Ministry of Health

National Directorate of
Human Resources

National Plan for Health Human Resources Development (NPHHRD)

2008–2015

Coordination from the Institute of Hygiene and Tropical Medicine, Lisbon, Portugal
Collaboration with the National Health Institute, HRD and the School of Medicine in Maputo
Funding from DANIDA and the Department for International Development

TABLE OF CONTENTS

LIST OF TABLES

Annex II

Annex III

Annex V

LIST OF FIGURES

Annex II

Annex V

LIST OF BOXES

LIST OF ACRONYMS AND ABBREVIATIONS

ARV	Antiretroviral
CBHA	Community-based health agents
HHR	Health human resources
HHRO	Health Human Resources Observatory
HRD	Human Resources Directorate
HRDP	Human Resources Development Plan
HRD-TD	Human Resources Directorate Training Department
HSSP	Health Sector Strategic Plan
INS	National Institute of Health
MCH	Maternal and Child Health
MDG	Millennium Development Goals
MINED	Ministry of Education
MI-NPHHRD	NPHHRD Monitoring and Implementation Group
MOH	Ministry of Health
NDMA	National Directorate for Medical Assistance
NGO	Non-Governmental Organization
NHS	National Health System
NPHHRD	National Plan for Health Human Resources Development
PIS	Personnel Information System
USD	United States dollar
WHO	World Health Organization

PREFACE

In recent years, Mozambique has seen encouraging improvements of its health indicators such as reductions in maternal, neonatal, and infant mortality, increases in the coverage of immunization and institutional deliveries, reduction of the malaria mortality rate, expansion of access to TB treatment, and a significant increase in the number of persons benefiting from antiretroviral treatment. Key to achieving these improvements has been the sustained action of the Ministry of Health, a national environment of economic growth and stability, and, above all, the silent, dedicated, and permanent work of thousands of health workers throughout the country.

Gone are the years when the country's efforts were devoted almost solely to keeping basic health services operative. The Mozambican Government now aims to provide sufficient and high-quality services to all of its people. Our focus is now on the expansion, strengthening, and improvement of the country's health system, and in particular, of the National Health Service.

The greatest challenge we face to reach this key objective is the deficit of human resources for health. This means that Mozambique not only lacks an adequate number of health workers but also that the distribution and competencies of these health workers are uneven.

The National Plan for the Development of Human Resources for Health was created to respond to this challenge. The plan involves a series of coordinated and systematic actions to enhance the Mozambican health workforce from 1.26 to 1.87 per 1,000 inhabitants by 2015, including a significant improvement of the Ministry of Health pre-service education system.

The plan is ambitious but realistic. It is, above all, essential if Mozambique is to maintain and expand its health achievements. To ensure that this plan benefits our people, all of us, the Mozambican Government, cooperation partners, the community, and the society in general, have to join our efforts and make sure it is implemented. The challenges are formidable, but through our united action, we will succeed.

Prof. Dr. Paulo Ivo Garrido
Minister of Health of Mozambique

INTRODUCTION

The Government of Mozambique's Five-Year Program, Absolute Poverty Reduction Action Program, Health Sector Policy Guidelines, and the National Health Policy provide guidance for its health policies and human resources. These documents show a strong commitment toward the fulfillment of the Millennium Development Goals (MDGs).

The definition and regulation of the civil service in general, and the specific health occupational categories in particular, are detailed in several laws, decrees, directives, and orders that highlight the existing diversity of subsidies and supplements, which often are not effective.

PART I—SITUATIONAL ANALYSIS AND PRIORITIZATION

CHARACTERISTICS OF THE HHR SYSTEM IN MOZAMBIQUE

Table 1 provides a situational analysis of health human resources (HHR) in Mozambique.

Taking into account the nature of the challenges presented by the MDGs, as well as the level of competence in pharmacy, laboratory, imaging, public health, and surgical care, the occupational categories supporting obstetric care and general clinical competencies **were identified as a priority** (Table 2). Due to the shortage of staff and their training needs, and the serious lack of professionalism in health sector management, competencies related to teaching and management also are given great importance. The National Health Service (NHS) responded to these priorities with the specific legislated cadres identified in Table 2. However, there are a high number of non-specific cadres that are also addressed as priority competencies (e.g., biologists).

As a result of the discontinuation of the elementary professional level in 2005 (and the auxiliary level from 2012), there is a trend to consider the emergency needs of "cadres" such as phlebotomists and service providers, and new "cadres" have emerged with the HIV epidemic (e.g., visitors, counselors). Other cadres have been practically discontinued (e.g., social welfare) but may be reinstated with a new competency and task profile.[1]

[1] This should need the revision of order no. 3/94 of March 14, which describes the job of the social welfare technicians.

An exemplary aspect of the Mozambican HHR system is the rational production of health workers through **a good articulation between the training system (depending on the Ministry of Health [MOH] and Ministry of Education [MINED]) and the major employer**, i.e., the State.

Although the assistance-related activities are traditionally identified in four levels of care (primary, secondary, tertiary, and quaternary), there are actually eight levels of complexity in the assistance-related activities. These levels may be recognized to ensure the adequacy of the employee's profile at each level (Table 3).

Table 1. Situational Analysis of the Mozambican HHR System

	Comments
I—Context	
• Political change moment • Existence of guiding documents and values • Demographic, economic, and social development • Public sector reform • Epidemiologic profile and MDG (malaria, tuberculosis, AIDS, maternal mortality, and child mortality)	• Politically strong and stable government—opportunity to make unpopular decisions • Equity of access commitment—opportunity to commit for correction of inequality • Economical growth—opportunity for greater investments in social sector to reduce external dependence and reduce poverty • Moments of change—public sector reform—opportunity, threats • AIDS—threat to NHS response capacity • MDG—opportunity to focus attention on strategic priorities
• Dependence on external funding	• Threat, opportunity
II—Labor Market	
• Health professions • Employers – Public sector – For-profit private sector – Non-profit private sector – Globalization of labor market • Regulating bodies • Production of health workers	• Lack of priority cadres—threat • Major inequality in distribution of workers—threat • MOH's regulating role under clarification and evolution—opportunity • Differentiation of NHS—opportunity • Labor market dominated by the NHS: – Opportunity, as it favors government accountability for the population's health and access to health care – Threat, because the lack of resources caused promiscuous institutional and personal survival mechanisms • Growing private sector—opportunity to contracting for public cause, but lack of regulation is a threat • Emerging professional orders—opportunity • Limited capacity to produce and variable quality of HHR—threat • Unforeseen expansion of the less-differentiated labor force—threat, although there is a slow evolution toward a better trained technical staff in rural areas, such as basic level maternal and child health (MCH) nurse with the intention of replacing the elementary birth attendant

	Comments
III—Human Resource Administration and Management in Public Sector	
• Strategic planning for HHR—threat • Administration and administrative structures—threat • Career structure, promotions, and opportunities—threat • Recruitment and contracting • Placement and replacements • Staff evaluation systems • Continuous professional development • Quality assurance • Incentives (for redistribution, retention and productivity) • Work conditions • Staff information system • Salary management and processing • Absenteeism management	• Decentralization without clear definition of direct administration or management responsibility by the: – MOH – Provincial government – Municipalities – District administrations • No articulation in strategic documents—threat • Deficient work conditions—threat • Low assiduity and production quality—threat • Limited competencies in general management and administration, particularly for HHR—threat • Decentralization of the Health Information System without central articulation—threat • Limited quality of Health Information System—threat
IV—Observation Areas	
• Labor market monitoring • Inequality indicators • Performance indicators • Personal compensation strategies (small scale corruption) • Work place violence • Professional satisfaction • Client satisfaction • Changes in regulating framework • Staff turnover (including migrations, etc.)	• The HHR Observatory function was not performed—threat

Table 2. Legislated Cadres Deemed as a Priority

Areas	Cadres	Last Training in…
Pharmacy	Pharmacist	
	Specialized pharmacy technician (Secondary L)	
	Pharmacy technician (Secondary L)	
	Pharmacy agent	2012
	Pharmacy assistant	2005
Medicine	General practitioner	
	Internal medicine doctor	
	Medical technician B	
	Specialized medical technician	
	Medical technician	
	Medical agent	
Laboratory	Laboratory technician A	
	Laboratory technician B	
	Specialized laboratory technician	
	Laboratory technician C	
	Laboratory technician D	
	Microscopist	Prior to 2005

Areas	Cadres	Last Training in…
Public Health/ Preventive Medicine	Public health specialist doctor	
	Specialized preventive medicine technician	
	Preventive medicine technician	
	Preventive medicine agent	
Nursing	Nurse A (Licentiate)	
	Nurse A (Bachelor)	
	General specialized nurse (secondary level)	
	General nurse (secondary level)	
	Basic nurse	2012
	Elementary nurse	2005
Maternal and Child Health (MCH)	Obstetrician	
	Pediatrician	
	Specialized MCH nurse	
	Midwife nurse	Remaining from colonial era; to be removed when positions are vacant
	MCH nurse – C (secondary level)	
	MCH nurse (basic level)	
	Elementary birth attendant	
Instrumentalist	Specialized instrumentation technician	
	Instrumentation technician	
Anesthesiology	Anesthesiologist doctor	
	Specialized anesthesiology technician	
	Anesthesiology technician	
Surgery	Surgeon	
	Specialized surgery technician	
	Surgery technician	
Management	Hospital administration technician A	
	Hospital administration technician B	
	Hospital administration technician and specialized hospital administration technician	
	Hospital administration agent	2012

Table 3. Existing Levels of Assistance Activities

Activity Levels	Institutional Basis	Population Served	HHR Type	Comments
Community-based	Rural health center (type II or III, former health posts)	500 people	1 community health worker	Community-based assistance has been increasing due to AIDS. It has been focusing on preventive and public health, such as development of sanitation projects. Integration within the health service system should be rethought, taking into account the new epidemiological context, new stakeholders in the health services system, and the decentralization process (see Annex VI).
Advanced strategy	Based on health centers	7,500–20,000	One ancillary worker and basic technicians in specified careers (vaccine, MCH, oral health, school health, nutrition, etc.)	Essentially rural, this includes mobile brigades and monthly health days for each district. This area deserves more attention in the health strategy to improve the structure and design to increase access and coverage in rural areas.
First contact with NHS	Health centers	16,000–100,000	Three to five ancillary workers, one administrator, and nine to ten technicians in specified careers	The type and minimum team are defined by law (1).
1st level of referral for the health center	District hospitals	50,000–250,000 (1)	Eight to ten ancillary workers, two to three administrators, and 22–29 technicians in specified careers (1)	Supported by general practitioners who perform only minor surgery. Offers 24-hour emergency room services. These hospitals should have a laboratory and radiology, and harmonizing them with general and rural hospitals should be considered.
	General and rural hospitals	150,000–900,000 (1)	39 administrators and 137 technicians in specified health careers (including nine doctors)	Has specialist doctors with surgical capacity, including for obstetric emergencies. Has radiology equipment.
1st level referral hospital	Provincial hospitals	800,000–2,000,000 (1)	National Directorate for Medical Assistance (NDMA) establishes staffing (2)	Type of load not formally defined.
2nd level referral hospital	Central hospitals	Variable	(2)	Type of load not formally defined.
Specialized hospitals	Psychiatric hospitals	Variable	Variable	Type of load not formally defined.

Notes: (1) Ministerial decree-law 127/2002; (2) NDMA definition criteria for hospital staffing 2007–2010; decree-law 127/2002 was used as guidance for minimum teams, and for the NDMA's document the team is the "satisfactory staff."

At the district level (highlighted in grey in the table above), the health team is divided into two complementary sub-teams: one team with an institutional work basis at hospitals and health centers and consisting of doctors and health technicians, and one team that provides care to the population (advanced strategy team) and community base. The current National Health Policy values the community base and advanced strategy, always remembering the mostly curative institutional approach, but the Policy does not systematize in a clear way the options for strategic implementation of activities for the advanced strategy (mobile brigades, patient evacuation according to a referral network, monthly health days, communication mechanisms, etc.).

HHR DATA

There is a **deficit in health workers** in Mozambique compared to other countries (Table 4).

Table 4. Comparative Data for HHR Indicators, 2004

	Doctors/ 100,000 Population	Nurses/ 100,000 Population	Birth Attendants/ 100,000 Population	Pharmacy Staff/ 100,000 Population
Mozambique	3	21	12	3
Malawi	2	59	-	-
Zambia	12	174	27	10
Zimbabwe	16	72	-	7
Botswana	40	265	-	19
South Africa	77	408	-	28

Source: WHO Annual Report, 2006.

There is also a deficit of 5,142 health workers when comparing current staffing levels to the levels expected for the given population (Table 5). In addition, despite the MOH's effort to correct regional differences in health workers, there are still some differences between worker placement criteria and the actual ratio of doctors and technicians available for the population (Figures 1 to 3). This is due in part to the absolute lack of resources, difficulties in retaining workers, problems with the existing health network, and the lack of staffing definitions.

Table 5. Difference between Expected Size of NHS Workforce and Reality in the Field, 2006

Cadres	Staffing According to Personnel Information System (PIS) 2006	Staffing Needs in 2006*	Difference
A. Priority MDGs	**11,811**	**12,339**	**528**
Pharmacy	849	909	60
Medicine	1,881	1,791	-90
Laboratory	809	1,202	393
Public Health/Preventive Medicine	820	337	-483
Nursing	4,282	4,733	451
Obstetrics and MCH Nursing	2,879	2,295	-584
Instrumentalist	132	389	257
Anesthesiologist	103	408	305
Surgery	56	275	219
B. Other	**13,872**	**18,485**	**4,613**
TOTAL	**25,683**	**30,824**	**5,141**

*Calculated based on defined minimum teams (decree 127/2002 and NDMA).

Figure 1. Population per Health Workers (All Health Fields), by Province (June 30, 2007)

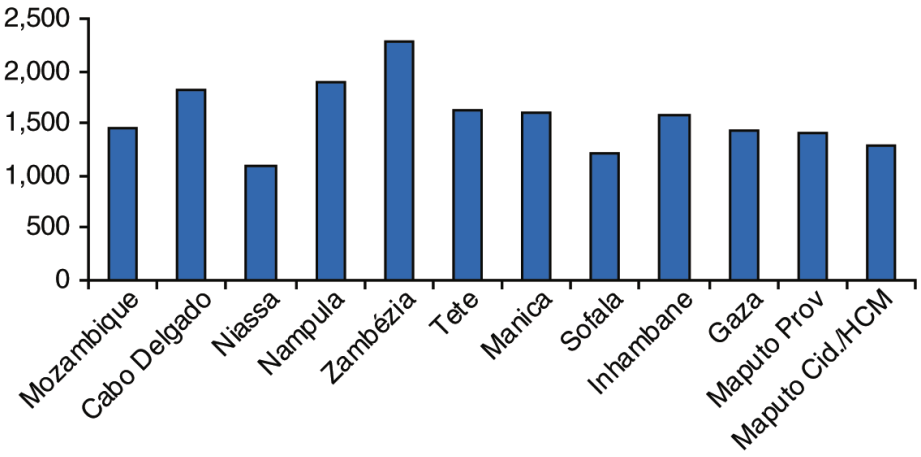


Figure 2. Population per Doctor, by Province (June 30, 2007)

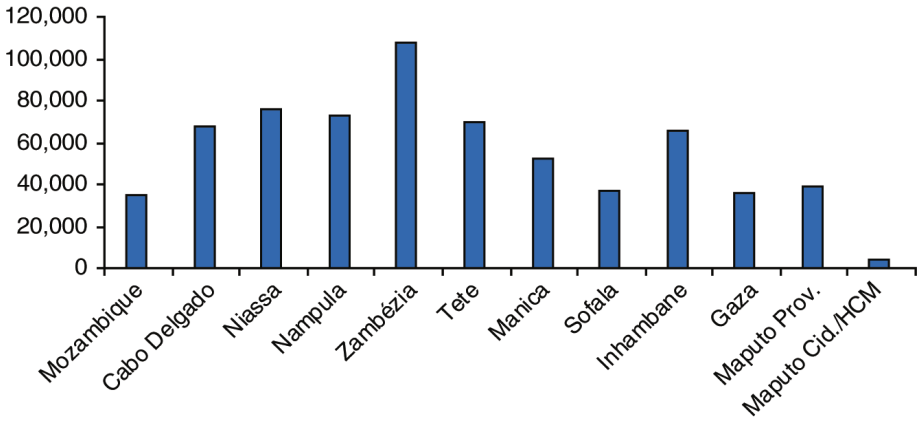
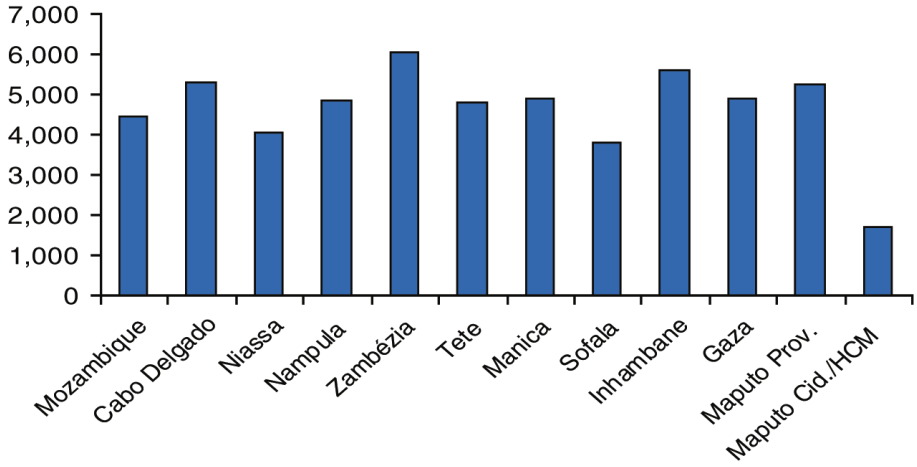


