health facilities according to a revised health workforce optimization model Expansion of (i) health workers; (ii) health facilities; and (iii) medical equipment harmonised in the annual operational plans	Plans not aligned	Annual action plans are fully harmonised and priorities set jointly	– Minutes on file of joint bi-annual Directorates' planning and review meetings – NHSP 2011-2015 Annual Operational Plans.	– Effective collaboration between Directorates – SMART and cost and time-indicative plans in place – MoFNP and CPs committed to finance the implementation of plans – National Training Operational Plan is based on an assessment of the sector's needs – Funding is predictable and regular
Result A 3: HRH with appropriate skills mix equitably distributed	– % of rural HCs with at least 1 midwife, 1 clinical officer, 1 EHT – # of health facilities with a staffing structure that matches its workload	To be obtained 0 health facilities	All RHCs have clinical, reproductive and environmental health core competence 75% of health facilities have a rationalised staffing structure.	– PMEC – Annual District Health Profiles – Reviewed and adjusted WOM/WisN – Annual recruitment and (re)deployment schedules based on adjusted WOM	– Functional HRTWG with revised ToRs and membership – WOM reviewed and adjusted every one years – Effective collaboration with other Directorates – DHRA produces timely comprehensive narrative and financial annual reports

Result	Indicators	Baseline	Target by 2015	Source of Verification	Assumptions
Result A 4: Bonding system for pre- and in- service students in place	– Revised legal framework – % of students signed RRBS prior to entering health training programme – % of temporal registrations successfully changed to full registration after serving the RRBS for agreed period – % of full adherence to bonding scheme of in-service graduates	Only temporal registration for Medical Doctors - No RRBS Bonding scheme for in-service not enforced	RRBS fully implemented and posting based on a rationalised staffing structure	– Concept Paper with guidelines on RRBS – Revised GNC Act – PMEC	– Effective collaboration with other Directorates – Significant scaling up of training outputs of multiple training programmes – WOM reviewed, revised and consistently used for optimal RRBS recruitment and deployment of new graduates
Result A 5: Improved attraction and retention levels of health service providers in rural and remote facilities	– # of staff houses built / renovated near remote or rural HCs by MoH – # of staff houses built – using MoH design and standards – by private-for-profit sector for renting – % of clinical staff retained for at least 3 years in rural and remote facilities – % of competent retired HRH provided with contract to be working in remote or rural HCs – More sustainable retention scheme in use – Compulsory service policy signed and implemented	To be obtained	To be obtained	– DP&P's Infrastructure Development Plan – PMEC – Annual District Health Profiles – DMO's annual reports – DHRA annual reports – Revised ZHWRS	– Effective collaboration with other Directorates – Significant scaling up of training outputs – Adjusted WOM consistently used for optimal deployment of HRH – Retired professionals with scarce competences contracted to work on in D and C districts – Affordable ZHWRS in place to allow for expansion of selected clinical cadres working in facilities in D and C districts

8.1.2. Costed Indicative Activity Plan

Objective A: Increase number of employed and equitably distributed health workforce with a appropriate skills mix

	Intervention / Result	Resp.	Timeframe					Cost Items	Cost (ZMK mn)	Cost ($'000)
			2011	*2012*	*2013*	*2014*	*2015*			
A.1	**Expanded number of funded positions**								**1,032,700**	**206,540**
A.1.1	Increase the number of the health workforce	MoH/ MoFNP	*X*	*X*	*X*	*X*	*X*	Cost of salaries and benefits, average ZMK44 mn per health workers, scenario 2 with total 9675 additional health workers: Additional cost over 5 years	1,032,700	206,540
A.2	**Redefine staff posting and establishment based on need**								**200**	**40**
A.2.1	Expand the annual action plans to include (i) Expansion of Funded establishment (ii) finalized health infrastructure, and (iii) medical equipment.	MoH DPP/ DHRA, DHCC	*X*	*X*	*X*	*X*	*X*	External workshops, 2 x 2 days	200	40
A.2.2	Monitor the implementation through quarterly reports.	MoH Mgmt	*X*	*X*	*X*	*X*	*X*	No cost	0	0
A.3	**Distribute human resources equitably and ensure appropriate skills mix for achieving the MDGs**								**80,023**	**16,005**
A.3.1	Purchase the end-user license fees for the 'Talent management' module of the ERP HCM system	DHRA/ HRTWG/ PSMD/ MoFNP/ CPs	*X*					Purchase license and installation of system existing on the market, 3,500 USD per license x 120 users	21,000	4,200
A.3.2	Finalize negotiation with PSMD to provide expanded access to the PMEC within the MoH							No cost	0	0
A.3.3	Fund training - provided by PSMD – to all newly-appointed HR officers at all levels in using relevant modules of the SAP-ERP-HCM	DHRA/ PSMD/ CPs		*X*				4 external workshops, 3 days	1,066	213
A.3.4	Provide briefings to managers on use of PMEC and linkages with other databases	DHRA/ PSMD/ PMOs/ DMOs/Med Superintendents / HRO	*X*		*X*		*X*	10 internal workshops, 1.5 days	656	131.2
A.3.5	Conduct annual 4-day refresher courses for all HR Officers already trained in PMEC and provide training on expanded use of PMEC and linkages with other databases	DHRA/ PSMD/ DHRA/ HR Officers		*X*	*X*	*X*	*X*	5 external workshops, 4 days	2,633	527
A.3.6	Update PMEC monthly and submit regular reports to MoH	DHRA/ HR Officers		*X*	*X*	*X*	*X*	No cost		0

A.3.7	Conduct annual (independent) payroll audits and WOM audits	DHRA/ HR Officers / M&E Unit of DPP		X	X			Travel and per diem costs etc	593	118.6
A.3.8	Produce, distribute and use comprehensive HR reports, including staff returns	DHRA/ HR Officers		X	X	X	X	Producing report is regular work at no extra cost. Printing 500 copies x 50,000	25	5
A.3.9	Conduct research into the type and quality of services provided and workload at each level of the referral system	DHRA/ HRTWG/ Research Unit of DPHR/ CPs/ University/HCs	X	X			X	Procure 2 studies annually x 100 million	1,000	200
A.3.10	Conduct research into unmet need at community level and fund this activity	DHRA/ HRTWG/ Research Unit of DPHR/ University / Neighborhood Health Committees / Civil Society/ communities/CPs	X	X			X	Procure 2 studies annually x 100 million	1,000	200
A.3.11	Conduct research to assess which activities could/ should be task-shifted and what training and supportive supervision would /should be required	DHRA/ HRTWG's Task Group 8/ DPHR/ Research Unit of the DPHR/ University /facilities at all levels/regulatory bodies/ training institutions		X				Procure 2 studies annually x 100 million	1,000	200
A.3.12	Review/adjust the Establishment, using findings from reports above	DHRA/ PSMD/ CHAI			X		X	External workshop: Audiovisuals, Stationery, Transport/Fuel, Secretarial, Photocopying, Consultancy, Venue, Lunch/teas, 1 workshop x 2 days, annually	150	30
A.3.13	Advocate for approval of a needs-based establishment, including increased # of funded positions and increment of annual 'net recruitment budget' from Treasury	DHRA/ Senior management/ HRTWG/ MoFNP/ Cabinet Office	X	X	X	X	X	Internal work, no cost	0	0
A.3.14	Review and adjust the WOM, using findings from previous activities	DPHA/ CHAI/ DPP	X	X			X	Local consultant, 4 weeks	100	20
A.3.15	Use revised WOM for optimal recruitment and (re)deployment, bi-annual recruitment and (re)deployment schedules, including requirements for foreign trained professionals with scarce skills	DHRA/ regulatory bodies/ Committee at SoM responsible for screening foreign applications			X	X	X	External workshop: Audiovisuals, Stationery, Transport/Fuel, Secretarial, Photocopying, Consultancy, Venue, Lunch/teas, 2 workshops x 1.5 days, annually	300	60
A.3.16	Recruit and redistribute HRH in line with agreed schedule as defined in B.2.14	DHRA/ PSMD/ PMOs /DMOs/ HR Officers			X	X	X	Recruitment cost, 5 million per recruitment	25,500	5,100
A.3.17	Budget for and provide reallocation allowances in line with GRZ benefits for redistributed HRH	DHRA/ PMOs/ DMOs	X	X	X	X	X	Reallocation allowances, 25 million per person x 1000	25,000	5,000

A.4	**Implement and enforce bonding scheme for all pre- and in-service trainees**								**789**	**157.8**
A.4.1	Investigate the different types of bonding schemes, including the proposed RRBS and RRCSS, write concept paper and present to the MDD and Unions	DHRA/ HRTWG/ Research Unit of the DPHR/ MDD/ Health Unions/ Regulatory bodies/ training institutions	*X*	*X*				Internal work, no cost		0
A.4.2	Develop policy and legal documents in a consultative process involving all relevant stakeholders			*X*				Local consultant to develop the campaign and material, 2 weeks, fees and material	33	6.6
A.4.3	Implement the designed bonding scheme				*X*	*X*		10 internal workshops, 1.5 days	656	131.2
A.4.4	Carry out a formative evaluation of the effects of the bonding scheme and adjust according to results						*X*	consultant	100	20
A.5	**Improve conditions of service to attract and promote retention of health service providers in rural and remote facilities**								**235,235**	**47,047**
A.5.1	Advocate for improved allowances and provide free 'high cost' medical scheme to public sector HRH	DHRA/ HRTWG/ Senior management/ MoFNP	*X*	*X*				In relation to social health insurance		0
A.5.2	Advocate for infrastructure development in health facilities and for newly built and /or renovated staff houses near rural and remote HCs	DHRA/ DPP/PMOs / DMOs/ CPs		*X*	*X*	*X*	*X*	Construction of 500 houses x 90 million (DPP budget)	45,000	9,000
A.5.3	Conduct a research study to assess GRZ's hardship and retention allowances/ schemes from other sectors and review their impact	DHRA/ Research Unit of DPHR/		*X*				Cost of study	100	20
A.5.4	Review the ZHWRS, identify funding mechanisms to promote its sustainability of attracting and retaining clinical cadres	DHRA/ Research Unit of the DPHR		*X*				External workshops, 2 x 2 days	60	12
A.5.5	Implement a multi-media campaign to improve attraction to and retention of working in rural and remote facilities	DHRA/ HRTWG/ CPs/ regulatory bodies/ media firms		*X*	*X*			Local consultant to develop the campaign and material, 2 weeks, fees and material	25	5
A.5.6	Establish an effective system for contracting and deploying qualified, competent and committed HRH with scarce skills	DHRA/ HRTWG/ Regulatory bodies/ PMOs and DMOs	*X*	*X*	*X*	*X*	*X*	Local consultant 6 weeks	50	10