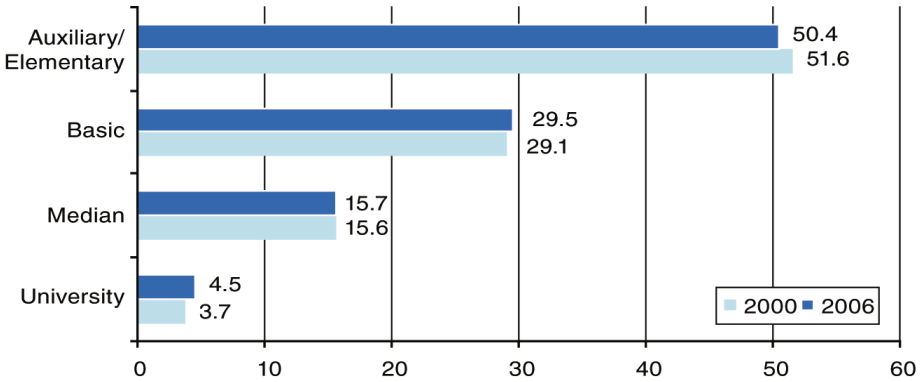
Figure 3. Population per Nursing Staff, by Province (June 30, 2007)



The deficit in health workers varies among the provinces (Figure 1) and is more evident for all health workers in Zambezia, Nampula, Cabo Delgado, and Tete. The inequalities are more evident for doctors (Figure 2), with the greatest deficits in Zambezia, Niassa, Nampula, and Cabo Delgado. Among nurses (Figure 3), the greatest deficits are in Zambezia, Nampula, Inhambane, Cabo Delgado, and Maputo Province.

The relative distribution for each level of the entire staff (from the university to the elementary level) among the provinces points to a relative deficit of median and university staff (Figure 4), which is most evident in Manica, Zambezia, Niassa, Tete, Cabo Delgado, and Nampula. For the specific health cadres, the greater deficits are in Manica, Nampula, Tete, and Niassa.

Figure 4. Percentage Distribution of NHS Staff by Education Level, 2000 and 2006



The **most underserved provinces in terms of priority cadres** are Zambézia, Cabo Delgado, Nampula, Manica, Inhambane, Tete, Gaza, Sofala, Maputo Province, Niassa, and Maputo City (Table 6). In addition, there has been a greater increase in staff in the non-clinical workforce than the clinical workforce (Table 7). In other words, there is a **relative deficit in assistance staff that is not evenly distributed within the levels of care**.

Table 6. Population per Priority Professional Cadre: National Level and Provincial Distribution (June 30, 2007)

Professional Cadre	Total	Niassa	Cabo Delgado	Nampula	Zambezia	Tete	Manica	Sofala	Inhambane	Gaza	Maputo Province	Maputo City
Pharmacy	**20,867.6**	10,450.3	29,538.3	32,723.3	44,093.0	16,257.7	20,295.9	15,455.5	27,250.6	30,958.5	**20,349.0**	14,449.6
Medicine	**9,988.6**	6,066.0	11,856.9	15,445.4	14,642.2	13,735.0	11,573.7	7,979.3	**10,778.2**	6,517.6	9,006.9	9,633.1
Laboratory	**22,381.1**	**23,455.2**	36,601.8	36,774.7	38,801.8	20,426.4	28,008.3	15,455.5	23,294.9	25,701.4	19,278.0	14,287.3
Public Health/ Preventive Medicine	**23,820.8**	21,989.2	17,911.5	32,448.3	35,274.4	28,968.3	24,145.1	21,179.7	23,676.8	**23,485.8**	13,400.6	17,660.7
Nursing	**4,409.4**	4,075.2	5,311.3	4,844.9	6,034.5	4,799.0	**4,896.6**	3,778.8	5,619.8	4,899.9	5,232.6	4,430.6
Obstetrics and MCH	**6,439.1**	3,909.2	8,094.6	7,738.2	10,718.7	7,342.2	5,669.7	5,262.4	5,176.6	6,612.5	**5,907.8**	5,886.9
Instrumentalist	**149,755.8**	**150,783.1**	187,075.7	386,134.7	242,511.5	99,578.6	700,207.5	95,308.7	111,098.6	136,217.4	366,282.0	141,285.4
Anesthesiologist	**205,725.2**	211,096.4	420,920.3	551,621.8	431,131.6	227,608.3	700,207.5	171,555.7	481,427.3	97,298.1	**366,282.0**	141,285.4
Surgery	**351,151.6**	1,055,482.0	336,736.2	3,861,347.0	485,023.0	531,086.0	**466,805.0**	343,111.4	288,856.4	272,434.8	549,423.0	158,946.1
Management	61,161.5	35,182.7	52,615.0	85,807.7	114,123.1	54,939.9	73,706.1	85,777.9	68,865.4	64,865.4	49,947.5	**66,924.7**

Note: The darker blue cells indicate the median value and the lighter blue cells indicate values above the median value. Please refer to the cadres included in Table 2 for each professional area.

Table 7. HHR Distribution per Job Type and Education Level, 2000 and 2006

Education Level		2000	2006	Variation
University	Degree in medicine	436	606	39.0%
	Other	140	537	283.6%
	Sub-total	576	1,143	98.4%
Secondary level	Clinical duties	2,132	3,115	46.1%
	Other	357	919	157.4%
	Sub-total	2,489	4,034	62.1%
Basic level	Clinical duties	4,128	6,642	60.9%
	Other	523	942	80.1%
	Sub-total	4,651	7,584	63.1%
Elementary level	Clinical duties	1,628	2,090	28.4%
	Other	582	1,007	73.0%
	Sub-total	2,210	3,097	40.1%
Other	Assistant workers	1,631	2,090	28.1%
	Laborers	5,003	8,987	79.6%
	Sub-total	6,634	11,077	67.0%

Source: MOH/DRH SIP.

The little information available for Niassa Province shows major inequalities between its 15 districts; information on inequalities between districts is lacking for the other provinces.

There are contradicting opinions regarding productivity and performance, which, similar to issues on quality, were not properly addressed.

Health workers are unsatisfied and lack confidence in their employers' ability to correct the problems in the health service system. Among the problems cited by the employees and managers are poor working conditions, weak bio-security procedures, lack of career implementation, inadequate incentive policies for the many realities in the country, lack of implementation of the incentive policy in force, staffing deficits, lack of access to in-service training, delays in processing staff documents, inadequacy of the Personnel Information System (PIS), lack of strong leadership for the sector, lack of access to private practice outside of the major urban centers, and inequalities among provinces and districts.

Interviews with NHS managers at the central and provincial levels revealed the following:

- Perceived bad working conditions and inadequate salaries;
- Perceived non-selection of staff from remote locations for training;
- Lack of incentives for retaining staff in remote areas;
- Lack of incentives beyond financial and/or material incentives;
- Lack of decentralized methods to allocate incentives;

- Provinces perceived as implementing bodies for national policies, which are defined centrally;
- In-service training is not included for career progression;
- Doubts relative to training results, i.e., whether the trainings serve to change health worker behaviors and improve quality;
- Lack of defined priorities and responsibilities for training within a decentralized system;
- In-service training approach is not integrated and does not address the training needs of the different areas prescribed by the national programs;
- Lack of administration and health management skills at peripheral level;
- Slow recruitment and admission model in the state sector; and
- Inadequate information circuits between the Provincial Health Directorate and the peripheral levels (e.g., lack of timely updates regarding new legal norms or new procedures or guidelines).

Most client complaints relate to waiting times, lack of bio-safety, poor conditions of the health infrastructure, lack and/or cost of drugs, and lack of transportation to the health facilities. Although it was not mentioned in client focal groups, petty corruption is well documented in the health sector.

ASSUMPTIONS AND RISKS

Based on this diagnosis, the National Plan for Health Human Resource Development (NPHHRD) shall consider the assumptions and risks in Table 8 as probable, or at least possible.

Table 8. Assumptions and Risks to Be Considered in the NPHHRD

Assumptions	Risks
• Consolidation of representative democracy regimen • Continuous and accelerated economic growth • Uninterrupted availability of resources at several levels • Continuous decentralization to provinces, districts, and municipalities • Progressive differentiation of NHS • Clarification and regulation of duties assigned to different levels of health service governance, management, and administration • Acknowledgment of effects and demands of HIV/AIDS on health workforce • Health facility expansion or reclassification – Type II rural health center and district and municipal hospital network, with a progressive decrease of health posts to ensure better geographic distribution and improved accessibility • With improved acknowledgment, security, production incentives, and training, and a more efficient management, workers will increase the volume and quality of services provided • Co-existence with and expansion of private medicine and other profit or non-profit private services • Increase in number and differentiation of health workers with relative increase in volume of excess salary mass (due to qualification of health staff) from the relative increase in health budget • Progressive decrease in number of less differentiated workers (elementary and auxiliary)	• Slowdown in macroeconomic growth and reduction in fund allocation to the health sector by government • Interruption in support from international agencies resulting from changes in their policies due to economic instability • Electoral process as a potential to political instability • Favoritism, conflicts, and lack of continuity related to electoral cycles in the three levels of governance bodies • Increased challenges related to budgeting and management of financial resources • Persistence of inadequate working conditions for employees and resulting lack of motivation • Emergencies resulting from calamities and epidemics, with deviations in application of previously anticipated funds • Delays in decentralization process • Lack of enthusiasm for decentralization to municipalities • Delays in establishment of coordination mechanisms between decentralized units and central regulating bodies • Increased pressure over budget linked to health network expansion • Increased pressure over budget linked to increase in service production • Relative increase in volume of excessive salary mass (due to qualification of health workers) from the relative increase in health budget • Attraction of health workers from the NHS by the private sector

NATIONAL PRIORITIES AND CONTINUITY

This NPHHRD shall also contemplate the national priorities identified in the National Health Policy and the current Strategic Plan for the Health Sector (Box 1) and continue the previous Human Resource Development Plans (HRDP; 1992–2002, 2001–2010, 2006–2010). These objectives constitute an excerpt of the eight general objectives and 51 specific objectives for HHR reported in the National Health Policy.

Box 1 Health Sector Strategic Plan Objectives for HHR Development

4.	**General Objective:** Reduce maternal mortality. **Strategy:** ● Redefine the "minimum team" for minimum essential reproductive health/obstetric care and "minimum care package" for each level of service provision.
16.	**General Objective:** Develop actions for community mobilization and involvement of the community in promoting and defending its own health. **Strategies:** ● Define profile of community workers. ● Revitalize community health worker national program.
30.	**General Objective:** Improve and continue the expansion of the health network toward communities to increase coverage. **Strategy:** ● Develop and estimate the costs for an Integrated National Plan for Development of the Health Network, Infrastructure, Equipment, and Human Resources.
31.	**General Objective:** Maintain and develop a referral network according to provisions of Ministerial Decree no. 127/2002, of 31 July, which shall be updated by the end of July 2008. **Strategy:** ● Adequately review the workers in each of the levels.
32.	**General Objective:** Improve the quality of health care using the experiences from some provinces, and develop mechanisms to quantify improvements to monitor and evaluate the quality of care. **Strategy:** ● Train staff to use the therapeutic protocols.
39.	**General Objective:** Improve resource management skills in all health facilities. **Strategies:** ● Develop a management capacity-building strategy for senior staff and secondary level staff. ● Implement the public sector reforms in the health sector.
45.	**General Objective:** Promote the scientific development of traditional medicine and develop and collaborate with traditional medicine practitioners. **Strategies:** ● Assess the role of traditional medicine in Mozambique. ● Establish mechanisms for collaboration between the MOH and traditional medicine practitioners. ● Develop policies and laws to guide the practice of traditional medicine and protect the intellectual property and rights of traditional medicine practitioners.
56.	**General Objective:** By the end of 2007, assess the current professional careers and training system established by Decree no. 25/76, of 19 June, and the complementary provisions for MCH nursing and, based on the results, approve the recommended steps. **Strategies:** ● Review the implementation of Decree no. 25/76, of 19 June. ● Review and update the job description for health workers at all levels within the health system.
57.	**General Objective:** Send the HRDP for approval within the scope of a broader health planning exercise that takes into account the Health Network Development and the progression of the health budget. Ensure allocation of health workers in all health facilities according to the provisions of the Ministerial Decree 127/2002 and reduce the training of basic level health workers to provide incentives for the promotion of basic to secondary. **Strategies:** ● Submit the HRDP for review and approval. ● Intensify post-graduate training programs for health workers and the necessary health sector competencies. ● Increase collaboration with health worker training institutions.

58.	**General Objective:** Intensify the training of health workers, mainly those of secondary and higher level, to expand the health care provision network, reduce the average population per doctor/nurse/other health workers, and increase the level of technical qualification of the workforce. **Strategies:** ● Increase number of training institutions and results in terms of HHR (according to targets of the HRDP and the Accelerated Training Plan). ● Review the health staff required at each level of the health system. ● Review training curriculum for health workers and improve quality of training. ● Establish a database for all trainers in the sector.
59.	**General Objective:** Intensify post-graduate programs, both in-country and abroad. **Strategies:** ● Collaborate with expatriate institutions on post-graduate training. ● Establish additional health facilities with post-graduate training capacity.
60.	**General Objective:** Develop programs for continuous training, distance learning and in-service training. **Strategies:** ● Perform an in-service training needs assessment. ● Develop an Integrated National Plan for in-service training. ● According to decree 64/98 of 3 December, establish system of credits for continuous professional development of health workers.
61.	**General Objective:** Improve human resource management at all levels to allow more rational use of available human resources and improve health workers' motivation and productivity. **Strategies:** ● Develop and implement a management performance evaluation system. ● Review the staff's work and job descriptions. ● Introduce an integrated system for human resource management. ● Decentralize management of human resources.
62.	**General Objective:** Improve productivity of health workers and other health professionals. **Strategies:** ● Develop criteria to determine health workers' productivity. ● Establish a monitoring system for health workers' productivity.
63.	**General Objective:** Develop a salary policy for health workers that is based on merit, competence, and professional behavior. **Strategies:** ● Request a study to review work conditions of health workers, and implement recommendations. ● Develop and implement an incentive strategy for health workers. ● Develop a professional development program for health workers.
64.	**General Objective:** Review professional careers and training system according to Decree no. 25/76, of 19 June, and implement recommendations by 2008.

PRIORITY STRATEGIC LINES

Based on the situational analysis, this NPHHRD identifies four priority strategic lines to ensure a qualitative and quantitative improvement of human resources in health services:

1. Organize NHS services and normative framework;
2. Improve management capacity at all levels of NHS;
3. Improve health worker distribution, motivation, and retention; and
4. Increase capacity of initial production, post-graduate training, and in-service training networks.

These priorities will be discussed in more detail in Part II.

PART II—STRATEGIES, ACTIVITIES, COSTS, AND TARGETS

The four strategic lines **have the purpose of ensuring**:

- A qualitative leap in the Mozambican health service system associated with significant improvements in the MOH's training system and management capacity (note that this document features only this purpose) by 2015; and
- A rapid and accelerated expansion of all secondary and higher level professional resources associated with the expansion of the health network by 2025, as described in Box 2 and Table 9.

Box 2. Health Network Expansion until 2025[2]

- Add one rural health center (type II) per 10,000 population (there is a need for approximately 750 more rural health centers type II), which shall be equipped with one ancillary worker, one medical agent, and one MCH nurse.
- Add one district hospital with surgical capacity (two rooms), per district.
- Add one general hospital per city.
- Maintain the same number of provincial and central hospitals and improve their performance. The Human Resources Directorate (HRD) recommended an additional provincial hospital in Matola and an additional central hospital in Quelimane, which is already in progress.