A.5.7	Pay allowances to HRH participating in the ZHWRS	DHRA	*X*	*X*	*X*	*X*	*X*	Target 1,350 health workers. 270 doctors with annual gross benefits of ZMK 56,000,000 per doctor including housing amount and 1,080 other clinical staff with annual gross benefits of ZMK 19,200,000 per clinical staff. Calculations also include 9 months extra salary to be received after fulfillment of the contract, ZMK 42,000,000 per doctor and ZMK 14,400,000 per other staff	190,000	38,000
Subtotal A									**1,348,947**	**269,789**

8.2. OBJECTIVE B: INCREASE TRAINING OUTPUTS HARMONIZED TO THE SECTOR'S NEEDS

8.2.1. Results Framework

Result	Indicators	Baseline	Target by 2015	Source of Verification	Assumptions
Result B1: Effective coordination between the key actors in training of HRH	National Health Training Coordination Committee (HTCC) meetings Joint planning	To be obtained	Functional HTCC in place National Training operational plan developed.	ToR, minutes .,Plan document.	- Interest by the key actors to collaborate
Result B:2: Training programmes and certification of HRH reviewed and new ones developed in response to sector's needs and to facilitate career progression	# of programme reviewed # % of training programmes for clinical cadres that include non-clinical subjects, including leadership, management, M&E, HMIS and reporting components # of new progression programmes developed for programmes with no clearly outlined progression	To be obtained	All existing programmes evaluated by end 2013 All curricula for training of clinical cadres include leadership, management and M&E modules All programmes with clear and cost effective progression paths	– Reports – Revised curricula – Approval of programme/curriculum by regulatory bodies – Curricula – Programme career progression structures	– Capacity at the MoH to conduct/ spearhead the activities – Capacity at the TIs and regulatory bodies to participate in the activities – CPs supporting the activities (CHAI, MEPI, NEPI, DfiD, USAID, Strengthening training and education of health workers etc.) – TIs and Regulatory bodies engaged in redefining progression alternatives

Result	Indicators	Baseline	Target by 2015	Source of Verification	Assumptions
Result B.3: Expanded national capacity for production of HRH	# of graduates/enrolments # of TIs meeting the required standards Approved updated NTOP % of students from rural and remote areas	2,981 Enrolments and 2,311 Graduated Annually. See Annexes B and C for # per cadre	3626 enrolments 3200 graduations See training output targets in Table in main plan	– Registers/ – Records at regulatory bodies. – MoH graduates tracking tool – Assessment reports/Records by regulatory bodies – Plan document – – MoH Annual Review Report – Records of students accepted	– The MoH investment plan is facilitating implementation of the NTOP 2011 and investments in new TIs – Capacity available at the MoH to conduct/ spearhead the activities – CPs willing to support the activities (CHAI, MEPI, NEPI, DfID, USAID) Strengthening training and education of health workers etc.) – TIs and regulatory bodies open-minded to innovation and revision
Result B.4: Improved access to HRH training programmes (pre-service) for students from rural and remote areas	– GNC Act revised and approved to allow for temporal registration for Nurses before December 31, 2012 – % of newly graduates for each cadre deployed in rural and remote HCs with temporal registration – % of temporal registrations successfully changed to full registration after serving the RRBS for agreed	To be obtained	Minimum of 30 % of students accepted on HRH training programmes are from rural and remote areas RRBS implemented from 1st of January 2012 onwards for all new students in clinical professionals	– Concept Paper with guidelines on RRBS – Revised GNC Act in place – Health Councils Data bases – Health training institutions' annual reports – District annual reports – DHRA annual reports – PMEC	– Effective collaboration with other Directorates – Significant scaling up of training outputs of multiple training programmes – WOM reviewed, revised and consistently used for optimal RRBS recruitment and deployment of new graduates

8.2.2. Costed Indicative Activity Plan

Objective B: Increase training outputs harmonized to the sector's needs

Intervention / Result		Resp.	Timeframe					Cost Items	Cost (ZMK mn)	Cost ($'000)
			2011	*2012*	*2013*	*2014*	*2015*			
B. 1	**Strengthen the coordination among the key actors in training of health workers**								**240**	**48**

B.1.1	Establish a National Health Training Coordinating Committee (HTCC)	HRH committee	*X*					Internal work, no cost	0	0
B.1.2	Strengthen the link between the MoH and private TIs for training of HRH by: a) Create a forum , and b) Establish MoUs with private Ties	Private TIs		*X*	*X*	*X*	*X*	Internal work, no cost	0	0
B.1.3	Review and update to year 2015 the NTOP 2008	DHRA, DPP, CHAI, HRTWG	*X*					Local consultant 12 weeks. Travel costs, consultant and 2 HR officers from MOH, 3 travels for regional verification meetings	240	48
B.2	**Expand the national training capacity for production of HRH**								**171,783**	**34,357**
B.2.1	Implement and monitor the revised and updated NTOP 2011	DPP, CHAI, CPs, HRTWG	*X*	*X*	*X*	*X*	*X*	HTCC meetings coordinating, internal workshop 2 x 1 day annually. Additional 360 staff , Recurrent costs	33	6.6
B.2.2	Establish a new TI for training of Medical Doctors and Dental Surgeons (Ndola School of Medicine)	DPP, CBU, NCH, HPCZ	*X*					New infrastructure and equipment for capacity of 1000 students Salaries and other recurrent costs	20,000	4,000
B.2.3	Establish training sites for Clinical Officers in two additional provinces,	Chainama College			*X*	*X*	*X*	New infrastructure and equipment for 2 schools, each with capacity of 100 graduates annually	24,000	4,800
B.2.4	Provide training of Registered Nursing in Western Province and North Western Province	Nursing Dep., GNC, PMOs				*X*	*X*	New infrastructure and equipment for 2 schools, each with capacity of 100 graduates annually. Salaries and other recurrent costs	27,700	5,540
B.2.5	Re-open Chitambo Nursing School for training of Enrolled Nurses	Nursing Dep, DHRA, DCC&DS, DTSS	*X*					Renovation of existing and some new infra structure for 100 graduate capacity. Salaries and other recurrent costs	16,000	3,200

B.2.7	Increase the use of non- traditional forms of training e.g. open and distance learning	CPs, NEPI, MEPI programmes, TIs abroad	*X*	*X*	*X*	*X*	*X*	Local consultant 6 weeks	50	10
B.2.8	Review and update the organizational structures of the public TIs	MoFNP	*X*	*X*	*X*			Internal work, no cost	0	0
B.2.9	Increase the # of trained Nursing and Midwifery tutors, Basic Science Lectures and Clinical Sciences Lectures	NEPI, MEPI, UNZA, MOE	*X*	*X*	*X*	*X*	*X*	150 staff (in addition to 360 staff included in NTOP)	84,000	16,800
B.2.10	Increase # of funded positions for Nursing and Midwifery Tutors, Basic Science lectures and clinical sciences Lectures and Clinical Instructors to respond to the increased # of students	MoE, MoFNP, UNZA	*X*	*X*	*X*	*X*	*X*	Internal work, no cost	0	0
B.2.11	Create positions for BSc Nurses and Midwives in health facilities to improve clinical instruction and quality of health services	MoH, MoFNP, PSMD		*X*	*X*	*X*	*X*	Internal work, no cost	0	0
B.3	**Improve access to pre-serve programmes for candidates / students from rural and remote areas**								**83**	**16.6**
B.3.1	Conduct a study to determine the current number of students from rural and remote areas accepted on training programmes for HRH		*X*					Local consultant 2 weeks	33	6.6
B.3.2	Explore options to actively favor enrolment of students from rural and remote districts to be accepted on training programmes for HRH.	MoE, Ties, HPCZ, GNC		*X*	*X*			Local consultant 6 weeks	50	10
B.4	**Review existing training programmes and certification of health workforce and develop new ones to respond to the sector's needs**								**10,465**	**2,093**

B.4.1	Review training programmes for HRH to determine how they: a) respond to the needs of the sector; b) correspond with positions in the establishment, and c) facilitate career progression	MOH HQ, TIs, GNC, HPCZ, CPs		*X*	*X*			Local consultant, 4 weeks. HTCC meetings coordinating	35	7
B.4.2	Develop and establish new programmes in line with sector needs including: clinical instructors, dental surgeons, medical masters degree, ML degree biomedical engineers etc		*X*	*X*	*X*	*X*	*X*	Local consultant, 4 weeks x 10 programs	329	65.8
B.4.3	Create new relevant diploma and degree training programmes to:	MoH, Colleges/ regulatory councils		*X*	*X*	*X*	*X*	Costs cannot be calculated, but a ceiling estimated HTCC meetings coordinating	10,000	2,000
B.4.4	Evaluate the CHAs training after the first year of implementation	MoH, HPCZ, CHAI, DfID		*X*				Local consultant, 4 weeks	35	7
B.4.5	Amend curricula for clinical cadres to include non-clinical subjects such as leadership and management, planning, M&E, HMIS, performance management and reporting	MoH, TIs, GNC, HPCZ, CPs		*X*	*X*			International consultant 4 weeks, fees, per diem and travel	66	13.2
Subtotal B									**182,571**	**36,514**