Table 9. Health Network Expansion by 2025[3]

Type of Health Facility	Total in 2025
Central Hospital	4
Provincial Hospital	8
Psychiatric Hospital	2
General Hospital	12
Rural Hospital	32
District Hospital with Surgery	87
Urban Health Center A	23
Urban Health Center A/Maternity	19
Urban Health Center B	21
Urban Health Center B/Maternity	9
Urban Health Center C	48
Urban Health Center C/Maternity	22
Rural Health Center I	125
Rural Health Center II	1,341
Total	1,753

[2] As defined by His Excellency Professor Ivo Garrido, The Minister of Health of Mozambique (September, 2007).
[3] As defined by His Excellency Professor Ivo Garrido, The Minister of Health of Mozambique (September, 2007).

The specific objectives of each strategic line shall be oriented to achieve the global objectives, namely:

1. Achieve the MDGs;
2. Improve the MOH's training capacity;
3. Reduce the deficit of health workers;
4. Reduce HHR inequalities among provinces;
5. Correct differences within provinces and districts;
6. Improve quality and quantity of health worker performance;
7. Improve retention of the NHS workforce;
8. Define the regulatory role for HHR in the Mozambican health services system (as opposed to the NHS).

Table 10 shows the specific targets proposed for each of the eight global objectives.

Table 10. Global Impact Targets of the NPHHRD, 2008–2015

Global Objective	Indicators	Status in 2007 or 2008	Target for 2015
Achieve MDGs	Child mortality rate	See Annex I	
	Child-youth mortality rate		
	Maternal mortality ratio		
	HIV/AIDS		
	Malaria		
	Tuberculosis		
Improve MOH's training capacity	Training capacity	13 training institutions	To be defined according to institution's classroom capacity
	Number of full-time trainers	227	272
	Percentage of trainers with a degree	21%	33%
	Percentage of trainers with Master's degree	None	4% (about 10 with Master's degrees)
Reduce HHR deficit	Population per health worker	See Annex II	
Reduce HHR inequalities among provinces	Population per health worker	See Annex II	The population per priority cadre equal to or above the national median in all provinces in 2007
	Incentive assignment	Attributed without performance criteria	Managers who contribute to correction of inter- and intra-provincial inequalities get an incentive according to incentive package

Global Objective	Indicators	Status in 2007 or 2008	Target for 2015
Reduce differences within provinces and districts	Population per health worker	Niassa is the only one documented	Document situation in every province and define criteria and mechanisms to ensure this objective
Improve health worker performance	Professional pyramid structure	See Annex II	Narrow the base and broaden the body of distribution pyramid for different education levels
	Training of managers in management	Unknown	All NHS managers received specific training for management roles they perform
	Align HHR profile with expected performance of each health facility	Unknown	Review profile to integrate estimated activities of major vertical programs
	Incentive allocation	Excessive non-regulated incentives and subsidies that are not paid	Define regulated and justified national and provincial incentive packages; develop mechanisms to identify ideal team performance with routine allocation of incentives
Improve retention of health workers in NHS	Rate of withdrawal from NHS	Data collection is not systemized	Reduce by half
	Rate of lack of placement in NHS for specific health cadres	Data collection is not systemized	Reduce by half
Define regulatory role for HHR	Whether there are existing professional orders	Doctor's Order in phase of creation (Law no. 3/2006, of 3 May)	Two orders exist for: 1) doctors, and 2) other health cadres

The objectives and targets in Table 10 shall also be adopted as this NPHHRD's objectives and targets. The attainment of these targets will be facilitated through general strategies adapted to each of the particular targets. Such general or cross-cutting strategies include:

- **Build capacity of individual** managers, regulators, service managers, and providers (e.g., support procurement and competence improvement in terms of expertise, competencies, and attitudes);
- **Strengthen organizational capacities**, i.e., the operation of information systems; monitoring, supervision, and evaluation processes; availability of management; decision support; and resource mobilization tools;
- Develop professional and financial **subsidies and incentives packages** to stimulate the performance of all staff cadres and improve the willingness of the individual and institution to support achievement of the proposed objectives and targets; and

- Create an **adequate institutional environment** through changes in the legal and regulating framework to facilitate attainment of the proposed targets.

STRATEGIC LINE 1—ORGANIZE NHS SERVICES AND NORMATIVE FRAMEWORK

Analysis Overview

The analysis of the organization of NHS services and its normative framework showed the following:

- The coexistence of a structured organizational model at the level of care and a somewhat vertical programmatic approach reduces the capability of community health workers at the most peripheral levels;
- Organizational models are either strictly low mobility or have some mobility but lack flexibility to adapt to the services provided;
- There is a need to coexist with new models that facilitate interaction between the NHS and other health service providers facilitating access to HIV/AIDS care;
- The organizational model does not formally include health agents at the community level; and
- The current profile of HHR placed in health facilities seems inadequate for the organizational models and health facility, given the normal epidemiological profile for minimum teams or "satisfactory staffing."

Values and Guiding Principles

The NHS organizational models and the major national programs—and the staff who are assigned to them—shall provide the managers with instruments to manage health facility performance and ensure the adequacy of the health teams for the tasks and objectives set for each health facility.

General Objective

The general objective of this strategic line is to ensure that health teams are adequate for the health facilities in which they are placed. Therefore, this strategic line specifically intends to:

- Harmonize the structured organizational model at the level of care and the somewhat vertical programmatic approach to contribute to the capacity of community health workers at the most peripheral levels;
- Implement flexible organizational models that have the mobility and capacity to adapt to the service packages provided;
- Develop an organizational model that formally includes community health workers; and

- Take into account the epidemiological profile and organizational responses to ensure adequate health workers for these organizational models.

Strategies

The selected strategies for this objective include the following:

- Strengthen institutional and health facility management;
- Define the health facility staff;
- Develop recruitment plans for health facilities on an annual basis;
- Regulate the interface between vertical programs and horizontal services;
- Update the human resource profile and ensure the adequacy of training programs for such profiles;
- Systematize the advanced and proximity strategies;
- Ensure quality management; and
- Ensure the adequacy of incentives for the adopted organizational models (see Annex III).

A set of activities for these strategies is identified in Table 11. The creation of professional orders and their global responsibilities in quality management, and more specifically in the accreditation and inspection of health service and training units, shall be progressively clarified and defined.

Targets

The targets are related to the achievement of the activities according to the timeline in Table 11.

Estimated Costs

The global costs to complete the activities in this strategic line are estimated in Annex VII.

Table 11. Strategic Line 1: Organize NHS Services and Normative Framework

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
Strengthen institutional and health facility management	Ensure MOH's internal coordination to integrate estimations in this plan in mid-term fiscal scenario	X								HRD	
	Define and develop minimum management team per health facility type	X	X							NDMA	Yes
	Develop criteria to determine performance of each health facility type	X								NDMA	
	Develop and implement instruments to evaluate health facility performance		X	X						NDMA	
	Develop criteria to determine performance of health facility managers	X								HRD	Yes
	Develop and implement a system to evaluate performance of health facility managers		X	X						HRD	Yes
	Build capacity of managers to distribute and use staff according to specific tasks				X	X	X			HRD	Yes
	Design and apply legal instruments and documents to delegate competencies at all levels				X	X	X			HRD	Yes
Define health facility staff	Update placement norms per type of health facility	X	X							NDMA	
	Update placement norms per 1,000 population	X	X							HRD	
	Define staff for each health facility	X	X	X						PHD	
Develop recruitment plans for health facilities	Regulate recruitment and vacancy creation	X								HRD	
	Develop and implement recruitment plans on an annual basis for submission to Provincial Health Directorate by responsible institution	X	X	X	X	X	X	X	X	PHD	
	Develop and implement recruitment plans per district or municipality	X	X	X	X	X	X	X	X	PHD	
	Develop and implement provincial recruitment plans	X	X	X	X	X	X	X	X	PHD	
	Assess provincial recruitment plans for equity criteria	X	X	X	X	X	X	X	X	HRD	
Regulate interface between vertical programs and horizontal services	Develop intervention normal for national programs at health facility level to ensure ability to perform several functions at health facility		X	X						NDMA	Yes

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
Update HHR profile and ensure adequacy of training programs	Review job descriptions and responsibilities of priority staff (with particular attention to MCH staff)	X	X	X						NDMA	Yes
	Review job descriptions and responsibilities of remaining staff		X	X	X					NDMA	Yes
Systematize the advanced and proximity strategies	Define minimum services package, including mobile brigades	X	X	X						NDHPDC	Yes
	Define alternative outreach packages adequate for the reality of health care in the country	X	X	X						NDHPDC	Yes
	Define minimum teams for each package	X	X	X						NDHPDC	Yes
	Define community health worker profile[1]	X	X	X						NDHPDC	Yes
	Revitalize and update the national community health worker[1] program	X	X	X	X	X				NDHPDC	Yes
Ensure quality management	Train staff on using therapeutic protocols	X	X	X						HRD	
Ensure adequacy of incentives for organizational models	Define applicability criteria for each individual incentive, taking into account the type of health facility		X	X						HRD	Yes
	Specify incentives for institutional performance that are adequate for the different organizational models		X	X						HRD	Yes

[1] See Annex VI.

HRD = Human Resources Directorate. NDMA = National Directorate for Medical Assistance. PHD = Provincial Health Directorate. NDHPDC = National Directorate for Health Promotion and Disease Control.

STRATEGIC LINE 2—IMPROVE MANAGEMENT CAPACITY AT ALL LEVELS OF NHS

Analysis Overview

Management of the NHS is perceived as being poor and unprofessional. This lack of professionalism exists in a context in which the decentralization process to the provinces, municipalities, and districts, as well as the autonomy processes for some health facilities, demands major competency in management at all levels of the NHS.

Capacity building in management has not been neglected; rather, it has not been integrated into a capacity-building strategy for all levels of the NHS. This has resulted in the placement of managers into positions that are not necessarily relevant for the new competencies that they acquire in training.

Decentralization is occurring at a pace that is not accompanied by its regulation. This lack of regulation adds difficulties to the management processes because of a lack of defined responsibilities and management processes for the several levels of the NHS. This situation occurs in a context of non-existent institutional memory, in which there is a lack of properly designed information management systems and under-developed management instruments, resulting in a lack of timely information to inform decision-making. As a result, the management culture often results in less transparent decisions, with staff appointments occurring regardless of the necessary qualifications.

At the level of HHR management, the excessive bureaucracy—as well as the complexity of health worker careers, lack of information, low salaries, lack of incentives and other instruments, and incompetent staff—results in a situation in which the reality is unknown, there are bureaucratic delays, managers lack the capacity to manage the employee's career, and staff lack motivation.

Despite being a recent phenomenon, in Mozambique there are still situations of loyalty conflict and interference with authority and reporting lines that are related to NHS workers being linked to non-governmental organizations (NGOs) or private entities, or to NGO workers who are functionally integrated into the NHS health facility.

Values and Guiding Principles

NHS management should be professionalized, guided by public service values, and supported by clear and transparent regulations and norms and by proper management instruments.

General Objective

The objective is to strengthen the management, planning, and administration capacities in general, and HHR in particular, according to the public administration reform in course and the reality of job decentralization. In addition, all appropriate steps should be taken to continuously improve management practices—while respecting the technical and regulating laws and norms in force for health staff professional careers and training—and decentralize the concentration of powers and competencies to ensure the development of facilitating instruments for management processes.

Strategies

The strategies for this objective include the following:

- Train in management and revise the Regional Center for Sanitary Development (RCSD) articles of incorporation to redevelop it as a public institute responsible for training NHS staff on management and distance learning;
- Develop regulations for multiple employment;
- Decentralize HHR management to the provinces, municipalities, districts, and autonomous institutions;
- Manipulate HHR management; and
- Develop an HHR Observatory (HHRO).

The activities developed for these strategies are shown in Table 12.

Targets

The targets related to the fulfillment of activities according to the timeline are shown in Table 12.

Estimated Costs

The global costs to complete the activities for this strategic line are estimated in Annex VII.

Table 12. Strategic Line 2: Improve Management Capacity at All Levels of NHS

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
Train in management and revise RCSD articles of incorporation	Create NHS management school	X	X							RCSD	Yes
	Define NHS health facility manager profile	X	X							HRD	Yes
	Strengthen RCSD human resources capacity to respond to new demands	X	X	X						RCSD	Yes
	Develop training programs for NHS health facility managers		X	X						RCSD	Yes
	Develop and implement systematic plan for pre-service training of NHS health facility managers			X	X	X	X	X	X	RCSD	
	Develop and implement a systematic plan for continuing education for NHS health facility managers						X	X	X	HRD	
	Design and approve new articles of incorporation for RCSD	X	X	X	X	X	X	X	X	RCSD	Yes
Regulate multiple employment	Regulate exclusivity regime for public servants		X	X						HRD	Yes
	Update private practice regulations for public servants	X	X							NDMA	Yes
Decentralize HHR management to provinces, municipalities, districts, and autonomous institutions	Regulate decentralization of management of HHR to more peripheral levels	X	X							HRD	Yes
	Develop mechanisms to support transfer of management of HHR to more peripheral levels	X	X	X	X	X	X	X	X	HRD	
	Introduce integrated system for HHR management at all levels of NHS	X	X	X	X	X	X	X	X	HRD	Yes
Manipulate HHR management	Review and update programming and work organization mechanisms in health facilities to increase their efficacy and efficiency to increase their productivity			X	X	X				HRD	Yes
	Promote a teamwork spirit in which all members have specific and well determined tasks that are known and assumed by all, and staff know how to contribute to a common objective			X	X	X				HRD	
	Place qualified and specialized higher level staff (or requalification of existing staff) in human resource departments at all levels			X	X	X				HRD-TD	
	Develop continuing education for provincial and central level managers in the many areas of HHR	X	X	X	X	X	X	X	X	RCSD	Yes
	Develop and apply a specific code of ethics and discipline for health workers			X	X	X				HRD	

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
	Inventory HHR management instruments and define needs	X								HRD	Yes
	Develop and implement a plan to develop HHR management instruments		X	X	X	X	X	X	X	HRD	Yes
Develop HHR Observatory	Inventory HHR data sources	X								INS	Yes
	Install the HHRO	X	X	X	X	X	X			INS	Yes
	Review the PIS and adapt it to the national health system and Ministry of Planning and Finance salary system	X	X							INS	Yes
	Provide supervision and in-service training for the technical team responsible for PIS at all levels	X	X	X						INS	Yes
	Expand PIS to districts and provincial capitals			X	X	X	X	X	X	PHD	
	Provide routine PIS reports between different departments and directorates within MOH			X	X	X	X	X	X	INS	
	Harmonize information flow between the PIS, MOH's Health Information System, Ministry of Planning and Finance's information system and HHRO			X	X	X	X	X	X	INS	
	Install an intranet-like computerized national network for simultaneous information (provincial and central levels)				X	X	X	X	X	UTI	
	Develop and implement a system to monitor health worker migration trends				X	X	X	X	X	HRD	
	Monitor the NPHHRD 2009–2015		X	X	X	X	X	X	X	INS	
	Maintain the HHRO						X	X	X	INS	

RCSD = Regional Center for Sanitary Development. HRD = Human Resources Directorate. NDMA = National Directorate for Medical Assistance. HRD-TD = Human Resources Directorate Training Department. INS = National Institute of Health. PHD = Provincial Health Directorate. UTI = IT Technical Unit.

STRATEGIC LINE 3—IMPROVE NHS STAFF DISTRIBUTION, MOTIVATION, AND RETENTION

Analysis Overview

The analysis of the HHR situation showed the following:

- There are major inequalities in the distribution of health workers between provinces and municipalities;
- Placement of new graduates in the provinces with "increasing" criteria is occurring without considering the priorities in each province and the necessary skill mix;
- The HHR pyramid has a broader base of less differentiated workers;
- Central and provincial hospitals are overloaded because of deficits in the necessary competencies in rural hospitals and health centers to respond to the increasing workload as a result of HIV/AIDS;
- Overload of services and lack of task organization and distribution are resulting in a lack of efficiency in work;
- Efficiency can be improved by transferring low-activity staff from health facilities to other facilities with an overload of patients;
- There is a lack of implementation of professional careers;
- There is a lack of funds for progression or promotion of workers in their respective careers;
- Differences exist between salaries and the cost of living;
- Poor working conditions result in staff who are dissatisfied and lack motivation;
- The aged infrastructure prevents the use of bio-safety norms; and
- There is a high risk of HIV/AIDS among health workers.

Such conditions contribute to the overall dissatisfaction and lack of motivation of health staff.

Values and Guiding Principles

Health workers should be valued, and their central role in the design and operation of the health services system should be acknowledged by balancing their distribution, identifying their needs, ensuring their safety, facilitating the performance of their tasks, ensuring their mobility, rewarding sacrifices and above-average performance, and ensuring the attainment of personal and organizational objectives.

General Objective

The objective of this strategic line is to improve performance of the health service system through a better distributed and motivated workforce. Specifically, it is intended to:

- Correct the poor distribution of staff throughout the country and between levels of care;

- Ensure adequate health careers for the current national context and advise on their effective management; and
- Develop a reference framework to justify a salary, subsidy, and incentive policy that acknowledges, within the public sector framework, the specificity of the HHR status.

Strategies

The strategies for this objective include the following:

- Review and/or update recruitment, placement, turnover, and retention procedures;
- Review health worker performance, career progression, and promotion management;
- Review specific health careers to simplify and align them to the new institutional contexts, the greater demand for staff differentiation, and the new epidemiologic reality;
- Develop a salary, subsidy, and incentive strategy specific to health workers within the public administration; and
- Improve work conditions for health workers—especially regarding bio-safety conditions, and implement the principle of compensation based on incurred risks, difficulty and physical stress from certain tasks, and the mandatory nature of shift work—and understand the capacity of intervention for health worker motivation.

The activities for each strategy are identified in Table 13.

Targets

The targets are related to the fulfillment of activities according to the timeline in Table 13.

Estimated Costs

The global costs to complete the activities for this strategic line are estimated in Annex VII.

Table 13. Strategic Line 3: Improve HHR Distribution, Motivation, and Retention

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
Review and/or update recruitment, placement, turnover, and retention procedures	Build capacity of Provincial/District Health Directorates and central hospital management to execute recruitment process for NHS staff together with public sector reform initiatives		X	X						HRD	
	Design an integration program for newly recruited staff based on their technical area and duties to be performed (reception program)		X	X						HRD	
	Develop and implement a health staff turnover system		X	X						HRD	
	Ensure that transfer mechanisms are linked to a need to fill vacancies		X	X						HRD	
	Promote continuity of partner initiatives to hire newly graduated staff who are waiting for an appointment by the Administrative Tribunal		X	X						HRD	
	Decentralize the Administrative Tribunal related processes		X	X	X	X	X	X	X	HRD	
	Review and/or update retention procedures		X	X						HRD	
Review performance, career progression, and promotion management	Develop criteria to evaluate health worker performance				X	X	X	X	X	HRD	
	Develop a monitoring system for health worker performance				X	X	X	X	X	HRD	Yes
	Update the promotion and progression system for professional careers				X	X	X	X	X	HRD	Yes
	Develop procedures to link performance, career progression, and continuous training				X	X	X	X	X	HRD	Yes
Revise specific health careers	Propose and negotiate a special status for specific health cadres					X	X	X	X		
	Review and simplify specific health careers—including new careers if needed—and the tasks assigned to each professional at different levels of the careers and the respective training system	X	X	X						HRD	Yes

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
Develop salary, subsidy, and incentive strategy	Propose and negotiate a special status for the specific health cadres to make possible a salary strategy that considers merit and competencies		X	X						HRD	Yes
	Regularize the situation of States' employees in terms of salary rights linked to progression and promotion in the career system		X	X						HRD	
	Implement the principle of compensation based on risks incurred, difficulties and stress resulting from certain tasks, and the mandatory nature of working in shifts		X	X						HRD	
	Increase percentage of total staff expenses relative to the health budget		X	X						HRD	
Improve work conditions and understand the capacity of intervention for health worker motivation	Develop and implement a plan to improve work conditions	X	X							HRD	
	Create mechanisms to ensure continuous distribution of personal protective items in health facilities		X	X						HRD	
	Monitor the bio-safety conditions for health workers	X								HHRO	
	Analyze motivational factors that keep health workers in peripheral health facilities, and the social, economic, and anthropologic factors that characterize such employees	X	X	X						INS	
	Develop intervention packages to motivate health staff	X	X	X						HRD	Yes
	Improve motivation of the workers through morale and material incentives, improved work conditions, and improved work planning, programming, and organization	X	X	X						HRD	Yes
	Strengthen the principle of assignment of housing close to the health facilities to facilitate the accommodation of workers and interns, extending also to urban areas	X	X	X						HRD	Yes
	Review and implement a system of subsidies and incentives for health workers and teams (see Annex III)	X	X	X						HRD	Yes
	Develop and implement a mechanism to support the subsidy and incentive system in a sustainable and equitable way	X	X	X						HRD	Yes

HRD = Human Resources Directorate. HHRO = Health Human Resources Observatory. INS = National Institute of Health.

STRATEGIC LINE 4—INCREASE CAPACITY OF INITIAL PRODUCTION, POST-GRADUATE TRAINING, AND IN-SERVICE TRAINING NETWORKS

Analysis Overview

The training institutions and centers are at their production limit for NHS human resources in response to the Government's Plan 2005–2009, Human Resources Development Plan 2006–2010, and the Accelerated Training Plan 2006–2009, which present some concerns with the possible compromise in training quality. There is an urgent need to improve the capacity of the network of human resources placed into training to adequately respond to the country's identified shortages and training needs. Evaluation and monitoring of the quality of training and final technical capacity of the trainees must also be improved. These activities should take into consideration the involvement of the Professional Orders.

The MOH has been and shall continue to be responsible for coordinating medical post-graduation internships; however, there is still a need to rethink the linkage with the newly established Doctor's Order. The MOH will also continue to be responsible for in-service training norms executed by the Provincial Health Directorate.

The situational analysis identified the following issues:

- Quality is compromised by the increase in the current production of technicians;
- There is a lack of effectiveness of the management/administration of the training institution;
- Dependence of the training institutions on external funding means that late arrival of funds makes it difficult to plan and execute training programs;
- Nursing is one of the most favored trainings, yet the level of production of nurses is not satisfactory, resulting in a relative deficit in the production of priority cadres for the MDG and an unbalanced skill mix;
- National and provincial scope training responsibilities are undefined;
- The Provincial Health Directorates assume few responsibilities in managing the training institution to improve the quality of training and coordination needed for the absorption of trained staff;
- There is a shortage of qualified staff to teach the courses;
- There is a shortage of full-time teachers;
- Poor conditions at the internship sites inhibit good learning;
- Monitoring and technical support to the Training Department at the central level and to the training institution is limited due to a shortage of staff;
- Lack of defined norms for service provision makes it difficult to institute technical training parameters based on competence;

- Continuing education is occurring without monitoring to assess quality improvement in management of the service or system;
- Continuing education planning is excessively linked to vertical programs' contents and funding.

Values and Guiding Principles

The training network should develop the ability to produce the health workers necessary for the NHS and ensure that the process of training meets high standards of technical demand and a commitment to the values of the public mission and professional ethics.

General Objective

Providing expanded and strengthened health care for the population is only possible through properly trained health workers. Therefore, the general objective of this strategic line is to ensure the training of health workers according to the identified needs (Annex II). Specifically, it is intended to:

- Improve and expand the training (both technical and ethical) of priority secondary level cadres;
- Improve and expand in-country and expatriate post-graduation internships in a medical specialty;
- Create conditions to train Training Institution managers on management and pedagogic training for its teachers; and
- Ensure implementation of in-service training as an integrated national program that is linked with career management.

Strategies

The strategies for this objective include the following:

- Expand the training network and improve logistics;
- Expand the technical capacity of the training network;
- Improve teaching processes and quality;
- Create a teaching career within the MOH;
- Differentiate the training of health workers;
- Improve the skill mix for the health facility's profile;
- Strengthen the training information system (in the scope of the HHRO);
- Support the community mobilization and participation policy;
- Organize in-service training processes;
- Strengthen the capacity for post-graduate planning and implementation;
- Train managers (see Strategic Line 2: Improve Management Capacity at All Levels of NHS); and

- Coordinate with partners for the funding of local courses beyond those anticipated in the Provincial Common Fund.

Activities for each of the strategies are shown in Table 14. Implementation of these strategies may assume at least two forms. The first is followed by the HRD Training Department (HRD-TD) and implies an equity approach of the Training Institutions in every province. The second requires the creation of centers of excellence in two or three provinces that have training, research, and community service responsibilities, as well as responsibilities for an intense training-of-trainers activity, other Training Institution follow-up, and national training courses as focal points for development of distance education methodologies.

It is important to identify the responsibilities of the HRD-DF in following and promoting the bachelors and licentiates needed in the NHS. Together with the Health Sciences College, it should look for licentiate degree courses for secondary level health workers to prevent the loss of these workers to other degrees outside of the health sector. To ensure the capacity building of internship sites, accelerated post-graduate training courses conducive to Master's and Doctor's degrees will be promoted in partnership with the Ministry of Education (MINED) for the teachers shared among the Training Institution's and MOH's internship sites.

The relationship with the MINED is important to ensure strategies to expand the capacity to produce doctors for the national health system. According to the strategies, the MOH may define, in more detail, the best approach to complement the needs not satisfied by national production. Strategies may include the continuous recruitment of expatriate medical staff, training of national medical staff abroad, and revision of national needs, as well as reconsidering the possibility of replacing doctors with less differentiated staff in some facilities.

Targets

The targets are related to the fulfillment of activities according to the timeline in Table 14.

Estimated Costs

The global costs to complete the activities foreseen in this strategic line are estimated in Annex VII.

Table 14. Strategic Line 4: Increase Capacity of Initial Production, Post-Graduate Training, and In-Service Training Networks

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
Expand training network and improve logistics	Update the investment plan for training institutions infrastructure to expand training network	X	X								
	Review general regulations for training institutions to allow their differentiation into centers of excellence	X	X							HRD-TD	
	Build new premises for the Institute of Health Sciences in Maputo		X	X						HRD-TD	
	Procure and harmonize teaching and support material: humanistic lab equipment, IT equipment, photocopiers, supplies for internships		X	X	X	X	X	X	X	HRD-TD	
	Procure library material and humanistic lab equipment for courses and internships in a decentralized way (training department at the central level)		X	X	X	X	X	X	X	HRD-TD	
	Intensify development of Documentation and Information Centers in the training institutions and health facilities used as internship sites		X	X	X	X	X	X	X	HRD-TD	Yes
Expand technical capacity of training network	Increase teaching staff to ensure four full-time teachers per course		X	X	X	X					
	Implement an intensive capacity-building/specialized technical refresher and pedagogic program for teachers and tutors/ internship supervisors		X	X	X	X	X			HRD-TD	
	Establish agreements for licentiate degree courses for training institution teachers together with the Health Sciences College		X	X	X	X	X	X	X	HRD-TD	
	Develop specialized technical capacity building in coordination with respective programs	X	X	X	X	X	X	X	X	HRD-TD	
	Build capacity of teachers in competency-based learning (use of standard procedure guidelines for technical competence teaching and learning, and objective evaluation)			X	X	X	X	X	X	HRD-TD	Yes
	Establish shared training programs for teaching staff and internship supervisors in health facilities to standardize technical and pedagogic criteria		X	X	X	X	X	X	X	HRD-TD	
	Coordinate and link in-country and expatriate training institutions in line with exchange and technical support to national health training network		X	X	X	X	X	X	X	HRD-TD	

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
	Design and implement a package of subsidies and incentives for staff teachers in training institutions			X						HRD-TD	
	Establish training service contracts with governmental or non-governmental institutions available to organize additional courses (in excess of the capacity of existing training institutions in the health sector) according to local level funds		X	X	X	X	X	X	X	HRD-TD	
	Create a pedagogic-didactic nucleus in the training department at the central level		X	X						HRD-TD	
Improve teaching process and quality	Review technical criteria for internship site selection in each technical area	X	X	X						HRD-TD	
	Coordinate with Provincial Health Directorates in selecting internship sites based on revised technical criteria, and the permanent refurbishment of such sites		X	X	X	X	X	X	X	HRD-TD	
	Promote and create model wards within hospitals to serve as internship sites	X	X	X	X	X	X	X	X	HRD-TD	Yes
	Contract retired technical staff to strengthen teaching of ethical attitudes in the internship component		X	X	X	X	X	X	X	HRD-TD	
	Define contracting norms for internship supervisors considering the payment according to their education level			X						HRD-TD	
	Initially perform cross-evaluations (among institutions, per pairs) of training institutions' activities, which should evolve to independent assessments by 2015			X	X	X	X	X	X	HRD-TD	Yes
	Review and harmonize curriculums		X	X						HRD-TD	Yes
	Implement training programs for priority careers (nursing, MCH nursing, general medicine and preventive medicine) in a modular way to facilitate alternation of two simultaneous teams in the same institutions and schedule and movement of students to rural hospitals in the province in which the clinical and rural internships shall occur									HRD-TD	Yes
	Organize biannual research journeys at the training institution with presentation of student and teacher work			X		X		X		HRD-TD	
Create a teaching career within the MOH			X	X							

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
Differentiate trainings for health workers	Promote elementary and basic health technicians by 2011		X	X	X					HRD-TD	
	Negotiate with the MOH the necessary training so that elementary staff may enroll in secondary level courses (grade 10)	X	X	X						HRD-TD	
	Carry out promotion training for secondary level elementary by 2011	X	X	X	X	X				HRD-TD	
	Reformulate training programs for Promotion Courses to improve the specificity of content, reduce the training period to one year, and decrease the worker's period of absence from the origin health facility. Include the provision of post-labor courses.		X	X	X	X	X	X	X	HRD-TD	Yes
	Contract with the Health Sciences College for licentiate degree courses for secondary level health workers		X	X	X	X	X	X	X	HRD-TD	
Improve the skill mix for the health facility's profile	Train general medicine agents to facilitate the transfer of nurses placed in peripheral facilities without in-patient wards to the facilities with in-patient service		X	X	X	X	X	X	X	HRD-TD	
Strengthen the training information system (in the scope of HHRO)	Continue process of creating a central level computerized database for entire training process, including continuing education and internship sites		X	X	X	X				HRD-TD	Yes
Support community mobilization and participation policy	Promote community involvement by coordinating and standardizing training for community-based health agents (CBHA) by NGOs involved in community work		X	X	X	X				HRD-TD	
	Promote development of professional competencies in health using community involvement methodologies and techniques		X	X	X	X	X	X		HRD-TD	
	Reach a consensus on the community health worker profile (see Annex VI)	X	X	X						NDHPDC	
	Adjust the Community Health Worker Training Program to the defined profile (see Annex VI)	X	X	X						HRD-TD	
	Include community involvement work methodologies and techniques in reformulating training programs for health technicians (general medicine technicians and agents)		X	X	X					HRD-TD	Yes

Strategies	Anticipated Activities	Year of Implementation								Responsible	Technical Assistance
		08	09	10	11	12	13	14	15		
Organize in-service training processes	Establish an integrated planning, monitoring and evaluation system for in-service training activities for workers at all levels and NHS categories	X	X	X						HRD-TD	Yes
	Implement an Information System to manage and monitor continuing education activities integrated in the above mentioned information system	X	X	X						HRD-TD	Yes
	Centralize funding for continuous training activities at central level	X	X	X	X	X	X	X	X	HRD-TD	
	Develop new distance continuing education modalities by training institutions with national courses		X	X	X	X	X			HRD-TD	Yes
	Strengthen the technical capacity of the continuous training department at the central level and in provinces with licentiate workers	X	X	X						HRD-TD	
Strengthen capacity for post-graduate planning and implementation	Expand medical post-graduate courses in the main institutions in the country accredited for curative health service provision	X	X	X	X	X	X	X	X	HRD-TD	
	Maintain demand for medical services before enrollment in complementary internships conducive to medical specialties									HRD-TD	
	Develop methods to increase post-graduate training with partnerships between schools of medicine in the country or abroad		X	X	X	X	X			HRD-TD	

HRD-TD = Health Resources Directorate Training Department.

NPHHRD IMPLEMENTATION

Implementation of the NPHHRD will be a laborious, complex, and demanding process. The following reference framework is proposed to ensure a well-coordinated, well-documented, transparent, accurate, efficient, and effective process. This reference framework requires the appointment of a NPHHRD Monitoring and Implementation Group (MI-NPHHRD) that will be responsible for 10 work packages necessary for successful implementation of the NPHHRD (Figure 5).

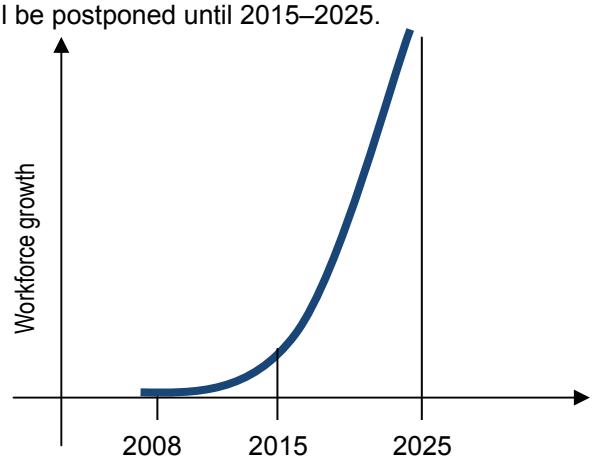
Figure 5. Implementation of NPHHRD by Monitoring and Implementation Group

Implementation

The NPHHRD will avoid accelerating the training too quickly while the definition of provincial and district responsibilities and the scope of decentralization and public sector reform are pending (Figure 6). The possibility of complementing the efforts of the public sector with efforts from other sectors, through co-funding mechanisms and/or contracting for the planned activities, will be taken into consideration.