8.3. OBJECTIVE C: IMPROVED PERFORMANCE AND UTILIZATION OF HRH

8.3.1. Results Framework

Result	Indicators	Baseline	Target by 2015	Source of Verification	Assumptions
Result C.1: Supervisors and managers at all levels and institutions possess L&M capacities to assure a professional, service-oriented, client-centered and ethical workforce	– % of planned supervisors and managers participated in the 2-year comprehensive L&M training/coaching and mentoring package – Criteria for annual awards for best-performing team in district, hospital, training institutions and HRH (per cadre?) developed and communicated to all HRH	No courses in L& M offered to target groups	360 supervisors and managers trained through L&M package approach	– National Annual Training Plan (NTOP 2011) – NTA report – Comprehensive training report – List of participants for each training session – Financial report – Criteria for annual awards visibly displaced in each facility	– Investment in training package in L&M yields intended results – DHRA lead by example – Managers and supervisors trained in L&M lead by example – Annual awards motivates HRH to become better performers
Result C.2: Enabling and supportive learning and working environments for all students and HRH in all facilities and institutions	– % of health facilities which are appropriately constructed, furnished and equipped – % of facilities in D and C districts with safe and adequate supply of water and electricity – % of facilities with adequate medical equipment according to set standards –	To be obtained	To be obtained	– Infrastructure inventory – PA tool includes these indicators – Bi-annual PA reports – Annual narrative and financial reports from DMOs, PMOs and DHRA	– MoH commitment to concentrate on increasing access to services in D and C districts – MoH committed to improve staffing levels and skills mix for facilities in D and C districts – MoH committed to promote continuous learning of HRH – Effective collaboration with other directorates – Plans with other directorates are fully harmonized – Construction firms ready to construct staff near facilities in D and C districts for renting to HRH

Result	Indicators	Baseline	Target by 2015	Source of Verification	Assumptions
Result C.3 ***All facilities and institutions have healthy and safe learning and working environments for students and HRH***	– % of facilities implementing the national programme on occupational health, safety, security, and harm and risk reduction in line with the National Health & Safety Act – % of facilities enforcing implementation of the MoH's HIV/AIDS workplace policy (2008) – % of districts with budget allocations for protective wear used for selected cadres – % of general staff meetings conducted	– National Health and Safety Act in place – MoH's HIV/AIDS workplace policy in place –	Each district and major facilities/institution has functional Committee in place	– PSMD booklets – PSC booklets – PA and JAR tools on HRH issues – Bi-annual PA reports – Annual narrative and financial reports from DMOs, PMOs and DHRA – Minutes of 'general staff meetings' on file	– Effective collaboration with other directorates – Plans with other directorates are fully harmonized
Result C.4: ***Productivity and quality of work of HRH significantly increased***	– Effective daily attendance registry in place – PMP implemented at all levels and facilities – Best performing facilities (teams) and HRH (per cadre) annually publicly and timely awarded	– No daily attendance registry in place – HC level services provided at higher levels of the health pyramid (ineffective referral System)	– 90% of all facilities have functional registers	– Daily attendance registries – PMP reports – HRH personal files – PA and JAR tools on HRH – Bi-annual PA reports – JAR reports – Research report – Annual HRH's performance appraisals – Annual narrative and financial reports from DMOs, PMOs and DHRA – Assessment reports to asses best performers based on set criteria	– Managers and supervisors lead by example – Funds available for rolling out PMP to all levels and facilities

Result	Indicators	Baseline	Target by 2015	Source of Verification	Assumptions
Result C.5: Number of service-oriented, client-centred and gender sensitive workforce significantly increased	– % of facilities with Code of Ethical Conduct in English and local language visibly exhibited – % of Neighbourhood Health Committees briefed on Code of Ethical Conduct and Disciplinary Code – % of districts, institutions and larger facilities with functional Grievance Handling Committees	– Codes in place but not enforced	To be obtained	– PA tool – Bi-annual PA reports – Annual narrative and financial reports from DMOs, PMOs and DHRA – Grievance Handling Committee reports – Research reports on client satisfaction and job satisfaction of HRH	– Managers and supervisors are conversant with Code of Ethics and Disciplinary Code and lead by example – Strong team spirit in facilities – HRH have confidence in Handling Committees have con
Result C.6: In-service training strengthened	– % increment to the MoH scholarship programme – % of provinces with decentralized in- service programme	– Budget figure 2011 – No guidelines in place – 0%	Doubling of the current MoH scholarship programme MoH training guidelines in place 100% of the provinces	– MoH Annual Action Plan – NTOP – Guidelines – Decisions by the MoH (PSMD)	– MoH Action Plan facilitate increased funding to scholarship programme – HRH/HRD capacity at PMO level available – Capacity at the MoH to spearhead and monitor the activities

8.3.2. Costed Indicative Activity Plan

Intervention / Result	Resp.	Timeframe					Cost Items	Cost (ZMK mn)	Cost ($'000)
		2011	*2012*	*2013*	*2014*	*2015*			
C.1 Strengthen the leadership and management capacities of managers and supervisors at all levels								**7,200**	**1,440**

C.1.1	Develop and implement a comprehensive modular L&M 'package' for a cohort of managers, supervisors and HR officers at all levels, institutions and major facilities	DHRA/ HRTWG/ NIPA/ regulatory bodies/ PSMD/ Procurement unit/ CPs/ ZISSP/ BRITE	*X*	*X*	*X*			International consultant(s) 12 weeks	200	40
C.1.2	Conduct bi-annual L&M induction programmes for newly recruited managers and supervisors at all levels and institutions,	DHRA/ HRTWG /CPs/ NIPA/ BRITE/ CPs	*X*	*X*	*X*	*X*	*X*	External workshops, 2 x 5	500	100
C.1.3	Conduct quarterly three-day meetings for all managers: PMOs, DMOs, In- Charges of facilities, and HR officers at PMO and DMO level to discuss L&M issues, provide ongoing coaching, mentoring and training	All Directorates/ PMOs/ DMOs/ medical superintendents / HR Officers/PSMD	*X*	*X*	*X*	*X*	*X*	External workshops with 200 participants, 4 times per year during 5 years, total of 20 meetings. Cost per meeting is 300 million	6,500	1,300
C.2	**Provide enabling and supportive learning and working environments for all health workforce in all health institutions**								**1,835**	**367**
C.2.1	Purchase and distribute lockable files, computers and printers for offices of HR Officers	DHRA/ PMOs/ DMOs/ Medical superintendents	*X*		*X*		*X*	Equipment for 120 offices, ZMK 7.5 per office	900	180
C.2.2	Provide paid study leave and financial support for attending national professional events/conventions	All Directorates/ Professional organizations/ PMOs/ DMOs	*X*	*X*	*X*	*X*	*X*	10 national convents annually. Cost covering travel, lodging, per diem and registration fees	485	97
C.2.3	Participate in PSC tours	DHRA/ PSMD/ HR Officers	*X*	*X*	*X*	*X*	*X*	Costs for transport, lodging and per diem for 2 persons	450	90
C.2.4	Offer internal attachments at the DHRA to HR Officers working at PMO, hospitals and DHOs for continuous learning opportunities	DHRA/ PMOs/ DMOs	*X*	*X*	*X*	*X*	*X*	No cost	0	0
C.2.5	Promote shared learning and synergy between MoH staff and TA's/CP's to increase relevance of Technical Support to sector needs	CPs/ all Directorates/ PMOs/ DMOs/ Medical Superintendents	*X*	*X*	*X*	*X*	*X*	No cost	0	0
C.3	**Strengthen performance management for improved productivity and quality of work of the health workforce**								**10,931**	**2,186**

C.3.1	Assess all learning and working environments on prevalence of safety measures	DPH&R/ PMOS/ DMOs/ Medical Superintendents	*X*	*X*	*X*	*X*	*X*	Local consultant 2 weeks for development of assessment guidelines, assessment by HR officers	35	7
C.3.2	Develop a national MoH policy on occupational health and safety in line with the Health and Safety Act	DPH&R	*X*	*X*				External workshops with consultant and stakeholders. 4 workshops x 2 days	200	40
C.3.3	Establish national programme on occupational health, safety, security, and harm and risk reduction at all levels and institutions into their annual action plans	DPH&R	*X*	*X*	*X*	*X*	*X*	Indicative implementation costs, awaiting the programme development	70	14
C.3.4	Enforcement of the implementation of the HIV/AIDS workplace policy	DCCDS/ all HR Officers	*X*	*X*	*X*	*X*	*X*	Regular work, no cost	0	0
C.3.5	Provide protective wear to all eligible workers on a regular basis	Administrative and Logistic Unit	*X*	*X*	*X*	*X*	*X*	Indicative cost	8,000	1,600
C.3.6	Request the PSMD to provide copies of the Disciplinary Code and Procedures for handling offences in the Public Service to all facilities at all levels; provide briefing to HR officers on the 'Red Book' during quarterly meetings and equip them with the skills to brief their workers on the issue	DHRA/ PSMD/ all HR officers	*X*		*X*		*X*	Local consultant 6 weeks for writing booklets, printing and distribution	50	10
C.3.7	Provide in-service training to all HR Officers in providing services in accordance with their job descriptions	DHRA/ PSMD/ ZISSP	*X*	*X*	*X*	*X*	*X*	Local consultant for planning, 12 weeks and resource persons for lecturing	100	20
C.3.8	Conduct regular 'general staff meetings' at all levels	All Directorates/ PMOs/ DMOs/ Heads of training institutions/ Medical Superintendents	*X*	*X*	*X*	*X*	*X*	regular work, no cost	0	0