Figure 6. NPHHRD Implementation

Production of new staff will initially be maintained more or less at current levels. Efforts will initially focus on building capacity of the management and improving the training network and work conditions, and accelerated expansion will be postponed until 2015–2025.



Three possible scenarios have been considered for the period between 2008 and 2015; these are described in Annex II and budgeted in Annex VII.

Monitoring and Implementation Group

The MI-NPHHRD shall be a multidisciplinary senior group (including workers in the specific health fields, economists, human resources specialists, and information and expertise management specialists) under direct supervision of the National Human Resource Director. The Group leader shall hold a National Director position (similar to a permanent secretary for compensation and subsidy purposes). The constitution and terms of reference are specified in the provisional Decree establishing the MI-NPHHRD (Annex VIII). All positions shall be full-time, with permanent exclusivity and availability (no working hours). The MI-NPHHRD shall be appointed for a three-year term, and its existence may be prolonged should any exceptional circumstances demand it. The main tasks of the MI-NPHHRD are described below.

Communication

A diversified group of users, policymakers, public administrators from several sectors, professional associations and orders, unions, foundations and NGOs, international partners, and health workers are interested in understanding the NPHHRD and its expected results. Therefore, one of the priority tasks will be to design and execute a Communication Plan to ensure continued and sustainable contact during the course of activities of the MI-NPHHRD. This plan shall use various resources, such as newspapers, radio, television, brochures and posters, as well as new Web-based technologies, to share information about the plan.

HHRO

The MI-NPHHRD should integrate the HHRO Installing Commission. The main objectives are to:

- Incentivize and promote evidence-based HHR strategies and interventions;
- Inform HHR decision-making through the availability of data, information, and expertise on national HHR;
- Develop capacities to evaluate and monitor the HHR situation;
- Establish a community of experts with HHR information producers and users and HHR development advocacy; and
- Mobilize resources and technical support.

The scope of work covers the following:

- Improve the HHR database at the national, provincial, district, municipality, and institutional levels (e.g., harmonize definitions, data collection instruments, relationships, and data accessibility according to the authorized access levels);
- Promote research and data analysis and develop capacity-building activities for data collection, analysis, and communication;
- Systematize on an annual basis the HHR information according to a standardized format;
- Create and maintain routine methods of HHR information presentation (e.g., manifests, memoranda, forums); and
- Integrate within an international HHRO network.

The institutional basis for the HHRO should be a network with the MOH, other relevant ministries, universities, and other training institutions, as well as with PIS managers at all levels.

Priority Ownership at Provincial and District Levels

The NPHHRD is based on a macro vision of the Mozambican reality. This vision shall be considered in the many provincial contexts and converted into Provincial HHR Plans. The MI-NPHHRD shall incentivize and validate these planning exercises.

Partners and Resources

Success of the implementation depends on well-structured partnerships with a clear definition of duties and rights, expectations in terms of results, and rewards for the achievement of such results. The partnerships shall assume formal commitments with the public sector objectives and targets. For this purpose, it is necessary to specify the commitments, provide available resources, ensure the existence of legal and management instruments, and ensure that the responsible services have the necessary competencies to follow them.

The MI-NPHHRD shall be responsible for identifying partners for the different activities for the strategic lines, contracting with partners, working in partnership with public services, and ensuring access to proper and necessary resources for their implementation.

Technical Assistance[4]

Many support activities will be provided and supported by national and international technical assistance. The Monitoring and Implementation Group will create a technical assistance plan to pursue the NPHHRD and may assign management of parts of this plan to different stakeholders involved in its implementation.

Research

Research is needed to document the cost and effectiveness of several proposed activities. Therefore, the MI-NPHHRD shall design a Research Plan for HHR in Mozambique and shall follow up on its implementation.

Monitoring and Evaluation

The NPHHRD intends to achieve the objectives related to building the capacity of the training and management system through the recruitment and placement of staff wherever they are needed the most (Box 3).

The MI-NPHHRD will monitor the approach to complex issues related to new careers, salaries, and incentives and community health worker management (see Annex VI). It shall also follow up the evolution of indicators for the defined targets. Therefore, the MI-NPHHRD will develop and implement mechanisms for monitoring and evaluation. It will also determine whether there is greater access to the priority competencies, the level of coverage, and the impact on production.

[4] Technical assistance is the term used to include short-, mid- and long-term contracts for nationals or foreigners.

Box 3. Expected Results for First 36 Months of NPHHRD (June 2008 to June 2011)

Capacity Building
- Clarify legal and normative framework for the decentralization in course.
- Manipulate and train managers in general, and HHR managers in particular.
- Build capacity of training centers.
- Develop the observatory role.

Staff
- Define and approve national, provincial, district, and institutional staffing.

Recruitment and Placement
- Base the recruitment and placement of staff on staff-related vacancies, and recruit as many staff as possible graduating from institutions.
- Compensate for the deficit by recruiting retiring and retired workers in the specific careers with competitive packages that are complementary to retirement.
- Complete the management teams in the Provincial Health Directorate according to the recommendation in Annex II.

Retention
- Finalize negotiations with the Ministry for Public Function to obtain a special status for health-specific careers.
- Provide retention incentives related to exclusivity commitments, full-time work, and priority cadres.
- Define and implement incentive packages related to attainment of strategic objectives.
- Approve subsidies conducive to improving the social status of workers in general.
- Improve bio-safety conditions in the workplace.
- Specify and implement the minimum technical conditions for good performance.
- Provide free and priority health services and treatment for all health workers.

The MI-NPHHRD shall monitor the approach to careers, salaries and incentives, and community health worker management (see Annex VI). It will also follow up the evolution of the indicators for the defined goals. Thus, the MI-NPHHRD shall develop and implement mechanisms for monitoring and evaluation and will be able to determine whether there is greater access to the priority cadres, the extent of coverage, and the impact on training and production of health workers.

Implementation Incentives

The MI-NPHHRD will be responsible for formalizing a package of incentives to be allocated to national and provincial decision-makers for the implementation of plan activities. This will be under the direct responsibility of the MI-NPHHRD, which will directly administer them. These activities, the available resources, the execution timeline, and the evaluation indicators and incentives will be subject to an agreement process between the national or provincial authority and the MI-NPHHRD.

Integrated, Semi-Open Planning

Planning for the health sector is extraordinarily complex, not only because of its multiple stakeholders (public and private), but also because of the multiple plans emerging under the control of the same actor and the evolution of the evidence basis that justifies the decisions.

This plan cannot be seen as an unchanging plan while it is in force. The MI-NPHHRD shall establish mechanisms to allow adaptation to new plans that are created, new trainings that become available, resources that are not mobilized according to expectations, etc.

IMPACT INDICATORS FOR THE HEALTH SECTOR STRATEGIC PLAN (HSSP) 2007–2012

General Objective 1	Reduce rate of child mortality from 124% registered in 2003 to 90% in 2010 and 67% in 2015, therefore achieving the MDG						
	2007	2008	2009	2010	2011	2012	2015
Reduce neonatal mortality				36/1,000 live births			30/1,000 live births
Reduce the incidence rate for measles				4.5/100,000			2.5/100,000
Reduce the rate of deaths caused by measles (WHO)				0.05/100,000			0.02/100,000
Increase the percentage of children under one year of age who are immunized against measles in each district by 2015				90%			95%
Reduce mother-to-child transmission of HIV, for HIV-tested children born to HIV+ mothers				25%			
Increase level of coverage of HIV-+ pregnant women who are clinically eligible for treatment with antiretroviral drugs (ARV)				30%			
Increase percentage of HIV+ children benefiting from ARV treatment in 2007 and 2010	10%			10,600 HIV+ children (less than 10% of those in need)		31,000 children (less than 30% of those in need)	

General Objective 2	**Reduce rate of child/juvenile mortality from 178% registered in 2003 to 135% in 2010 and 108% in 2015, therefore achieving the MDG**						
	2007	2008	2009	2010	2011	2012	2015
Reduce rate of incidence of diarrhea in children under 5 years				11%			10%
Reduce rate of incidence of acute respiratory infections (mainly pneumonia) in children under 5 years				8.5%			6.5%
Reduce rate of incidence of severe malaria in children under 5 years (MDG)				41/10,000			22.5/10,000
Increase percentage of children under 5 years benefiting from combination of personal and collective protection measures (spraying, treated mosquito nets, and other low-cost interventions) (MDG)				60%			
Reduce rate of mortality from severe and complicated malaria in children under 5 years (MDG)				1.5/10,000			1/10,000
Reduce proportional rate of mortality by malaria in children under 5 years				22.5%			15%
Reduce rate of mortality caused by severe malnutrition in children under 5 years				12.50%			10%
Reduce rate of prevalence of anemia in children 6 to 59 months				50%			30%

General Objective 3	Reduce rate of maternal mortality from 408 deaths per 100,000 live births registered in 2003 to 350 per 100,000 in 2010 and 250 per 100,000 in 2015, therefore achieving the MDG						
	2007	2008	2009	2010	2011	2012	2015
Increase coverage of first antenatal visits and progressively improve their quality				90%			95%
Increase average number of antenatal visits per pregnancy and progressively improve their quality				3.5%			400%
Increase coverage of institutional births (MDG)				56%			66%
Improve quality of birth assistance in health facilities							
Increase number of health facilities providing basic essential emergency obstetric care, with particular effort in underserved provinces (Zambezia, Nampula, Niassa, Cabo-Delgado, and Inhambane)				3.0/500,000 population			4.0/500,000 population
Increase coverage for obstetric complications treated at health facility with essential emergency obstetric care				30%			50%
Improve and strengthen supervision of compliance with obstetric norms in force							
Improve capacity to diagnose and treat obstetric complications in health facilities							
Strengthen prevention and treatment measures for direct obstetric complications							
Improve obstetric referral system through existence of ¾ of operational ambulances				70% of health facilities with obstetric care			
Improve obstetric referral system through existence of ¾ of operational ambulances				100% of health facilities with emergency obstetric care			
Improve obstetric referral system through existence of ¾ of operational communication radios				100% of district centers and 50% of localities with obstetric beds			
Reduce maternal mortality due to direct obstetric complications in health facilities with essential emergency obstetric care				1.5%			1%

General Objective 3	Reduce rate of maternal mortality from 408 deaths per 100,000 live births registered in 2003 to 350 per 100,000 in 2010 and 250 per 100,000 in 2015, therefore achieving the MDG						
	2007	2008	2009	2010	2011	2012	2015
Reduce rate of prevalence of malarial parasitism in pregnant women (MDG)				15%			10%
Increase number of pregnant women receiving personal and collective prevention measures against malaria (spraying, treated mosquito nets, and other low-cost interventions) (MDG)				60%			
Ensure that pregnant women at risk of malaria have access to presumptive and intermittent treatment		60%					
Reduce rate of malaria-related fatalities and mortality among pregnant women							
Develop advocacy actions toward abortion non-penalization to prevent maternal mortality due to unsafe abortions							
Ensure provision of safe abortion services and establish and extend post-abortion services to rural and urban health centers							
Increase use of contraceptives (MDG)				24%			34%
Reduce rate of incidence of teenage pregnancy							
In collaboration with the National Council for the Fight against AIDS, reduce rate of prevalence of HIV in pregnant women 15 to 24 years (MDG)				12%			8%
Increase coverage of syphilis screening and treatment				85%			95%

General Objective 7	Reduce the malaria burden by half by 2015 (measured by rates of prevalence of malarial parasitism and lethality) relative to levels observed in 2001, therefore achieving the MDG regarding malaria control						
	2007	2008	2009	2010	2011	2012	2015
Increase number of people at risk of malaria receiving personal and collective protection measures against malaria (spraying, treated mosquito nets, and other low-cost interventions) (MDG)				60%			
Reduce from 60% the rate of prevalence of malaria parasitism in the population 2–9 years reported in 2001 (MDG)				45%			
Ensure rapid access to correct and low-cost treatment for all those with malaria within the first 24 hours after onset of symptoms			60%				
Reduce the 7% malaria lethality rate reported in 2001 (MDG)				5%			3.5%
Improve the current 25–30% quality of malaria diagnosis				60%			80%
General Objective 8	**Reduce rate of tuberculosis prevalence and mortality, therefore achieving the MDG regarding tuberculosis control**						
	2007	2008	2009	2010	2011	2012	2015
Reduce rate of prevalence of tuberculosis from 636/100,000 reported in 2004				450/100,000			320/100,000
Reduce the 12% rate of tuberculosis lethality reported in 2004 (MDG)				8%			6%
Increase the 45% detection rate of cases with BK+ reported in 2004		65% by end of 2008		70% by end of 2010			
Increase rate of 76% therapeutic success with Short Cycle Directly Observed Treatment (DOT) reported in 2004, therefore achieving the MDG	80% by end of 2007			85% by end of 2010			
Reduce the 8% rate of loss to treatment reported in 2004				6% by end of 2010			5% by end of 2015
Integrate health care for tuberculosis patients within primary health care		End of 2006					

ANNEX II

ESTIMATED HHR NEEDS, HHR PRODUCTION CAPACITY BY EXISTING TRAINING INSTITUTIONS, AND NEED FOR COMPLEMENTARY TRAINING ACTIONS

This annex describes the methodology used to estimate staffing needs for 2015 according to three scenarios, based on the employees in the MOH's database on 31 December 2006 (PIS).

ESTIMATES

These estimates are based on the following criteria: estimated health network for 2015, teams of workers per type of health facility, estimated workforce losses, training of health workers, population growth, teachers needed in the MOH's training network, and strengthening of the planning and management capacity at the provincial level.[5]

1—Health Network

The HRDP 2006–2010 was used as a reference to estimate the number of health facilities for 2008–2010, assuming that it will remain the same number until 2015.

Table 1. Health Network: Scenario 1

Type of Health Facility	Total
Central Hospital	4
Provincial Hospital	8
Psychiatric Hospital	2
General Hospital	6
Rural Hospital	32
District Hospital	37
District Hospital with Surgery	3
Urban Health Center A	23
Urban Health Center A/Maternity	19
Urban Health Center B	21
Urban Health Center B/Maternity	9
Urban Health Center C	48
Urban Health Center C/Maternity	22
Rural Health Center Type I	125
Rural Health Center Type II	591
Total	**950**

Source: 2008–2010 health network reported in 2006–2010 HRDP and HRD (an additional central and provincial hospital).

[5] Despite the workload and geographic dispersion of the population being considered, the lack of data did not allow their inclusion.

His Excellency the Minister of Health Dr. Paulo Ivo Garrido considers the following as objectives regarding the expansion of the health network:

- One rural health center (type II) per 10,000 population (there is a need for approximately 750 more rural health centers type II), which shall be staffed by one ancillary worker, one medicine agent, and one MCH nurse;
- One district hospital with surgical capacity (two rooms) per district;
- One general hospital per city;
- Maintain the same number of provincial and central hospitals and improve their performance. The number of *central and provincial hospitals* was taken into consideration by suggestion of the HRD, and an additional provincial hospital in Matola and an additional central hospital in Quelimane are already in the process of finalization.

The Minister's proposal intends to ensure that all districts have at least one district hospital.

Table 2. Health Network in 2025

Type of Health Facility	Total
Central Hospital	4
Provincial Hospital	8
Psychiatric Hospital	2
General Hospital	12
Rural Hospital	32
District Hospital with Surgery	87
Urban Health Center A	23
Urban Health Center A/Maternity	19
Urban Health Center B	21
Urban Health Center B/Maternity	9
Urban Health Center C	48
Urban Health Center C/Maternity	22
Rural Health Center Type I	125
Rural Health Center Type II	1,341
Total	**1,753**

This broader horizon is important background for the continuity of the current NPHHRD after 2015. Therefore, the health strategy shall consider the expansion of the health network to allow faster growth of the workforce between 2015 and 2025.

2—Estimated Workforce Losses

- The loss of staff for *retirement* is deemed as starting at retirement age (55 years for females, 60 years for males). Employees over the retirement age (awaiting the retirement process) will not be considered in the NHS workforce.

  The *general mortality under 55 years of age* was calculated as 0.5% per year based on the estimates mentioned in the previous plan (PRHR 2006–2010). Despite the growth trend in HIV-related mortality, treatment-related initiatives for MOH employees (i.e., ARV therapy and treatment of opportunistic infections) will help to limit losses of staff and functional capacities.

- The impact of sickness-related absenteeism, generally associated with AIDS, was estimated considering that 8% of the workforce may work at 50% of their capabilities. This corresponds to a 4% loss in staff.[6] A 6% rate was applied, keeping the same criteria for a nine-year period (2007–2015). The fact that total absenteeism may be higher should be taken into account. However, with the improvement of bio-safety conditions and access to treatment, HIV-related absenteeism may decrease.

- A 5% loss due to withdrawal toward the private sector was used, which included the exit of new graduates who are not even appointed in the NHS. This is only an average value and it is admitted that the exit is not uniform for all cadres.

3—Training

The "Integral Training Planning II Semester 2007–I Semester 2010" is being developed and includes the Human Resources Development Plan 2006–2009 and the Accelerated Training Plan 2006–2009. The projected courses shall continue until the I Semester 2010 and will translate into an additional 9,437 graduates (MOH HRD-TD, Health Technicians Acceleration Plan July 2006 to June 2009; Integral Training Planning II Semester 2007–I Semester 2007 per Training Institution, March 2007).

The projected number of workers trained between 2011 and 2015 was subtracted from the calculation of the total number needed. The total calculated needs were estimated from the training needs from 2011 to 2015.

4—Population Growth

The National Statistics Institute estimates a population growth of about 20.4%, and this percentage was used to adjust the needs of permanent health specific staff.

[6] Vio F. MOH/HRD; Sofala Province Visit Report, 18–28 July 2004, cited in PNDRH 2006–2010.

5—Teacher Needs

Needs related to teaching, which are acknowledged as a priority competence, are estimated as four teachers per course, with an increase of 45 permanent teachers.

6—Need to Strengthen MOH's Regulatory Role and Integrated Planning at Provincial Level

Four higher technicians shall be considered per province (one for the management or administration and finance area, one for planning and cooperation, one for human resources, and one for procurement, for a total of 44) to support integrated planning and to be integrated by 2015. A quantitative increase in central bodies, Provincial Health Directorate and district health, and Women's and Social Welfare Services staff is not anticipated. In other words, the 44 technicians plus the necessary employees to replace the losses estimated in the MOH's database on 31 December 2006, were anticipated. Alteration of the staff pyramid was also considered at the MOH level by filling the vacancies created by the exit of non-technical staff with preferably higher level technical staff.

Explanatory Notes

- The number of staff needed for the fight against AIDS, malaria, and tuberculosis and other vertical programs was included in the global estimates for professional need, and these programs are fulfilled through the NHS and its health facility network.
- The "Servicer" category proposed in the MOH's document was aggregated to the "Health Facility Laborer" category, which integrates "Service Agents."
- The phlebotomist, counselor, and activist categories were not considered.
- Employees who perform(ed) their activity in health posts have already been integrated into health centers or in the community network according to the proposal in Ministerial Decree 127/2002; therefore, this group is not considered.
- Careers that have been eliminated will not be reinstated.

Existing Data Limitations

There are several limitations to estimating staffing needs for the 2010–2015 period, such as:

- **Insufficient health network data:** For a task of this nature, it is crucial to:
  - Know the existing health facilities according to type, as well as their staff per category, age, gender, and level of training;
  - Have detailed information on existing equipment, especially the number of available beds and the purpose they are serving;
  - Know the health facility's level of productivity; and

- Know detailed and scheduled investment plans, both for the construction of new structures and renovation and reclassification of existing structures.

- **Health Investment Plan:** This document "identifies the areas in which the health facilities shall be built; the recommendations of the National Council for Health Coordination and the Minister's Advisory Board," and is a crucial instrument regarding the expansion of the health network. However, the plan in force (Health Investment Plan 2004–2008 [2013]) reveals many limitations regarding the 2013 projections; therefore, it did not constitute a sufficiently solid work base for the ongoing NPHHRP.
- **Health facility census 2007:** This key instrument cannot be used because the information is still being validated. However, in this phase it is relevant to clarify the current situation rather than to be used as a planning source;
- **Health facility projections for 2008–2010 (HRDP 2006–2010):** The number of health facilities (per type and province) considered in these projections served as a basis to calculate the HHR needs in previous documents.

Adopted Scenario

The adopted scenario is based on placement of staff in the health facilities[7] anticipated for 2008–2010 (Table 1), and incorporates the recommendations of the HRD regarding the construction of a central hospital in Quelimane and a provincial hospital in Matola.

For the cadres deemed as a priority for the attainment of the MDGs, the criterion adopted is that all provinces shall reach by 2015 the best national ratio observed in 2006 among the population of such professionals.

Results

The adopted scenario includes a total of 45,654 permanent staff in 2015, with 29,333 in specific careers and 16,321 in general (common) careers (Table 3).[8]

Table 3. HHR Estimates 2007–2015

	HHR in 2006	Estimated HHR per Year								
		2007	2008	2009	2010	2011	2012	2013	2014	2015
Specific HHR	13,056	14,010	15,293	16,344	18,203	21,013	24,180	25,954	27,719	29,333
General HHR	12,627	13,076	13,628	14,178	14,730	15,240	15,694	15,903	16,112	16,321

[7] As per the Ministerial Decree 127/2002 (for the primary network and district hospitals with surgical capacity) and the "Definition criteria for hospital staff 2007–2010" from the NDMA (for general, rural, provincial, and central hospitals).
[8] Does not include the need for expatriate doctors.

Compared to 31 December 2006, there is a 78% global growth; relative to the health specific careers, this translates to growth of 124.7%. The general careers have a growth of 29.4%, and the estimated annual growth is 8.63% (Table 4).

Table 4. Number of NHS Permanent Staff and Annual Growth, 2006–2015

	Year									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of HHR	25,683	27,087	28,920	30,522	32,932	36,253	39,873	41,856	43,831	45,654
Annual growth	–	5.47%	6.77%	5.54%	7.90%	10.08%	9.99%	4.97%	4.72%	4.16%

There is a strong anticipated growth of 15.1% from the year 2012 on, and of 39.6% in the period of 2011–2015. It is estimated that the general careers will register an average annual growth of 3.25% (Table 5).

Table 5. Evolution of Personnel (Specific and General HRH), 2006–2015

Area/Profession	2006	2008	2015	2006–2015 Evolution (Absolute Value)	2006–2015 Evolution (Percentage)	Percentage Relative to Total NHS Staff in 2015
Pharmacy	817	902	2,002	1,185	145%	4.4%
Medicine**	1,896	2,398	4,689	2,793	147%	10.3%
Laboratory	809	988	1,581	772	95%	3.5%
Public Health/ Preventive Medicine	820	1,007	1,703	883	108%	3.7%
Nursing	4,282	4,872	9,453	5,171	121%	20.7%
Obstetrics and MCH Nursing	2,906	3,307	5,951	3,045	105%	13.0%
Instrumentalist	132	173	421	289	219%	0.9%
Anesthesiologist	103	145	359	256	249%	0.8%
Surgery	56	54	155	99	177%	0.3%
Management	333	430	880	547	164%	1.9%
Total	**12,154**	**14,270**	**27,194**	**15,040**	**78%**	**59.6%**
Total NHS Staff	***25,683***	***28,920***	***45,654***	***19,971***	***124%***	
Specific Careers	***13,056***	***15,293***	***29,333***	***16,277***	***80%***	
General Careers	***12,627***	***13,628***	***16,321***	***3,694***	***29%***	
% of Specific Careers	***51%***	***53%***	***64%***			

*Does not include the need for expatriate doctors.

Special emphasis is given to the growth of priority professions, which more than doubles (124%). The proportion of this group of professions among the total permanent staff of the NHS (59.6%) should also be highlighted. Specific careers also grow from 51% to 64%.

Global Evolution in the 2000–2008 and 2008–2015 Periods

In analyzing the evolution of a set of indicators that compare human resources to the population, over a decade and a half it becomes clearer that the quantitative leap may occur (Tables 6 and 7). The total permanent staff per 100,000 population shall double over that period. The increase in the number of MCH nursing staff per 100,000 population is significant, at approximately three to four times the current number.

Table 6. Global Indicators for 2000, 2008, and 2015

Indicators	2000	2008	2015
Total HHR per 100,000 population	92.25	138.68	186.21
Total doctors per 100,000 population*	2.52	4.49	6.13
Nursing staff per 100,000 population	21.25	23.36	38.56
MCH nursing staff per 100,000 population*	5.35	11.41	20.74
Medical, nursing, and MCH nursing staff per 100,000 population	29.12	39.26	65.43
Total priority profession staff per 100,000 population	45.59	68.43	110.92

*Considering the total of national and expatriate doctors, except for the year 2000.

Table 7. Global Indicators for 2015

Global Indicators	
Number of specific HHR professions	29,333
Number of doctors*	1,504
Number of nurses (only nursing staff)	9,523
Population per specific HHR	835.8
Population per doctor	16,301.6
Population per nurse	2,574.6
Number of HHR per specific area per **100,000 population**	119.6
Number of doctors* per 100,000 population	6.1
Number of nurses (only nursing staff) per 100,000 population	38.8
Number of HHR per specific area per **100 population**	1.196
Number of doctors* per 100 population	0.061
Number of nurses (only nursing staff) per 100 population	0.388

*Considering the total of national and expatriate doctors, except for the year 2000.

11—Priority Professions

The following are highlighted relative to priority professions (Table 8):

- No needs were identified for some of the categories that were considered, specifically those of a higher level in some professional areas, thus representing negative needs. In these situations, the same number of employees was kept as in 2006.

- No new needs were considered for elementary level categories; in such cases the values reported for 2015 reflect the regular exit or reclassification of such employees in the system.
- Relative to specialist doctors considered in 2006, the value provided by PIS in July 2007 was used.

Globally, the 124% increase in the total priority profession employees in each scenario reflects a significant increase relative to 2006.

Table 8. Comparison of Scenarios 1, 2, and 3 Relative to Priority Professions, 2006–2015

Areas	Professions/professional cadres	Situation in 2006		Projected for 2015	
		Number	Population/ Profession	Number	Population/ Profession
Pharmacy	Specialized pharmacy technician	6	3,314,783.5	41	597,989.8
	Pharmacy technician	149	133,481.2	1,207	20,312.8
	Pharmacy agent	447	44,493.7	593	41,345.0
	Pharmacy assistant	215	92,505.6	161	152,283.1
Medicine	General practitioner	443	44,895.5	1,066	22,999.6
	Internal medicine doctor	15	1,325,913.4	39	628,655.9
	Medical technician B	1	19,888,701.0	1	24,517,582.0
	Specialized medical technician	27	736,618.6	59	415,552.2
	Medical technician	436	45,616.3	1,541	15,910.2
	Medical agent	974	20,419.6	1,983	12,363.9
Laboratory	Laboratory technician A	5	3,977,740.2	5	4,903,516.4
	Laboratory technician B	1	19,888,701.0	1	24,517,582.0
	Specialized laboratory technician	9	2,209,855.7	36	681,043.9
	Laboratory technician C	241	82,525.7	814	30,119.9
	Laboratory technician D	409	48,627.6	630	38,916.8
	Microscopist	144	138,116.0	95	258,079.8
Public Health/ Preventive Medicine	Doctor specializing in public health	5	3,977,740.2	19	1,290,399.1
	Specialized preventive medicine technician	13	1,529,900.1	45	544,835.2
	Preventive medicine technician	320	62,152.2	864	28,376.8
	Preventive medicine agent	482	41,262.9	775	31,635.6
Nursing	Nurse A	28	710,310.8	44	557,217.8
	Nurse B	109	182,465.1	1,791	13,689.3
	Specialized general nurse	153	129,991.5	390	62,865.6
	General nurse	812	24,493.5	3,501	7,003.0
	Nursing assistant	2,382	8,349.6	3,238	7,571.8
	Elementary nurse	798	24,923.2	489	50,138.2

Areas	Professions/professional cadres	Situation in 2006		Projected for 2015	
		Number	Population/ Profession	Number	Population/ Profession
MCH	Obstetrician	30	662,956.7	140	175,125.6
	Pediatrician	27	736,618.6	71	345,318.1
	Specialized MCH nurse	17	1,169,923.6	80	306,469.8
	Midwife nurse	13	1,529,900.1	1	24,517,582.0
	MCH nurse—C	416	47,809.4	2,481	9,882.0
	MCH nurse	1,486	13,384.1	2,506	9,783.6
	Elementary birth attendant	917	21,688.9	672	36,484.5
Instrumentalist	Specialized manipulation technician	12	1,657,391.8	109	224,931.9
	Manipulation technician	120	165,739.2	312	78,582.0
Anesthesiology	Anesthesiologist	10	1,988,870.1	24	1,021,565.9
	Specialized anesthesiology technician	16	1,243,043.8	176	139,304.4
	Anesthesiology technician	77	258,294.8	159	154,198.6
Surgery	Surgeon	18	1,104,927.8	37	662,637.4
	Specialized surgical technician	38	523,386.9	118	207,776.1
Management	Hospital administration technician A	14	1,420,621.5	49	505,007.8
	Hospital administration technician B	5	3,977,740.2	23	1,044,559.8
	Specialized hospital administration technician	22	904,031.9	42	590,334.4
	Hospital administration technician	143	139,081.8	310	79,010.6
	Hospital administration agent	149	133,481.2	456	53,790.6
TOTAL		**12,154**		**27,194**	

Annual Evolution for Level of Population Coverage: Some Professional Areas 2006–2015

The indicator reported in Table 9 allows verification of whether the extent of the increase of professionals improves the level of population coverage for a set of key cadres providing health care.

Table 9. Human Resources Evolution: Total, Specific Cadre, and Some Professional Cadres per 100,000 Population (National Total), 2006–2015

Years	Total HHR	Specific HHR	Doctors (Total)	Nursing Staff	MCH Staff	Public Health and Preventive Medicine Staff	Pharmacy Staff	Laboratory Staff
2015	**186.21**	**119.64**	6.06	38.84	24.56	6.89	8.39	6.45
2014	**182.88**	**115.66**	5.69	36.03	23.63	6.30	7.81	6.36
2013	**178.69**	**110.80**	5.32	33.11	22.55	6.55	7.09	6.20
2012	**174.18**	**105.63**	5.08	30.03	21.31	6.28	6.53	6.03
2011	**162.08**	**93.94**	4.90	25.08	18.92	5.99	5.55	5.54
2010	**150.69**	**83.29**	4.75	23.56	18.33	4.98	5.35	5.36
2009	**142.96**	**76.55**	4.59	23.52	17.02	4.90	4.48	4.84
2008	**138,68**	**73.33**	4.45	23.48	15.99	4.82	4.47	4.74
2007	**133.00**	**68.79**	4.47	21.74	15.36	4.48	4.43	4.39
2006	**129.13**	**65.65**	4.36	21.53	14.61	4.12	4.27	4.07

Figures 1, 2, and 3 illustrate the evolution of the relationship between some professional cadres and the estimated population for 2006–2015.