C.3.9	Continue with the roll-out of the Trainer-training training of PMP to all levels and institutions	DHRA/ PSMD/ PMOs/ DMOs / Heads of training institutions/ Medical Superintendents / HR Officers	*X*	*X*				Funded	0	0
C.3.10	Ensure that the PMP is implemented at central and at all levels and institutions and collate all completed and signed Performance Agreements	DHRA/ PMOs/ DMOs/ HR Officers		*X*	*X*	*X*	*X*	Part of regular work when institutionalized	0	0
C.3.11	Provide any outstanding job descriptions and ensure that new employees are given their copies	DHRA/ PSMD/ HR Officers	*X*	*X*	*X*	*X*	*X*	Part of regular work	0	0
C.3.12	Provide opportunities for regular coaching, mentoring of and in-service training to HR officers on PAs and technical supportive supervision, during their quarterly meetings	Snr. HR Officers	*X*	*X*	*X*	*X*	*X*	Resource persons from MoH and internal meeting costs	1	0.2
C.3.13	Incorporate HR officers in PAs and Technical Supportive Supervision teams	DTSS/ PMOs and DMOs	*X*	*X*	*X*	*X*	*X*	Development of tools internal by HRH specific working group. Costs for travel and 4 external workshops	400	80
C.3.14	Request the PSMD to provide copies of PSMD policies, codes and guidelines to senior managers and use quarterly meetings to discuss and agree on strategies for consistent enforcement of adherence to codes and guidelines	DHRA/ SMD/ DTSS/ PMOs/ DMOs/ medical superintendents/ HR Officers	*X*	*X*	*X*	*X*	*X*	Cost for printing of 500 copies of 5 documents	250	50

C.3.15	Develop performance-based reward system, and submit it to MDD for approval, and to MoFNP for funding; Once approved, communicate criteria for excellent performance of individuals and teams; institute the annual special recognition award event at all levels and facilities to publicly reward good performance	DHRA/ MDD/ DTSS/ PMOs/ DMOs/ medical superintendents/ HR Officers	*X*	*X*	*X*	*X*	*X*	Local consultant 12 weeks for development and support to implementation	100	20
C.3.16	Enforce adherence to PSMD policies, guidelines and codes at all levels and institutions	DHRA/ HR Officers	*X*	*X*	*X*	*X*	*X*	regular work, no cost	0	0
C.3.17	Conduct policy research on productivity and quality of care provided at health facilities	DPH&R	*X*	*X*	*X*	*X*	*X*	Procure 2 studies annually x 100 million	1,000	200
C.3.18	Develop a national policy on Task-shifting	DHRA/ Task Group 8/ Research Unit of DPH&R/ all Directorates/ regulatory bodies/ training institutions/			*X*			Establish working group to define task-shifting and plan for the implementation, w external workshops	125	25
C.3.19	Implement the Task shifting Policy and provide regular in-service training, coaching, mentoring and supportive supervision to those lower	DHRA/regulatory bodies/ training institutions/ PMOs/ DMOs				*X*	*X*	Consultancy for Development of implementation plan & training modules, external 2 day workshop, training costs	600	120
C.4	**Increase number of service-oriented and client-centered facilities**								**4,290**	**858**
C.4.1	Sensitize Civil Society Organizations (CSOs), Neighborhood Health Committees (NHC) and Village Health Committees on the Code of Ethics for the Public Service to enable them to assert their rights to be treated with respect and dignity by all HRH	DHRA/ DMOs/ In-charges of HCs/ HR Officers	*X*	*X*	*X*	*X*	*X*	Should be brought up in regular meetings, no extra cost	0	0
C.4.2	Conduct research into the public' perception of the health facilities and services, client satisfaction and job satisfaction of HRH	DPH&R /CPs	*X*		*X*		*X*	Research study	100	20

C.4.3	Establish client satisfaction / customer care programmes at all facilities	All Directorates/ Senior management / Hospitals and HCs	*X*	*X*	*X*	*X*	*X*	Ceiling estimated	650	130
C.4.4	Provide easy and comfortable access to facilities	DPP/ Medical Superintendents/ In-charges of HCs	*X*	*X*	*X*	*X*	*X*	Since based on assessments, costs cannot be calculated, but a ceiling estimated	3,500	700
C.4.5	Train HR Officers in setting set up and supporting Grievance Handling Committees	PSMD/ DHRA		*X*	*X*	*X*	*X*	Local consultant 4 weeks	40	8
C.4.6	Develop an Employee Wellness Programme and provide training in stress management and encourage HRH to take vacation leave at least every 24 months to be able to relax and recuperate and return to work re-energized	All managers	*X*	*X*	*X*	*X*	*X*	This is a management issue, no extra cost	0	0
	Strengthen planning of in-service training according to organizational needs								**0**	**0**
C.5.1	Enforce the implementation of the Public Service Training and Development Policy and the Procedures and Guidelines for Human Resource Development in the Public Service at all levels	PSMD, HR officers at PMOs	*X*	*X*	*X*	*X*	*X*	Internal work, no cost	0	0
Subtotal C									**24,256**	**4,851**

8.4. OBJECTIVE D: STRENGTHEN SYSTEMS AND STRUCTURES TO SUPPORT HR EXPANSION AND PERFORMANCE

8.4.1. Results Framework

Results	Indicators	Baseline	Target by 2015	Source of Verification	Assumptions
Result D.1: Functional planning and management systems and procedures in place at all levels and institutions	– HRTWG works in line with its revised ToR and NHRH SP 2011-2015 – Realistic cost-and time indicative annual action plans and reports timely developed and distributed	– HRTWG did not work in line with NHRH SP – No narrative and financial annual reports – JAR for HRH not aligned – No midterm review but final review conducted	– HRTWG works in line with its ToR and NHRH SP – Annual time and cost-indicative plans and reports timely available	– HRTWG ToR – HRTWG agenda and minutes on accessible file – Time and cost-indicative annual action plans – Narrative and financial reports	– HRTWG has committed members who serve key ministries and other major stakeholders in influential positions
Result D.2: Gender mainstreamed in all aspects of planning, development and management of HRH	– % of eligible women entering into non-traditional health professions – % of eligible women in management positions per level	– 1 female director – No female PMOs – # of female DMOs?	To be obtained	– PMEC – Annual narrative and financial reports from DMOs, PMOs and DHRA – Reports on selection of new students and recruitments	– Managers and supervisors are conversant with content of National Gender Policy and act accordingly
Result D.3: Effective communication and collaboration between and within levels, institutions and communities practiced	– Communication strategy implemented as planned – % of meetings at each level/ facility/ ward/ conducted using effective meeting management principles – % of major facilities with Internet connectivity	Insufficient systems in place to promote effective communication and collaboration	To be obtained	– MoH website updated on HRH issues – Accessible and updated files with agendas and minutes of meetings	– Managers and supervisors lead by example regarding effective communication and collaboration – Principles of time management and effective meeting management consistently practiced – Zero - tolerance for ad-hoc activities
Result D.4: Functions and roles of the regulatory bodies (GNC and HPCZ) strengthened	– Grant given to GNC and HPCZ – # of funded positions	– 2011 budget figures – # of funded positions 2011	100 % increment by 2015 New funded positions 2015	– MoH Action Plans and annual reports – Regulatory bodies reports	

8.4.1. Costed Indicative Activity Plan

Objective D: Strengthen systems and structures to support HR expansion and performance										
	Intervention / Result	**Resp.**	**Timeframe**					**Cost Items**	**Cost (ZMK mn)**	**Cost ($'000)**
			2011	*2012*	*2013*	*2014*	*2015*			
D.1	**Strengthen human resources planning, management and information systems**								**3,414**	**683**
D.1.1	Develop guidelines for effective meeting management, provide training to senior managers at lower levels and lead by example	DHRA/ DTSS/ Directorates/ PMOs/ Medical Superintendents/ DMOs	*X*	*X*	*X*	*X*	*X*	Internal work, no cost	0	0
D.1.2	Conduct TNA and train senior HR officers in 'coaching', conducting PAs, supportive supervisory skills and in conducting Technical Supportive Supervision	DHRA/ PSMD/ DTSS/ DPP	*X*		*X*		*X*	Local consultant for 12 weeks, 4 external MOH workshops annually	423	84.6
D.1.3	Prepare annual planning guidelines - to be used during the annual planning launches – to guide the 'translation' of the HRHSP' interventions for each level and support HR officers in developing annual action plans	DHRA /DP&P	*X*	*X*	*X*	*X*	*X*	Internal work, no cost	0	0
D.1.4	Clear backlog of 'HR cases' at DHRA to enable the Directorate to allocate time to strengthening HRH planning and management systems and procedures at all levels and institutions	DHRA/ PSMD/ PMO/ DMO/ HR Officers	*X*					Hire 20 extra staff, working under guidance for 4 months	110	22
D.1.5	Review and adjust the HRHSP 2011-2015 monitoring framework: indicators, baseline and targets and incorporate it into NHSP 2011-2015	DHRA/ HRTWH/ DPP	*X*	*X*	*X*	*X*	*X*	External workshop, 3 days	80	16
D.1.6	Review and adjust MoH planning guidelines, the PA monitoring tool for HR and make it relevant to and in line with the objectives of HRHSP 2011-2015	All Directorates	*X*	*X*	*X*	*X*	*X*	Internal work, no cost	0	0
D.1.7	Review and adjust the JAR tool in line with the HRHSP objectives and participate in the annual reviews	DHRA/ DPP/ WHO/ JAR team	*X*	*X*	*X*	*X*	*X*	Internal workshop	1	0.2