Figure 1. Evolution of HRH (total and health-specific) per 100,000 Population, 2006–2015

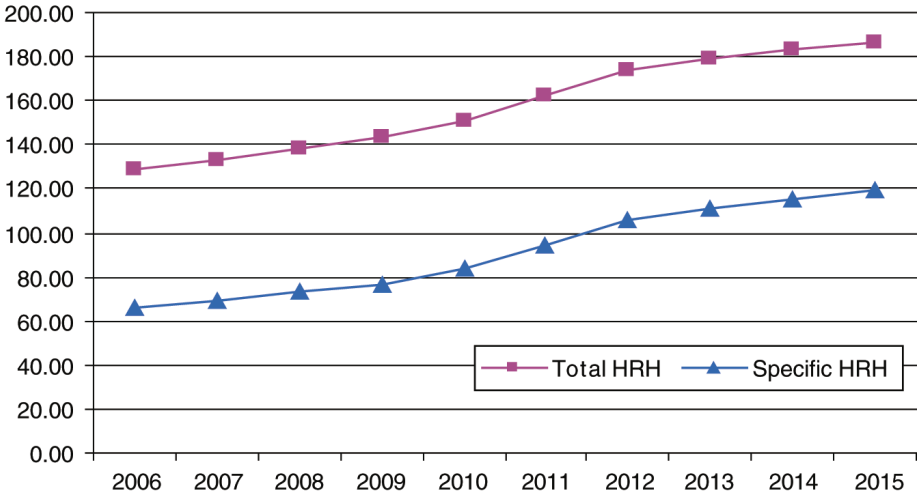


Figure 2. Evolution in Number of Professionals per 100,000 Population (Medical, Public Health and Preventive Medicine, Pharmacy and Laboratory Staff), 2006–2015

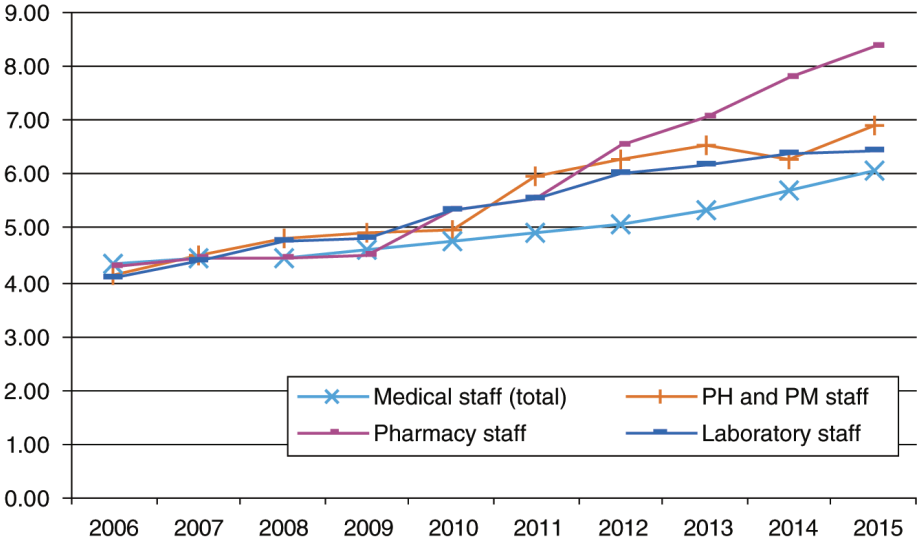
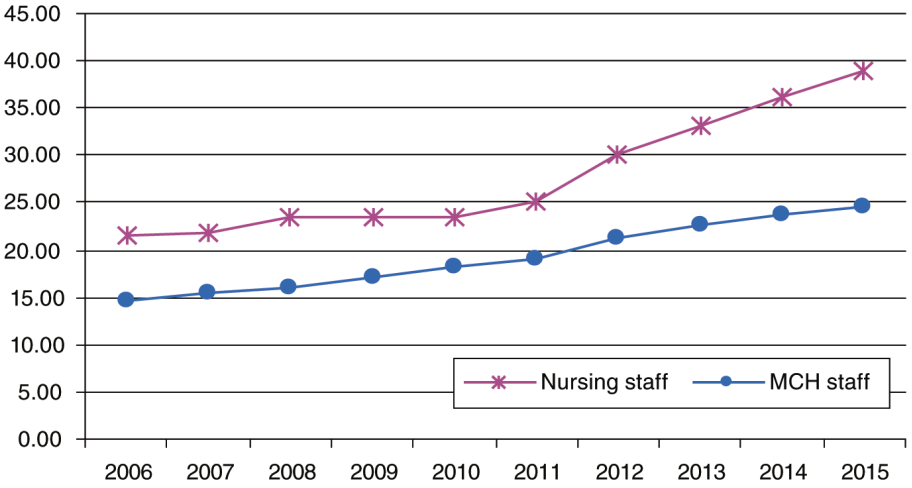


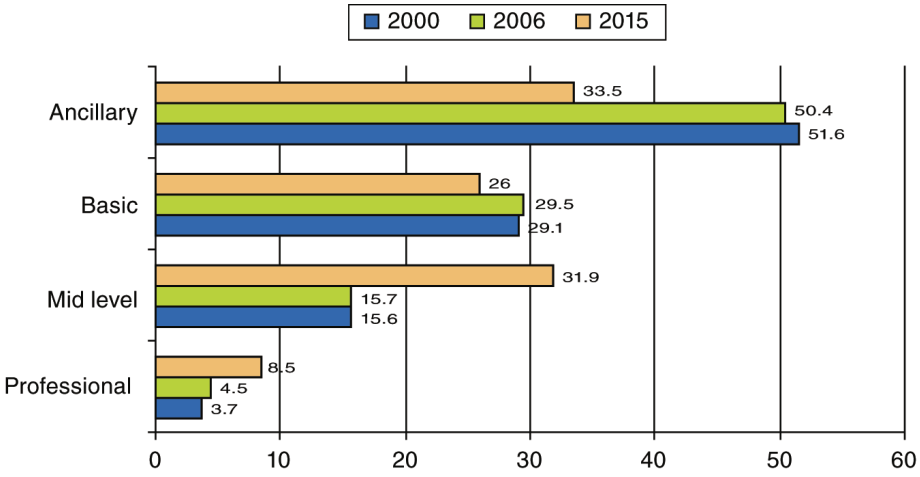
Figure 3. Evolution in Number of Professionals per 100,000 Population (Nursing and MCH Staff), 2006–2015



NHS Employee Training Levels in 2000, 2006, and 2015

In terms of improving the level of training of NHS staff in 2015 (Figure 4), there is a significant growth in the number of secondary level employees, a reduction in the burden of auxiliary and elementary staff, and a slight increase in the number of higher educated staff. This is a defining behavior that will translate into a new framework characterized by a significant improvement in the competencies and qualifications of NHS workers, with the end of secondary level courses in 2011.

Figure 4. Percentage Distribution of NHS Staff per Level of Education, 2000, 2006, and 2015



TRAINING NEEDS

The MOH is the main entity for training in basic, secondary, and specialized secondary level courses. The training programs for the 2006–2010 period anticipate training a total of 9,437 new graduates (399 specialized secondary level technicians, 4,268 secondary level technicians, and 4,770 elementary level technicians). The estimated volume of new graduates for each scenario is presented, taking into account the above mentioned 16.7% school losses. Therefore, about 11,500 graduates will enroll in training institutions in the 2006–2010 period.

From 2011 to 2013, there will be a need to train 5,175 new graduates in scenario 1, 10,912 in scenario 2, and 9,807 in scenario 3. The last enrollments in basic level courses is estimated to occur in 2011; therefore, beginning in 2012 there will be a significant increase in the number of secondary level graduates, and this will be most noticeable in the estimates for scenarios 2 and 3. The number of enrollments anticipated in the health training institutions over the 2006–2013 period will reach a total of 22,540 (Table 10).

Table 10. Estimated Enrollments in Health Training Institutions per Scenario, 2006–2013

Level	Enrollment in Health Training Institutions								
	2006	2007	2008	2009	2010	2011	2012	2013	Total
Specialized Secondary	28	29	125	270	425	325	290	190	1,682
Secondary	833	606	619	1,327	1,715	2,587	2,980	3,191	13,858
Basic	689	1,342	902	1,044	1,673	1,349			6,999
Total	**1,550**	**1,978**	**1,646**	**2,642**	**3,812**	**4,261**	**3,270**	**3,381**	**22,540**

Medical Staff Training

Relative to the training capacities in existing medicine faculties, both public and private, for 2015 the same may cater to the needs anticipated in each scenario regarding the training of general practitioners, but expatriate doctors will still be needed (Table 11). The national training

capacity is very low and the projections relative to the number of new national specialists are clearly insufficient.

The use of expatriate doctors is a fundamental condition to address human resource needs in the medical area. There is a gradual reduction in the dependence on expatriates in terms of specialists except for public health doctors, and the maintenance of general practitioner needs until 2015.

Table 11. Identified Needs for Expatriate Doctors

Scenario 2										
Expatriate Doctors	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
General practitioners	47	47	54	62	69	77	84	91	99	106
Specialists	220	220	181	143	104	66	27			
Public health doctors	1	1	3	4	6	7	9	11	12	14

Other professional areas for which training happens outside of the MOH's institutions are included. This is basically for level 1 higher technicians, such as clinical psychologists, physiotherapists, hospital administration technicians, and odonto-stomatologists. In some cases it is only the replacement of positions identified in 2006.

General Area Staff

The proposals presented for general areas reveal the reinforcement of level 1 superior technical careers, with increases of 31.5%. The technical workers projected exceed the existing ones in 2006 by 45%. There is also strong growth in blue collar workers and assistant staff in all scenarios.

ANNEX III

SALARY, CAREER, SUBSIDY, AND INCENTIVE REFORM

There is a need to simplify the career system and salary structure, and to link a package of subsidies and incentives conducive to achievement of the strategic objectives adopted by the MOH. Some principles that may facilitate the negotiation between the MOH and the Ministries for Public Function and Finances include the following:

- Define the budgetary need to support the public servant's salary, and prioritize education and health and ensure they conform to the macroeconomic targets by acknowledging that they are not compatible with a restrictive fiscal ceiling.
- Decompress the salary structure to allow easier placement of employees in staff positions that are harder to fill with qualified personnel, allowing salary increases above the level for other employees in the sector.
- From the point of view of salaries and subsidies, place more value on:
  - Staff with higher qualifications so that they can be retained in the public sector;
  - Health specific cadres considered as having priority competence.
- Form the point of view of incentives, value the staff working in isolation, and differentiate and make more flexible the incentive system to facilitate placement of staff outside of major urban centers.
- Facilitate retirement and pre-retirement for less qualified staff to open vacancies for qualified staff.
- Plan, with specific targets, the growth in health public civil service to allow improved management of the salary growth.
- Simplify and make the career system more flexible.
- Improve the information system related to salaries by integrating it into the HHRO.

The first step in implementing **mid-term salary reform** is to reach agreement with the Government on a financial package for salary support for five years. This decision will limit any other decisions. The current Ministry of Finance's reference framework for mid-term budgeting would be an adequate basis for the purpose.

A prerequisite is the clarification of how many employees work in the public sector, with which qualifications, and in which conditions. This requires analysis of the public service census and a drastic reform of the current PIS, which should also be integrated with the salary information system and with the HHRO. Although some duties related

to salary management may be decentralized, the design, core duties, and system monitoring should be kept centralized.

The mid-term salary reform should include the items mentioned in the bulleted list above and link remuneration for critical central and provincial governance and administration positions to a performance-based incentive regimen according to the evaluation criteria.

It is virtually impossible to address the expectations of all employees in terms of salary increases in force for the public sector. Who to reward and who to prejudice, relative to those who are most benefited, are decisions that do not have technical rules. Such decisions shall be based on judgments and political decisions on the positions that are more or less valued. However, **the above-mentioned positions—those with greater responsibilities and that are more differentiated, scarce, and isolated—should be privileged in terms of salary, subsidies, and incentives**.

Career reform and the expectations related to its competencies are also important motivation factors. Elementary nurses are placed in the periphery to perform comprehensive duties without any specific training for the purpose. The basic general nurses are used for general nursing duties at the hospital and as public health care providers at the health posts; this results in poor comprehension of their competencies and lack of specificity of their role within health teams. The MCH nurse's tasks overlap with those for basic nurses, medical agents, and preventive medicine agents. The general nurse category in the specialized technical career also seems to be poorly placed and probably should be reclassified to the technical career to allow development of the specialist nurse.

Some careers—technical and specialized assistants—include staff categories without career expectations (e.g., autopsy assistants, translation, electrocardiography agents). They may be encouraged to progress to the following career degree (or technical assistants or health technicians) through training programs.

The disappearance of elementary careers and technical and specialized assistants is expected with the progressive reclassification of existing staff in these careers in the secondary health technician career.

There is a need to differentiate specialized general practitioners (such as family doctors in other countries) and non-specialized medical doctors. The structure of the medical activity and its functioning demand adequate norms that do not coincide with the general system due to the importance of their social role. The medical profession should be defined as a differentiated profession with particular contracting conditions and duration and working hours for the medical careers in the NHS (see Annexes IV and V for an example of work started but not yet finalized).

Some basic principles were proposed for the use of **subsidies and incentives** to improve the performance in health.[9] The incentives to be considered may be of a financial, material, professional, or other nature, such as the following examples:

- **Financial:** Financial incentives may include uniform, accommodation, or transportation allowances; access to housing/car credits; and benefits such as pension and insurance.
  - **Recommendation:** In Mozambique, most of the subsidies and incentives are financial; they should be guided by clear and transparent regulations and by well-defined objectives. The package should be simplified, and instead of many small subsidies and incentives, it should be a more limited package with more significant quantitative incentives. There should also be a maximum ceiling for this group of incentives and subsidies. For incentives, this ceiling should be differentiated and maximized according to an increasing degree of isolation.[10]
- **Material:** The subsidies or incentives are those with direct financial benefits, such as food, clothing, accommodation, transportation, crèches, free of charge health care, and free of charge or subsidized school.
  - **Recommendation:** The package of subsidies and incentives shall include this kind of support in a more insistent way and take into consideration the local situation; therefore, it shall differ from province to province regardless of the existence of a national package.
- **Professional:** The subsidies or incentives relate to an increase in autonomy, responsibilities, access to continuous training or specialization, workshops, conferences, professional congresses, rapid promotion, and other symbols of recognition (non-monetary prizes, type of office, titles, flexible work hours or exemption, more days of annual leave, etc.).
  - **Recommendation:** In Mozambique, this type of incentive has been implemented with few regulations. There should be a definition and regulation for a package with these types of subsidies and incentives.

[9] A subsidy is a durable salary supplement intended to improve the quality of life of workers sometimes by acknowledging the work specificities (such as leadership, associated risk, work in shifts), or by addressing unsatisfied basic needs (such as lunch, transportation, rent, uniform allowances, and other social benefits related to contributions to a retirement or disability fund), regardless of the strategic objectives intended to be achieved. They are an important factor in worker motivation. Often they have been legislated for the group of public servants or segments of this civil service. Subsidies with an unjustified difference may cause lack of motivation and produce unexpected effects (such as a higher meal allowance for doctors relative to nurses). Some subsidies, when offered in a wise manner, may work as incentives (the assignment of a rent allowance only for isolation conditions may contribute to the redistribution/retention of staff in underserved districts).
An incentive is something of a material or symbolic nature, generally transitory, influencing or intended to influence one or some behaviors related to the achievement of strategic objectives. When there is a negative and undesirable influence, we are facing an un-incentive or a negative (perverse) incentive. Often, the incentive is not legislated, but it shall always be regulated in a transparent manner. Incentives are used to improve the performance of service providers and of the service system in general, i.e., to support the achievement of the proposed objectives and targets.

[10] The degree of isolation should be estimated in a different manner for each professional group, i.e., the degree of isolation for a specialized doctor shall be defined differently from the isolation for a nurse.

- **Other:** Other incentives include supporting the spouse to find employment.
  - **Recommendation**: In the beginning of the career, it should not be possible to cite family reasons for not being placed in rural settings. However, there should be the possibility of joint placement of relatives (the same as for different sectors of the work market) without losing benefits or penalization in terms of evolution in their respective careers (on the contrary, there should be favoring in career evolution).

Some principles to be taken into account include the following:

- Motivation and lack of motivational factors may differ in different circumstances and among distinct professional groups. The temptation to use examples from other environments should be avoided, because the impact of subsidies and incentives is specific to the environment and moment to which they are applied. For this reason and due to enormous differences among the provinces, it should be possible to develop specific subsidies and incentives for the specific provinces, beyond a national package.
- Financial subsidies and incentives address only part of the worker's needs and expectations. These should be identified and included in HHR development actions.
- The objectives of the country policies shall guide the definition of incentives. Consequently, it is important to clearly define the objectives that the subsidies and incentives shall and intend to achieve, and select them based on the valid analysis of worker's behaviors, perceptions, and expectations. It is important to think in terms of incentive packages (mixed financial, material, professional, and other incentives) and remember that the effect of subsidies and incentives should be monitored because it may decrease or be different than expected as time goes by.
- Allocation of performance-related remuneration and incentives (what the worker, teams, and health facilities in fact do, and their contribution to results) is theoretically attractive and justified. However, health is an area in which the results are mostly difficult to attribute to an individual worker. On the other hand, evaluation indicators for good performance have to be properly aligned to each context and to the previously defined health or health service objectives. International literature in the medical field shows that performance evaluation and the establishment of performance-related remunerations is controversial and non-conclusive, and evidence linking incentives to better individual performance is rare. On the other hand, any individual performance-related incentive system assumes a sophisticated information system that allows the rapid and simple measuring and monitoring of the objectives established, and a mature consideration of the type of indicators that could be used to differentiate individual performances. Therefore, the incentives currently being linked to productivity, performance, or result indicators, and prizes for good performance, should be generally linked to the teams or institutional

performance. These could translate into the possibility of a team selecting an improvement in its health facility, either for its comfort our quality improvement of the services.

- It is more important to remember that the absolute priority is to solve the basic problems that induce undesired behaviors and lack of motivation, **such as late payments, low salaries that do not allow adequate living, occupational risks (infections), difficult work conditions (lack of electricity, water, non-functioning equipment), work overload, and unfair or unclear management processes. The incentives may only produce the desired result when the basic conditions are guaranteed.** Improperly low wages may lead the workers to several adaptation strategies, some of a predatory nature, such as charging additional and illegal fees, sale of the organization's drugs, movement of clients to a private clinic, time completion, conflicts of interest, and migration.

The consulted studies on incentives in Mozambique, focal groups with professionals, and interviews with NHS managers show that, in general, the difficulties in lawfully established subsidy allocation procedures are related to delays or non-compliance. On the other hand, despite the good opinion of the existence of several types of incentives, they are not yet applied in a consistent way due to a lack of funding. The professionals claim **the compliance of the law and improved work conditions and deeply value residency, training opportunities, and transportation support as incentives**.