D.1.8	Review and adjust ToR and membership of HRTWG and Task Groups to strengthen their performance	DHRA/ HRTWG/ Task Groups	*X*		*X*			Internal work, no cost		0
D.1.9	Establish a linkage system that allows for following up on the activities of the HRHSP 20011-20015 and the financing report system once the links are available with Navision and IFMIS	DHRA/ DPP/ MoFNP	*X*	*X*				Internal work, no cost	0	0
D.1.10	Develop HRH Annual Actions Plans and annual narrative and financial reports	DHRA/ PMOs/ DMOs/ Medical Superintendents/ HR Officers	*X*	*X*	*X*	*X*	*X*	Internal workshop, 4 days, annually	2,500	500
D.1.11	Conduct an independent mid-term review and a final evaluation of HRHSP 2011-2015, including an assessment of performance of HRTWG and Task Groups, draw lessons learned and make recommendations for the next phase	DHRA/ DPP/Research Unit of DPHR/ CPs			*X*		*X*	Team of 3 local consultants x 6 weeks	150	30
D.1.12	Adjust HRHSP 2011-2015 based on findings and recommendations of mid-term review and distribute copies to all stakeholders	DHRA/ HRTWG			*X*		*X*	External workshop, 3 days	150	30
D.2	**Develop and implement a harmonized communication strategy**								**150**	**30**
D.2.1	Develop and implement a communication strategy for the sector to promote effective communication and feedback across and within levels, institutions and with representatives of relevant stakeholders and CPs	Administrative Unit of DHRA/ CPs/ UNZA / NIPA	*X*	*X*	*X*	*X*	*X*	Local consultancy for 8 weeks, 4 external MOH workshops annually	150	30
D.2.2	Collaborate actively with representatives of communities with the catchments areas of facilities	DHRA/ DPP/ DTSS	*X*	*X*	*X*	*X*	*X*	Regular work, no cost	0	0
D.2.3	Conduct regular Joint Labour Management Committee Meetings to facilitate harmonious labour and industrial relations and submit labour issues to PSMD	DHRA/ PMOs/ DMOs / HR Officers / PSMD	*X*	*X*	*X*	*X*	*X*	Regular work, no cost	0	0
D.3	**Strengthen functions and roles of regulatory bodies**								**3,325**	**665**
D.3.1	Increase the grant and # of funded positions at GNC and HPCZ	DPP, HPCZ, GNC, CHAI, other CPs		*X*	*X*	*X*		Double grant to GNC, 400 million and 1/3 increase to HPCZ, 200 million	3,000	600

D.3.2	Support decentralization of some functions of GNC and HPCZ to provincial level	HPCZ, GNC, PMOs			X	X	X	Training for PMO staff	325	65
D.3.3	Clarify the roles and responsibilities between the regulatory bodies	HPCZ, GNC, TEVETA		X				Internal work, no cost	0	0
D.4	**Accelerate implementation of the national gender policy**								**0**	**0**
D.4.1	Encourage young women to enter non-traditional health professions, including health management training	Training institutions / DHRA	X	X	X	X	X	This is a management issue, no extra cost	0	0
D.4.2	Encourage eligible women to apply for management positions within health sector, in particular for positions like Director, Deputy Director, Assistant Director, PMO, medical superintendent and DMO	PSMD/ Senior management	X	X	X	X	X	This is a management issue, no extra cost	0	0
D.4.3	Brief managers on content and implications of National Gender Policy for major HR functions	PMOs/ Medical Superintendents/ DMOs/ HR Officers	X		X		X	No extra cost	0	0
D.4.4	Enforce National Gender Policy to redress gender imbalances and attain gender equality in all aspects of training, recruitment, deployment and promotion	HR Officers at all levels	X	X	X	X	X	This is a management issue, no extra cost	0	0
Subtotal D									**6,889**	**1,378**

9. ANNEX B: GRADUATES BY CADRE

Number of graduates by cadre and year

Cadre	2006	2007	2008	2009	2010
Biomedical Scientist	16	12	4	36	31
Clinical Officer Anesthesia	0	12	0	10	3
Clinical Officer General	95	104	123	134	59
Clinical Ophthalmology Officer	0	0	8	6	7
Clinical Officer Psychiatry	2	0	37	39	20
Dental Technologists	0	0	8	0	6
Dental Therapy	0	0	20	29	22
Direct Entry Midwife	0	0	0	80	80
Enrolled Midwife	131	119	103	109	136
Enrolled Nurse	259	285	327	413	445
Environmental Health Officer	38	62	63	85	54
Environmental Health Technologist	65	75	74	89	28
Medical Officer	44	60	67	50	48
Medical Laboratory Technologist	48	94	76	81	127
Medical Licentiate	0	26	0	17	1
Nutritionist	*	*	*	*	42
Operating Theatre Nurse	31	34	36	35	30
Ophthalmology Nurse	0	0	7	4	11
Pharmacist	25	35	38	35	42
Pharmacy Technologist	Na	35	42	129	144
Physiotherapist	6	11	7	12	17
Physiotherapy Technologist	38	34	41	30	33
Post Basic Nurse – Bsc	26	29	21	24	29
Radio Technologist	32	38	41	23	42
Registered Mental Health Nurse	0	0	39	33	27
Registered Midwife	134	130	143	138	126
Registered Nurse	315	357	377	435	701
Total	1,305	1,552	1,702	2,076	2,311

** Figures not available.*
Source: MoH graduates tracking tool, May 2011. Graduate information for all nursing and midwifery cadres provided by GNC. Graduate information for all non-nursing and midwifery cadres gathered from Chainama College, Evelyn Hone College, UNZA and HPCZ.

10. ANNEX C: ENROLMENTS BY CADRE

Enrolments by cadre, 2010

Cadre	2010
Biomedical Scientist	171
Clinical Officer Anaesthesia	16
Clinical Officer General	113
Clinical Officer Psychiatry	28
Dental Technologists	22
Dental Therapy	8
Direct Entry Midwife	101
Enrolled Midwife	128
Enrolled Nurse	512
Environmental Health Officer	30
Environmental Health Technologist	120
Laboratory Technologist	80
Medical Doctor	118
Medical Licentiate	24
Nutritionist	56
Operating Theatre Nurse	32
Ophthalmology Clinical Officer	7
Ophthalmology Nurse	11
Pharmacist	59
Pharmacy Technologist	103
Physiotherapist	23
Physiotherapy Technologist	79
Post Basic Nurse – BSc	72
Post Basic Nurse – MSc	19
Radiography	96
Registered Mental Health Nurse	28
Registered Midwife	140
Registered Nurse	785
Total	**2,981**

Source: Ministry of Health - Enrolment Tracking Tool 2010. Enrolment information for all Nursing and Midwifery cadres was provided by TI forms. Graduate information for all non-Nursing and Midwifery cadres was gathered from Chainama College, UNZA and Evelyn Hone College. Chainama total of January and June Intakes, UNZA- Pharmacist and Physiotherapy have totals of 2nd and 3rd year enrolments. Evelyn Hone in 2010 introduced Extension programmes Biomedical Scientist used synonymously with Biomedical Scientist.

11. ANNEX D: TRAINING PROGRAMS AND ENROLMENTS BY TRAINING INSTITUTION

Training institutions by province, ownership, training programs offered and enrolments, 2010

Training Institution	Province	Ownership	Cadre	Jan 2010 Enrolment	Jun 2010 Enrolment	Total 2010 Enrolment
Agape School of Nursing	Central	Private	Registered Nurse	29	35	64
Chainama Hills College	Lusaka	GRZ	Clinical Officer General	55	58	113
			Clinical Officer Ophthalmology	7	0	7
			Clinical Officer Psychiatry	0	28	28
			Environmental Health Technologist	29	41	70
			Medical Licentiate	0	24	24
			Ophthalmology Nurse	11	0	11
			Registered Mental Health Nurse	28	0	28
Chikankata School of Biomedical Sciences	Southern	Mission	Laboratory Technologist	30	0	30
Chikankata School of Nursing	Southern	Mission	Registered Nurse	83	0	83
Chilonga Nursing & Midwifery	Northern	Mission	Enrolled Midwife	0	36	36
			Enrolled Nurse	0	28	28
Chipata School of Nursing & DEM	Eastern	GRZ	Certified Midwife	26	0	26
			Registered Nurse	0	50	50
Dental Training School	Lusaka	GRZ	Dental Technologists	22	0	22
			Dental Therapy	8	0	8
Dovecot College of Nursing Trust	Lusaka	Private	Registered Nurse	16	23	39
Evelyn Hone College	Lusaka	GRZ	Environmental Health Technologist	0	50	50
			Biomedical Scientist	0	125	125
			Pharmacy Technologist	0	103	103
			Physiotherapy Technologist	0	79	79
			Radiography	0	96	96
Kabwe School of Nursing & Midwifery	Central	GRZ	Enrolled Midwife	0	17	17
			Enrolled Nurse	0	15	15
Kafue College of Health Sciences and Research	Southern	Private	Clinical Officer			30
Kalene School of Nursing	North-western	Mission	Enrolled Nurse	0	54	54

Training Institution	Province	Ownership	Cadre	Jan 2010 Enrolment	Jun 2010 Enrolment	Total 2010 Enrolment
Kasama School of Nursing	Northern	GRZ	Registered Nurse	52	0	52
Kitwe School of Nursing & Midwifery	Copperbelt	GRZ	Registered Midwife	29	0	29
			Registered Nurse	52	0	52
Lewanika Nursing & Midwifery School	Western	GRZ	Enrolled Midwife	34	0	34
			Enrolled Nurse	0	65	65
Livingstone School of Nursing	Southern	GRZ	Registered Nurse	70	0	70
Lusaka Health Institute Nursing School	Lusaka	Private	Registered Nurse	15	15	30
Lusaka Nursing Institute	Lusaka	Private	Registered Nurse	30	13	43
Lusaka Schools of Nursing, Midwifery, & Operating Theatre	Lusaka	GRZ	Operating Theatre Nurse	32	0	32
			Registered Midwife	37	0	37
			Registered Nurse	29	0	29
Macha School of Nursing	Southern	Mission	Enrolled Nurse	0	43	43
Makeni School of Nursing	Lusaka	Private	Registered Nurse	36	41	77
Mansa School of Nursing	Luapula	GRZ	Registered Nurse	0	78	78
Monze School of Nursing & Midwifery	Southern	Mission	Enrolled Midwife	0	18	18
			Enrolled Nurse	0	33	33
Mufulira School of Nursing & Midwifery	Copperbelt	GRZ	Registered Midwife	32	0	32
			Registered Nurse	60	0	60
Mukinge School of Nursing	North-western	Mission	Enrolled Nurse	0	55	55
Mwami 7th Day Adventist School of Nursing	Eastern	Mission	Enrolled Nurse	0	45	45
Nchanga School of Midwifery	Copperbelt	GRZ	Certified Midwife	0	35	35
Ndola School of Nursing & Midwifery	Copperbelt	GRZ	Registered Nurse,			
			Registered Midwife			
Ndola School of Community Health	Copperbelt	GRZ	Community Health Assistants			
Ndola School of Biomedical Sciences	Copperbelt	GRZ				
Roan Antelope School of Midwifery	Copperbelt	GRZ	Certified Midwife	40	0	40
School of Anaesthesia	Lusaka	GRZ	Clinical Officer Anaesthesia	16	0	16
School of Medicine at UNZA	Lusaka	GRZ	Biomedical Scientist	0	46	46
			Medical Doctor	0	118	118
			Environmental Health Scientist	0	30	30
			Physiotherapist	0	23	23
			Pharmacist	0	59	59
School of Medicine at UNZA / DNS	Lusaka	GRZ	Post Basic Nurse - BSc	0	72	72
			Post Basic Nurse - Msc[2]	0	19	19

Training Institution	Province	Ownership	Cadre	Jan 2010 Enrolment	Jun 2010 Enrolment	Total 2010 Enrolment
Solwezi School of Nursing	North Western	GRZ	Enrolled Nurse	54	0	54
St. Francis / Katete School of Nursing & Midwifery	Eastern	Mission	Enrolled Midwife	0	9	9
			Enrolled Nurse	0	50	50
St. Luke's School of Nursing	Lusaka	Mission	Enrolled Nurse	0	40	40
St. Paul's School of Nursing & Midwifery	Luapula	Mission	Enrolled Midwife	14	0	14
			Enrolled Nurse	0	30	30
Western School of Nursing, Livingstone	Livingstone	Private	Registered Nurse	0	15	15

Source: Data compiled by CHAI, May 2011

12. ANNEX E: ENTRY REQUIREMENTS AND DURATION OF NURSING AND MIDWIFERY PROGRAMS

Types of Nursing and Midwifery cadres and the prerequisite training required for each cadre

Programme	Description / Qualification	Duration of Study
Enrolled Nursing	Pre-service Certificate Programme. Prerequisites: completion of Grade 12 and O-levels	2 years
Registered Nursing	Pre-service Diploma Programme. Prerequisites: completion of Grade 12 and O-levels	3 years
	In-service Diploma Programme for Enrolled Nurses	2 years
Certified Midwifery	Pre-service Certificate Programme Prerequisites: Grade 12 and O-levels	2 years
Enrolled Midwifery	In-service Certificate Programme for Enrolled Nurses. Requirements: 2 years of Enrolled Nursing, 2 years of work, 1 year Midwifery	1 year
Registered Midwifery	In-service Diploma Programme for Registered Nurses. Requirements: 3 years of Registered Nursing, 2 years of work experience, 1 year Midwifery	1 year
Registered Mental Health Nursing	Pre-service Diploma Programme, comprised of 3 years of Registered Nursing, 2 years of work, followed by 1 year of Mental Health Nursing Prerequisites: Grade 12 and 6 O-levels	3 years
	In-service Diploma Programme (for Nurses who already hold a Diploma)	1 year
Operating Theatre Nursing	In-service Diploma Programme (for Nurses who already hold a Diploma)	1 year
Ophthalmology Nursing	In-service Diploma Programme (for Nurses who already hold a Diploma)	1 year
HIV Nurse Practitioner	In-service Diploma Programme (for Nurses who already hold a Certificate)	1 year
	In-service Diploma Programme (for Nurses who already hold a Diploma)	1 year
BSc in Nursing	Pre-service Bachelor's Degree Program, comprised of 3 years of Registered Nursing, 2 years of work, 2 years of post-graduate studies Prerequisite: 1 year of study in the Department of Natural Sciences	4 years
	In-service Bachelor Degree Programme for Nurses who already hold a diploma	3 years
MSc in Nursing	In-service Master Degree Programme for Nurses who already hold a BSc degree	18 months

Source: Data compiled by CHAI, May 2011

13. ANNEX F: NURSING AND MIDWIFERY GRADUATES

Number of graduates from Enrolled Nursing and Enrolled Midwifery programmes by year, training institution, province and owner

Training Institution	Province	Owner	Jun 2009 Graduates	Dec 2009 Graduates	Jun 2010 Graduates	Dec 2010 Graduates
A. Enrolled Nursing						
1. Chikankata School of Nursing	Southern	Mission	32	4	0	0
2. Chilonga Nursing & Midwifery	Northern	Mission	30	0	32	2
3. Kabwe School of Nursing & Midwifery	Central	GRZ	26	0	29	10
4. Kalene School of Nursing	North-western	Mission	0	21	6	0
5. Lewanika Nursing & Midwifery School	Western	GRZ	14	29	48	3
6. Macha School of Nursing	Southern	Mission	25	4	38	2
7. Monze School of Nursing & Midwifery	Southern	Mission	29	0	29	18
8. Mukinge School of Nursing	North-western	Mission	28	1	30	10
9. Mwami 7th Day Adventist School of Nursing	Eastern	Mission	32	9	36	7
10. Solwezi School of Nursing	North-western	GRZ	13	21	11	30
11. St. Paul's School of Nursing & Midwifery	Luapula	Mission	34	0	46	5
12. St. Francis / Katete School of Nursing & Midwifery	Eastern	Mission	51	21	52	1
13. St. Luke's School of Nursing	Lusaka	Mission	0	0	0	0
Total			**314**	**110**	**357**	**88**
B. Enrolled Midwifery						
1. Chikankata School of Nursing	Southern	Mission	8	1	5	1
2. Chilonga Nursing & Midwifery	Northern	Mission	35	1	35	0
3. Kabwe School of Nursing & Midwifery	Central	GRZ	24	0	21	0
4. Lewanika Nursing & Midwifery School	Western	GRZ	14	29	0	29
5. Monze School of Nursing & Midwifery	Southern	Mission	18	0	18	0
6. St. Francis / Katete School of Nursing & Midwifery	Eastern	Mission	18	4	10	3
7. St. Paul's School of Nursing & Midwifery	Luapula	Mission	0	0	0	14
Total			**117**	**35**	**89**	**47**

Source: Table compiled based on raw data from CHAI; dated February 2011.

14. ANNEX G: MAP OF TRAINING INSTITUTIONS

The 37 Health Training Institutions in Zambia

COPPERBELT PROVINCE

1. ***Kitwe District***-Kitwe School of Nursing & Midwifery-GRZ
2. ***Chingola District***-Nchanga School of Midwifery-GRZ
3. ***Ndola District***-Ndola College of Biomedical Sciences*-GRZ
4. ***Ndola District***-Ndola School of Nursing & Midwifery-GRZ
5. ***Mufulira District***-Mufulira School of Nursing & Midwifery-GRZ
6. ***Luanshya District***-Roan Antelope School of Midwifery-GRZ
7. ***Ndola District***-Copperbelt RN Polytech-Private

NORTH WESTERN PROVINCE

1. ***Mwinilunga District***-Kalene School of Nursing-GRZ
2. ***Kasempa District***-Mukinge School of Nursing & Midwifery-Mission
3. ***Solwezi District***-Solwezi School of Nursing-GRZ

WESTERN PROVINCE

1. ***Mongu District***-Lewanika Nursing School-GRZ

LUAPULA PROVINCE

1. ***Nchelenge District***-St. Paul's School of Nursing-Mission
2. ***Mansa District***-Mansa School of Nursing-GRZ

NORTHERN PROVINCE

1. ***Kasama District***-Kasama School of Nursing-GRZ
2. ***Mpika District***-Chilonga Nursing-Mission

Note: All Mission Schools: a. receive funds from GRZ; b. receive HR support from GRZ and; c. the students are supported by GRZ.

*The five schools that do NOT teach nursing or midwifery have been marked with a *

CENTRAL PROVINCE

1. ***Kabwe District***-Kabwe School of Nursing-GRZ
2. ***Kabwe District***-Agape School of Nursing-Private

EASTERN PROVINCE

1. ***Chipata District***-Chipata School of Nursingand Midwifery - GRZ
2. ***Chipata District***-Mwami 7th Day Adventist School of Nursing-Mission
3. ***Katete District***-St. Francis/ Katete School of Nursing-Mission

LUSAKA PROVINCE & DISTRICT

1. Chainama Hills College-GRZ
2. Dental Training School*-GRZ
3. Lusaka Schools of Nursing, Midwifery, & Operating Theater-GRZ
4. School of Anesthesia*-GRZ
5. Defense School of Nursing-GRZ
6. Evelyn Hone College*-GRZ
7. School of Medicine at UNZA-GRZ
8. Dovecot College of Nursing Trust-Private
9. Lusaka Health Institute Nursing School-Private
10. Lusaka Nursing Institute-Private
11. Makeni School of Nursing-Private

SOUTHERN PROVINCE

1. ***Choma District***-Macha School of Nursing-Mission
2. ***Livingstone District***-Livingstone School of Nursing-GRZ
3. ***Monze District***-Monze School of Nursing-Mission
4. ***Mazabuka District***-Chikankata College of Biomedical Sciences*-Mission
5. ***Mazabuka District***-Chikankata School of Nursing & Midwifery-Mission
6. ***Livingstone District***-Western School of Nursing-Private

15. ANNEX H: PEOPLE CONSULTED

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Mr. Collins Chansa, Chief Planner, DPP
Ms. Emily Chipaya, Chief Nursing Officer, Management, DCCDS
Dr. Elizabeth Chizema, Director of Technical Support Services
Ms Namataa P. Kalaluka, Chief Accountant, DHRA
Mr. Chipalo Kaliki, Acting Deputy Director (ME), HMIS, DPP
Mr. Henry Kansembe, Deputy Director, Planning, DPP
Mr. Adam Lagerstedt, Technical Advisor, Sida, DPP
Mr. Mubita Lubalelwa, Deputy Director Donor Coordination, DPP
Mr. Robbson Manda, Snr. HRD Officer, DHRA
Ms. Ndubu Milapo, Chief Nursing Officer, Education, DCCDS
Mr. Trust Mufune, Snr. ME Officer, DPP
Mr. Lazarous Mulenda, Acting Chief Human Resources Management Officer, Planning, DHRA
Dr. Dennis Mulenga, Deputy Director, DTSS
Ms. Evelyn Muleya, Chief HRD Officer, DHRA
Ms. Namasiku Mulikita, HR Officer, DHRA
Ms. Mutinta Musonda, Assistant Director - HRMD, DHRA
Dr. Peter Mwaba, Permanent Secretary
Mr. Jere Mwila, Director, DHRA
Mr. Lawrence Njovu, Chief Human Resources Management Officer, DHRA
Ms. Patricia Sikaala, Administrative Officer, DHRA
Ms. Patricia Sikada, Accounting Officer, DHRA
Ms. Brivine Sikapande, Snr. ME Officer, DPP
Dr. Christopher Simoonga, Director, DPP
Mr. Nchebe Chitashi, Chief Medical Imagining
Dr. Miriam Libetwa, Deputy Director Nursing Services, DCCDS
Mr. Cleto Mweemba, Chief Physiotherapist
Mr. Davy Namduba, Dep. Director Pharmaceuticals
Mr. Clement Phiri, Biomedical Scientist
Mr George Sampa, Prosthetics and Orthotics
Dr. Gardner Syakantu, Director, DCCDS
Dr. Edgar Wamuwi, National Clinical Care Specialist
Ms. Mary Wiyenda, National Eye Care Coordinator
Ms. Muzala Kanyanga, Epidemiologist
Mr. Lubinda, MHR
Mr. Sackson Mayuni, CDT
Dr. Itone Muteba, DDPHR.OH
Ms Sandra Sakala, PSRO
Mr. Vichael Silauwe, Chief IMCI Officer
Mr. Wamunyima, SMHO
Dr. Tackson Lambart, Provincial Medical Officer, Lusaka
Dr. Dandi Malawo, Senior Medical Superintendent, Ndola Central Hospital
Ms. Charity Chirwa, Senior HR Development Officer,
Mr. Kapembwa, Senior HR Management Officer, Eastern Province
Ms. Florence Kashita, Senior HR Officer, Copperbelt Province
Dr. V. Lubinda, Medical Doctor at PMO, Solwezi
Ms. Fridah Mashandi, HR Officer, Central Province
Mr. Akabando Mbeha, HR Management Officer, Western Province
Mr. Bupe Mutanya, Senior HR Officer, Arthur Davidson Children's Hospital
Ms. Cleopatra Ngandu, Senior HR Officer, Southern Province
Mr. Simon Mulenga, Senior HR Management Officer, Lusaka Province
Mrs. Sandra Zulu, Senior HR Officer, MoH

University Teaching Hospital and School of Nursing, Midwifery and Theatre
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Mr. Isaac Kasaro, Chief Hospital Administrator
Mrs. Mary Jaramba, Principal Education Officer, Lusaka School of Nursing
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Mrs. Prisca S Mukonka, Acting Principal Tutor
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Dr. Robin Mwewa, President of the Zambia Dental Association
Mr Cleto Nweemba, President of the Zambia Society of Physiotherapists
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Mr. Wasa Nyambe, Watchman

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Mr. Mazeko, Mulanga Clinic
Mr. F. Muteio, Mulanga Clinic
Mr. B. Nguhibe, Prison Clinic
Mr. Chomba Phiri, Mulanga Clinic
Mr. Ndalda Sinate, CO
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Ms. Annie N. Mwale, Senior Nurse Tutor
Mr. Felix Nsama, Ass. Accountant
Ms. Ireen K. Nyamvwala, Clinical Instructor
Mr. Loveness M. Silumbwe, Registry clerk
Ms. Grenda Shatamuka, House Keeper

Copperbelt Nursing Polytechnic
Mr. Bruce Luvweyi, College Accountant
Ms. Sulinda, Principal Nurse Tutor

16. REFERENCES

Africa Health Workforce Observatory. *2010 Human Resources for Health Country Profile: Zambia.* WHO: Geneva. Sept. 2010.

Bowa, K.,F. Goma, Y. Mulla and S. Banda. *Undated Postgraduate medical training in Zambia, a Tool to Reduce External Brain Drain.*

Brugha, R., J. Kadzandira, J. Simbaya, P. Dicker, V. Mwapasa and A. Walsh. *2010 Health Workforce Responses to Global Health Initiatives Funding: A Comparison of Malawi and Zambia.* Human Resources for Health Journal, 2010. Vol. 8, Issue 19.

Central Statistical Office of Zambia. *The Zambia Demographic and Health Survey 2007*. CSO and Macro International Inc, Calverton, MD. 2009.

Central Statistical Office of Zambia. *Population and Housing Census Preliminary Report*. CSO, 2011.

Chabot, J. *2008 Report of the Mid Term Review of the Zambia National Health Strategic Plan NHSP IV, 2006–2010.* MoH, Lusaka.

Chessore, Wemos. *2008 Human Resources for the Delivery of Health Services in Zambia: External Influences and Domestic Policies and Practices. A Case Study of Four Districts.* Centre for Health, Science and Social Research, Lusaka.

Chitah, M. *2005 Expenditure Ceiling, Human Resources and Health: The Case of Zambia.* CHAZ, Lusaka.

CIA World Fact Book. 2011.

Dal Poz, M., Y. Kinfu, S. Drager and T. Kunjemen. *2007 Counting health workers: definitions, data, methods and global results.* WHO, Jan. *2007.*

Dambisya, Y. *A Review of Non-Financial Incentives for Health Worker Retention in East and Southern Africa.* Equinet Discussion Paper, No. 44 with ECSA-HC. University of Limpopo, South Africa. 2007.

Directorate of Human Resources and Administration. *2008 HRH Operational Plan*. Government of Zambia: Lusaka. April 2008.

Directorate of Human Resources and Administration. *Zambian Health Workers Retention Scheme Guidelines*. Government of Zambia: Lusaka. August 2010.

Directorate of Policy and Planning, Monitoring and Evaluation Unit. *Annual Health Statistical Bulletin 2006*. Government of Zambia: Lusaka. Feb. 2007.

Directorate of Policy and Planing, Monitoring and Evaluation Unit. *Annual Health Statistical Bulletin, 2008*. Government of Zambia: Lusaka. 2009.

Directorate of Policy and Planning, Monitoring and Evaluation Unit. *Annual Report 2008*. Government of Zambia: Lusaka. Feb 2010.

Dolea, C., L. Stormont, P. Zurn, D. Shaw and J. Braichet. *2009 Increasing Access to Health Workers in Remote and Rural Areas Through Improved Retention.* WHO: Geneva. 2009.

Global Health Workforce Alliance. *2010: Country Coordination and Facilitation (CCF), Principles and Process.* GHWA/WHO: Geneva. 2010.

Global Health Workforce Alliance. *From Kampala to Bangkok: Reviewing Progress, Renewing Commitments: Outcome Statement of the Second Global Forum on Human Resources for Health*. WHO: Geneva. 2011.

Grépin K. and W. Savedoff. *Ten Best Resources on Health Workers in Developing Countries. Health Policy and Planning Journal*. 2009. Vol 24, pg. 479-482.

Grobler, L., B. Marais, S. Mabunda, P. Marinda, H. Reuter and J. Volmink. *Interventions for Increasing the Proportion of Health Professionals Practising in Rural and Other Underserved Areas (Review).* The Cochrane Library, Issue 2. John Wiley and Sons. 2009.

Government of the Republic of Zambia. *Fifth National Development Plan 2006-2010*. 2006.

Government of the Republic of Zambia. *Broad Based Wealth and Job Creation Through Citizenry Participation and Technological Advancement (Summary)*. Ministry of Finance and National Planning, Lusaka.

Government of the Republic of Zambia. *Organization Structure Report for the Ministry of Health.* MoH and Management Development Division, Cabinet Office, Lusaka. 2006.

Government of the Republic of Zambia. *Vision 2030: A prosperous Middle-income Nation by 2030.* December, 2006.

Government of the Republic of Zambia. *Workforce Audit: Results of Payroll Verification Exercise.* MoH, Lusaka. Oct. 2009.

Government of the Republic of Zambia. *Act No. 24 of 2009: The Health Professions Act*. 2009.

Government of the Republic of Zambia. *Sixth National Development Plan 2011-2015: Sustained economic growth and poverty reduction.* 2010.

Government of the Republic of Zambia. *2011-2013 MTEF and 2011 Budget*. GRZ: August 2010.

Government of Zambia. *Public Service Training and Development Policy*. GRZ: Lusaka. 2007.

Global Health Workforce Alliance, World Health Organization. *Scaling Up, Saving Lives*. WHO: Geneva. 2008.

Global Health Workforce Alliance, World Health Organization. *The Kampala Declaration and Agenda for Global Action.* WHO: Geneva. 2008.

Global Health Workforce Alliance, World Health Organization. *Health Workers for All and All for Health Workers*. WHO/GHWA: Geneva. 2008.

Global Health Workforce Alliance, World Health Organization. *What Countries Can Do Now: Twenty-Nine Actions to Scale-Up and Improve the Health Workforce.* GHWA/WHO: Geneva. 2009.

Global Health Workforce Alliance, World Health Organization. *Financing and Economic Aspects of Health Workforce Scale-up and Improvement: Framework Paper*. GHWA/WHO: Geneva. 2009.

Hamada, N. J. Maben, B. McPake and K. Hanson. *International Flow of Zambian Nurses.* Human Resources for Health Journal. 2009, Vol. 7, Issue 83.

Hanefeld, J. and M. Musheke. *What Impact do Global Health Initiatives have on Human Resources for Antiretroviral Treatment Roll-out? A Qualitative Policy Analysis of Implementation processes in Zambia.* Human Resources for Health Journal. 2009, Vol 7: Issue 8.

Human Resources Information System. *Expanding on the existing Human Capital Management and PMEC systems.* Government of Zambia: Lusaka. March, 2011.

Health Professions Council of Zambia. *Annual Report 2009.* Health Professions Council of Zambia, 2010.

Horstman, R. *Zambian Health Workers Retention Scheme: Measuring the effect on health system deliverables.* Consultancy Mission Report, Dec. 2010.

Horstman, R. and Th. Ngulube. *Global Fund Proposals: Meeting Health Work Force Constraints in Zambia*. PowerPoint Presentation, May 2009.

Joint Learning Initiative. *Human Resources for Health: Overcoming the Crisis*. Harvard University Press, Cambridge, MA. 2004.

Kandimaa Matterson, A. *Human Resources for Health, Report*. SIDA: Stockholm. 2010.

Koot, J. and T. Martineau. *Mid-Term Review. Zambian Health Workers Retention Scheme (ZHWRS) 2003-2004.* MoH: Lusaka. 2004.

Matsiko, Ch. *Positive Practice Environments in Uganda: Enhancing Health Worker and Health System Performance.* GHWA: Geneva. 2004.

Ministry of Health of Zambia. *National Health Strategic Plan 2006-2010: Towards Attainment of the Millennium Development Goals and National Health Priorities*. Government of Zambia: Lusaka. 2006.

Ministry of Health of Zambia. *Human Resources for Health Strategic Plan (2006-2010).* Government of Zambia: Lusaka. 2006.

Ministry of Health of Zambia. *Joint Annual Review, 2007, Prelimiary Report*. Government of Zambia: Lusaka. 2008.

Ministry of Health of Zambia. *Action Plan 2008*. Government of Zambia: Lusaka. 2008.

Ministry of Health of Zambia. *National Training Operational Plan 2008: Field Assessments, Analysis and Scale-up Plans for Health Training Institutions*. Government of Zambia: Lusaka. July 2008.

Ministry of Health of Zambia. *Technical Planning for the 2009-2012 MTEF Plans, Planning Documents Technical Paper No. 1.* Government of Zambia: Lusaka. May 2008.

Ministry of Health of Zambia. *2008 Annual Training and Development Plan*. Government of Zambia: Lusaka. 2008.

Ministry of Health of Zambia. *Joint Annual Review Report, 2008*. Government of Zambia: Lusaka. 2009.

Ministry of Health of Zambia. *Action Plan 2009*. Government of Zambia: Lusaka. 2009.

Ministry of Health of Zambia. *Technical Planning for the 2010-2012 MTEF Plans, Planning Documents, Technical Paper No. 1*. Government of Zambia: Lusaka. July 2009.

Ministry of Health of Zambia. *Joint Annual Review Report, 2008*. Government of Zambia: Lusaka. 2009.

Ministry of Health of Zambia. *2010 Action Plan*. Government of Zambia: Lusaka. 2010.

Ministry of Health of Zambia. *Workforce Optimization Analysis: Optimal Healthcare Worker Allocation for Healthcare Facilities Across Zambia*. Government of Zambia: Lusaka. September 2009.

Ministry of Health. *Health Workforce Review*. Government of Zambia: Lusaka. December 2010.

Ministry of Health. *Technical Planning Updates for the 2011-2013 MTEF Plans. Planning Documents Technical Paper No. 1.* Government of Zambia: Lusaka. May 2010.

Ministry of Health. *National Workforce Accessment 2010, Preliminary Results*. Government of Zambia: Lusaka. December 2010.

Ministry of Health. *National Community Health Worker Strategy*. Government of Zambia: Lusaka. 2010.

Ministry of Health. *Annual Training and Development Plan*. Government of Zambia: Lusaka. 2010.

Ministry of Heatlh. *Draft National Health Strategic Plan 2011-2015*. Government of Zambia: Lusaka. 2010.

Ministry of Health. *Draft National Health Strategic Plan 2011-2015*. Government of Zambia: Lusaka. 2010.

Ministry of Health. *Human Resources Information System. Expanding on the existing Human Capital Management and PMEC systems.* Governmetn of Zambia: Lusaka. March 2011.

Ministry of Health, Directorate of Human Resources and Administration. *Workforce Optimization Analysis. Optimal Healthcare Worker Allocation for Healthcare Facilities across Zambia*. Government of Zambia: Lusaka. 2009.

Ministry of Health. *Human Resources for Health Strategic Plan 2006-2010, Review Report*. Government of Zambia: Lusaka. May 2011.

Ministry of Health. *Action Planning Handbook for District Health Teams, 5th Edition.* Government of Zambia: Lusaka. April 2009.

Ministry of Health. *Action Planning Handbook Hospitals, 5th Edition*. Government of Zambia. April 2009.

Ministry of Heatlh. *Action Planning Handbook for Training Institutions, 5th Edition*. Government of Zambia: Lusaka. 2009.

Ministry of Health. *Action Planning Handbook Health Centres, Health Posts and Communities, 5th Edition*. Government of Zambia: Lusaka. April 2009.

Mongu District Health Management Team, Ministry of Health. *Strategic Action Plan and Budget (2009-2011)*. Government of Zambia: Lusaka. 2009.

Mwale, H. Health Systems Strengthening Program
2009: Human Resources for Health Innovations in Zambia: A Case Study of the Zambia Health Workers Retention Scheme. PowerPoint Presentation, November

Mwale, H and S. Smith. *Health Services and Systems Programme*.

MOLGH, Decentrlization Secretariat*. Decentralization Implementation Plan 2009-2013*., Government of Zambia: Lusaka. Dec. 2009.

Neupane, R. and H. Njie. *Zambia Health Sector Support: Mapping Report*. DFID Health Resource Centre: London. 2006.

Ngulube, Th. *The Zambia Country Case Study on Positive Practice Environments (PPE). Quality Workplaces for Quality Care*. PPE Campaign Secretariat, International Council of Nurses: Geneva. 2010.

Office of the Secretary to Cabinet. *Code of Ethics for the Public Service.* Government of Zambia: Lusaka.

Office of the President, Cabinet Office. *The National Decentralisation Policy*. Government of Zambia: Lusaka. 2002.

Omaswa, F. *Health Worker Migration: Perspectives from an African Health Worker.* Strengthening Health Care Systems Journal. WHO: Geneva. 2006.

Picazo, O. and S. Kagulura. *The State of Human Resources for Health in Zambia: Findings from the Public Expenditure Tracking and Quality of Service Delivery Survey (PET/QSDS)*. 2005/06.

Secretary to the Cabinet. *Terms and Conditions of Service for Public Service*. Government of Zambia: Lusaka. June 2003.

Schatz J. *Zambia's Health Worker Crisis*. The Lancet 371. Feb 23, 2008. Pg. 638-9.

Sunkutu, K. and N. Nampanya-Serpell. *Searching for Common Ground on Incentive Packages for Community Workers and Volunteers in Zambia*. National HIV/AIDS/STI/TB Council: Lusaka. 2009.

Tjoa, A., M. Kapihya, M. Libetwa, J. Lee, C. Pattinson, E. McCarthy and K. Schroder. *Doubling the Number of Health Graduates in Zambia: Estimating Feasibility and Costs*. Human Resources for Health Journal. Vol. 8: Issue 22. 2010.

Van den Broek, A., G. Gedik, M. Dal Poz and M. Dieleman. *Policies and Practices of Countries that are Experiencing a Crisis in Human Resources for Health: Tracking Survey*. WHO: Geneva. 2010.

World Health Organization. *WHO Global Code of Practice on the International Recruitment of Health Personnel. WHA63. 16. Agenda Item 11. 5. A63/8*. WHO: Geneva. 2010.

World Health Organization. *The World Health Report 2006: Working Together for Health*. WHO: Geneva. 2006.

World Health Organization. *Report of the Global Consultation on an Implementation Framework for Scaling Up Nursing and Midwifery Capacity*. WHO: Geneva. 2008.

World Health Organization. *Increasing Access to Health Workers in Remote and Rural Areas Through Improved Retention, Background Paper*. WHO: Geneva. 2009.
World Bank. African Region Human Development Report: Zambia, Country Health Status Report. World Bank: New York. June 2010.

World Health Organization. *Human Resources for Health, Country Profile: Zambia.* WHO: Geneva. September 2010.

Global Health Workforce Alliance, World Health Organization. *Global Experience of Community Health Workers for Delivery of Health Related Millennium Development Goals. A Systematic review, Country Case Studies, and Recommendations for Integration into National Health Systems.* WHO/GHWA: Geneva.

World Health Organization. *Policies and Plans for Human Resources for Health, Guidelines for Countries in the WHO African Region.* WHO: Brazzaville. 2006.

World Health Organization. *Framework for the implementation of the Ougadougou Declaration on Primary Health Care and Health Systems in Africa*. WHO: Brazaville. 2010.