Table 1. Subsidies, Supplements, and Incentives: Current Situation and Proposals

Subsidies and Incentives	Current Situation	Proposal	Comment	Deliverables
Common National Package: Based on the General Budget of the State				
Special (isolation) bonus	Legislated. Four groups according to placement. Applies to all higher level technicians and specialty doctors.	Review the law. Increase differences of bonuses between levels of isolation and ensure a bonus for all health workers in same circumstances. Workers in Maputo city are not eligible. Increase amount of bonus to 100% for greatest levels of isolation in priority occupational categories.	Keep salary accounts for retirement pension estimation purposes. Method to decrease fears of lack of remuneration due to retirement.	Staff placement and retention in isolated situations
Exclusivity subsidy	Legislated	Review the law. Increase amount of exclusivity subsidy for priority professional groups.		Staff retention in public sector
Shift subsidy	Legislated	Increase amount of subsidy.		Availability to work unusual hours
Urgency subsidy	Legislated	Increase amount of subsidy.		Availability to work unusual hours
Leadership, management, and trust subsidy	Legislated. Complemented by partner funding through pro-health.	Design a regulation for non-legislated component, identifying allocation criteria.		Willingness to assume positions that do not fit in health career professional project
13th check	Legislated	Keep existing situation.		Motivation factor, retention in public sector
14th check (profitability bonus)	Legislated	Review assignment conditions. Assign only to priority occupational categories in major isolation situations.		Motivation factor, retention in isolated areas
Social welfare (assistance)	Legislated. Granted to relatives for funeral expenses.	Keep existing situation. Add a fund for life-saving drug procurement that cannot be found in public circuit, in favor of workers.		Motivation factor, retention in public sector
Free of charge health care		Strengthen easy access and free-of-charge nature of health care for NHS workers.		Motivation factor, retention in public sector
Housing	The policy is to build houses for HHR together with rehabilitation or renovation of health facility, which remains MOH's property.	Significant increase in construction of houses together with requalification of the health network to accommodate new projected staff. Prioritize rural and isolated areas.		Motivation factor, retention in public sector

Subsidies and Incentives	Current Situation	Proposal	Comment	Deliverables
Land allocation	There are a few experiences in this area.	Coordinate with housing allocation. Assigned in placement site. Introduce restitution mechanisms in event of work place abandonment. Link to construction credit allocation mechanisms in favorable conditions.		Motivation factor, retention in isolated areas
Variable Incentives to be Considered in a Provincial-Based Package: Based on External Funding				
Risk subsidy	Legislated	Review the mandatory nature.		Subjection prize for unavoidable risk conditions
Lunch allowance	Funded by partners through pro-health.	Keep for secondary and basic level technicians. Exclude for higher level technicians. Where granted, make identical for all workers regardless of professional category.		Improvement of worker's living conditions; motivation factor, retention in public sector
Family allowance subsidy	Legislated but has not been paid due to bureaucratic and administrative problems.	Review mandatory nature. Simplify administrative procedures, as possible.		Motivation factor, retention in public sector
Leadership performance subsidy	Does not exist in this format.	Link remuneration of central administration and leadership positions to an incentive regimen based on achievement of execution objectives.		Willingness to assume positions that do not fit in a health career professional project
Vehicle (maintenance and fuel vouchers)	Unregulated practice	Coordinate with leadership and management subsidies.	Consider fiscal exemption for importing a personal vehicle	Willingness to assume positions that do not fit in a health career professional project
Subsidized communication	Unregulated practice	Coordinate with leadership and management subsidies (for all leadership positions, from health facilities to central bodies).		Willingness to assume positions that do not fit in a health career professional project
Installation kit	Unregulated practice	Restrict to placements in isolated areas.		Redistribution factor in isolated areas
Maintenance kit	Unregulated practice	Restrict to placements in isolated areas.		Retention factor in isolated areas
Performance prizes for community health worker (Annex VI) mobile brigades	Not provided	Grant financial prizes for achievement of coverage indicators (vaccines, institutional births, etc.).		Productivity increase. Guide to MDG related productivity indicators

Subsidies and Incentives	Current Situation	Proposal	Comment	Deliverables
Seniority prize	Not provided	Introduce for seniority in isolated situations.		Retention in public sector and work place
Electricity and solar panels	There is some experience.	Extend fitting of solar panels to 200 other small rural health centers.		Motivation factor
Rent subsidies	Not provided	Particular bonus for professionals placed in other provinces or districts without housing.		Redistribution and retention factor in isolated areas
Government subsidized housing credit	Not provided	Negotiate more favorable conditions for health professional. The associations and orders may assume responsibility of such negotiations.		Motivation and retention factor in public sector
Scholarship for worker's children	Not provided	Legitimate for workers placed in rural areas; may look for vacancy availability in provincial training centers.		Redistribution and retention factor in isolated areas
Subsidy for treatments abroad for severe conditions	Unregulated practice	Clarify conditions to benefit.		Motivation and retention factor in public sector
Attendance at in-service training	Currently non-existent	Grant the right to a minimum number of trainings per period of time (e.g., a training every three years)		Redistribution and retention factor in isolated areas
Differentiation in number of paid annual leave days	Currently non-existent	Minimum national package. Increase annual leave entitlement for workers in isolated areas.		Redistribution and retention factor in isolated areas
Retirement	Legislated	Increase time count for service in peripheral areas, allowing early retirements with full benefits.		Redistribution and retention factor in isolated areas
Career progression	Legislated	Increase time count for service in peripheral areas, allowing quicker progression in career.		Inflated time count for service in peripheral areas, allowing early retirements with full benefits
Field subsidy	Legislated	Keep		Motivation factor
Displacement subsidy/per diems	Legislated	Keep but regulate and limit access.	Has had a perverse effect	Motivation factor
Permanent availability subsidy	Currently non-existent	For workers in isolated areas who are always available.		Motivation and retention factor in isolated areas
Extraordinary time	Legislated	Keep		Motivation factor

ANNEX IV

COMMUNITY HEALTH WORKER PROGRAM REVITALIZATION

Community-based health agents (CBHAs) have an important role in the provision of health care, especially in NHS underserved rural areas, and their role is expected to increase. They are an important instrument of the policy for population proximity, mobilization, and active participation.

The CBHA categories have been diversified with the involvement of NGOs in the health sector, especially in the search for solutions for the increasing HIV/AIDS problem. Such CBHA categories include not only community health workers, but also other workers with or without diversified training. The antecedents of the use of CBHAs in Mozambique date back to the independence.

In recognition of the traditional culture, traditional professionals (e.g., traditional birth attendants [TBAs]) have been mobilized to support the NHS activities. An example is the training of TBAs[11,12] from 1991 to 1998 that supported 3,734 TBAs, one-third of whom were in Zambezia. In 1995, evaluation of their work was cautiously positive, but recently the evaluations have been less enthusiastic (MOH 1995, 1999). The current policy is to continue to support the TBAs who assist at least 50 births per year. This intervention is recognized as having a low cost-effectiveness ratio and no impact on maternal mortality. The professional birth attendants shall collaborate with the NHS through the community health worker.

The community health worker program was implemented in Mozambique soon after independence using the Chinese model of "barefoot doctors." They were trained in basic principles of modern medicine to treat the most frequent diseases in rural settings and, mainly, to promote primary care preventive medicine and environmental sanitation; they were conceived as "community" staff and were intended to be supported by the served community.

In Mozambique, as well as other countries in which similar experiences were carried out, the results were doubtful (in the first phase, most of the community health workers left the activity). A systematic evaluation in 1994[13] highlighted that community health workers desired to belong to the NHS staff and showed a strong sense of belonging to the system; rural communities tended to consider them "nurses" and did not subsidize their activity. This situation generated frustration and resulted in losses from the program. The community

[11] Gloyd S, Floriano F, Seunda M, Chadreque MA, Nyangezi JM, Platas A. 2001. Impact of traditional birth attendant training in Mozambique: a controlled study. *J Midwifery Women's Health* 46(4):210–6.
[12] Thomas WW. 2002. Impact of traditional birth attendant training in Mozambique: a controlled study. *J Midwifery Women's Health* 47(1):65–6.
[13] Ali F, Mucache D, Scuccato. 1994. APE Program Evaluation, MOH, Swiss Cooperation.

health worker provided curative services (according to the population needs and expectations), and almost never provided environmental sanitation,[14] health education, or mobilization. Their productivity was low, there were shortages of medicines and materials, and there were serious insufficiencies both in treating clinical conditions such as malaria and the community management of high social impact diseases such as tuberculosis, sexually transmitted infections and AIDS. The study concluded that "all evidence points to a future non-sustainability of the program," and questioned the worthiness of making other studies in this area.

Meanwhile, **about 400–700 community health workers remain active** to date and continue to receive the kit C of medicines and send information to the District Health Directorate; training and support programs for the staff are maintained in the areas in which there are interested NGOs. This is a high number of people who, if better trained and supervised, may have an important role in the NHS-Community interface.

Recently, there was a significant development in basic home-based care[15] in response to the HIV epidemic. This care is normally provided by NGOs with the support of activists or health visitors with minimum in-service training. This transfer of duties to lay workers is presented as a way to reduce the overload of the current NHS workforce and should involve an array of diversified tasks, as shown in the box below:

Counseling and testing (C&T) activities:
- Conduct HIV voluntary C&T activities with pre- and post-test counseling;
- Conduct C&T activities for patients in the clinical context (in wards and for patients referred by medical staff); and
- Conduct pre-ARV therapy counseling activities, ARV therapy, and adherence follow-up.

Promote health education activities:
- Educate clients in health facilities on several endemic/communicable and non-communicable seasonal diseases[16] characteristic to each region/area;
- Educate clients in one health facility on the symptoms, diagnosis, prevention, treatment, and need for tuberculosis treatment[17] adherence, and also support all clients with suspected tuberculosis on how to have good quality sputum;
- Educate clients on the promotion of good hygiene and nutrition habits; and
- Support MCH nurses in providing education to pregnant women in the scope of prevention of mother-to-child transmission of HIV.

[14] According to other experiences, the environmental sanitation activities were practiced when the APE worked in villages.
[15] Asghar J, Gimbel-Sherr S, Sherr K, Chadreque MA, Floriano F, Mercer MA. 2003. *Annual Report 2003*. Health Alliance International, Central Mozambique Child Survival and Maternal Care Programme. FAO-A-00-98-00054-00. Beginning date: September 30, 2002. Ending date: September 30, 2007 Submitted October 30, 2003 by Health Alliance International, Seattle, Published documents.
[16] Covering the symptoms, prevention, and treatment of selected diseases.
[17] This will be even more important in the scope of community DOT, which was proposed as a new approach by the National Program for the Fight against Tuberculosis in 2007.

Other activities:
- Identify resources available in the community to establish referral and counter-referral systems according to needs identified and coherent with the reality in the area (home-based care, food support, legal assistance, social assistance, income generating programs);
- Perform the malaria rapid test for suspected clients in peripheral health facilities with staff shortages and/or without a laboratory (here the worker is now "capable," as this should only be an exception); and
- Perform the rapid test for syphilis with post-test counseling for suspected clients in peripheral health facilities with staff shortages and/or without a laboratory.

The Health Sector Strategic Plan (HSSP) 2001 (2005)–2010 and HSSP 2007–2012 have identified as a priority objective the development of actions for community mobilization and involvement of the community in the promotion and defense of its own health. The strategies identified for this purpose include the "Definition of Community Worker's Profile" and the "Revitalization of the National Community Health Worker Program." These guidelines were confirmed in June 2007 during the National Meeting on Community Involvement, which concluded that:

- Community involvement is still not well understood by health sector staff at all levels, who are not ready to develop community outreach activities;
- Most of the community outreach initiatives in the provinces are carried out by NGOs;
- There is no clear guidance regarding implementation of community outreach activities;
- The charges for consultations and sale of drugs by community health workers are not any different from the practice of private service;
- The training for community health workers and paramedics does not follow uniform criteria despite being carried out by the Provincial Health Directorate in partnership with NGOs; and
- There are inequalities in the payment of incentives to community health workers.

This National Meeting discussed the following:

- The data that are sent are often unreliable, and the supervisor should confront them with this reality;
- HIV/AIDS "counselors" are starting to exert pressure to become integrated into the NHS;
- Criteria for selection and operation of CBHAs are needed;
- Community health worker training actions need revitalization;
- Community health worker activities require supervision;
- Coordination mechanisms between different stakeholders need to be improved to broaden health facility coverage;
- The responsibility for community health worker training should be over the Provincial Health Directorate in a health facility with a doctor or medical technician;

- Training materials for community health workers should be revised to integrate within the training of traditional birth attendants;
- The National Directorate for Health Promotion and Disease Control should reconsider the monitoring and evaluation mechanisms in coordination with the Planning and Cooperation Directorate and Director of Health Information;
- Action is needed to improve environmental sanitation conditions and health promotion, because the situation in the schools is appalling;
- Evaluation of community health workers should be a joint effort between the community and District Health Directorates; and
- Nutrition-related issues and cultural values should be included within the community health worker's training curriculum.

Taking into account the political guidelines toward the reactivation of community health worker program, it is essential to clarify:

- Nomenclature: The clarification should allow assessment of community health workers, volunteers, activists, etc., who have in one way or another some linkage with the NHS to identify activity profiles for better classification of existing types of community health workers in the country, as well as reach a decision on a harmonized official nomenclature.
- Values and principles: The community health worker should be guided by an explicit deontology code guided by public service values.
- Necessary numbers: In general, a community health worker should serve about 200–500 people, preferably in underserved rural communities. Therefore, 7,000 to 10,000 community health workers are initially needed.
- In general, the community health worker should:
  - Be a trusted person in the community;
  - Be well trained;
  - Be motivated to educate, support, and care for others;
  - Have completed at least elementary school; and
  - Be able to write and speak Portuguese and speak the local language.
- Attributions and pre-service training:
  - Training of the community health worker should occur in a semester according to accredited curricula in an MOH-accredited training institution.
  - This training should consider the community health worker's duties in the communities in which he or she is/will be placed, such as counseling; population search; environmental sanitation (water supply and the construction and maintenance of latrines); and identification of pregnant women, home-based

births, and children who were not vaccinated for referral to health teams, etc.

- Registration: With the establishment of an order for the health professions, these workers should receive the order's professional record card and be subject to its regulations.
- Work conditions: The transportation, communication, and technical intervention equipment should be clearly identified and allocated to create technical conditions conducive to community health worker bio-safety and good performance.
- Rewards: The rewards for the work provided toward the NHS objectives could include regular subsidies (e.g., food and uniform allowance), performance-related subsidies (e.g., related to targets on vaccine coverage, institutional births, latrines in good conditions, etc.), and common benefits for all health workers (e.g., free of charge and priority treatment in the NHS health facility network). The work provided to support other health organizations outside of the NHS shall be remunerated according to the Mozambican labor law.
- Management: Management has been a weakness in most countries, including Mozambique, and **therefore should be professionalized.** Different management models can be considered:
  - The Foundation shall be "guided" by a group of representatives from the communities from which the CBHA were selected. This commission, with 30 representatives, shall be elected for a two-year term and may not serve for two consecutive terms. It shall integrate donors and MOH and Provincial Health Directorate staff and will meet at least once a year.
- Relationships with the NHS, Provincial Health Directorate, and District Services for Women and Social Welfare: Community health workers are in the provincial and district scope and should be coordinated with local health teams through the creation of harmonized action mechanisms for all community health workers with preventive medicine agents and technicians. Such teams should acknowledge the community health worker's work through records on their presence and results, which should be monitored by the Foundation's management team.
- Funding: Funding should be ensured directly from the donor community through the Foundation.
- "Stabilization factors" are conducive to the continuation of activity[18] by an important number of such elements, despite the current adverse conditions.

It is the responsibility of the MI-NPHHRD (Annex VI) to promote and guide development of this program and establish agreements with one or more credible foundations for its execution.

[18] There is evidence that "kit C" has been a stabilization factor. It is a fact that in many provinces the Pharmacy Department has the only available information on community health workers. Kit C is now what is seen as the community health worker's wage.

ESTIMATED COSTS OF IMPLEMENTATION

INTRODUCTION

The cost estimation for the NPHHRD is intended to present the real financial implications for its total implementation within the established terms. **Other than as an advocacy instrument, this exercise shall serve as a basis to update the current Mid-Term Fiscal Scenario developed for the health sector**.

In addition, the expenses directly linked to the human resources area, the health service expenses as a whole, cannot be omitted; therefore, implementation of the designed strategy depends mostly on strengthening the existing system. At the same time, reinforcement and improvement of the human resources area requires higher operational costs at the health facility level.

This annex presents the financial implications corresponding to the decisions made relative to the salary policy and staff growth scenario selected by the MOH (Annex II).

METHODOLOGY

In general, the projections were made from the bottom up, based on estimated unit costs, if existing, and targets for the many components of the plan. The projected expense was adjusted on a yearly basis to the inflation rate, and the exchange rate used is US $1.00 = 25.575 MTn. Nine main cost components were identified:

1. Salaries and subsidies
2. Incentives
3. Expatriate doctors
4. Pre-service training
5. In-service training
6. Scholarships and post-graduate internships
7. Human resource management
8. Community health workers
9. NPHHRD implementation

Beyond these components, a general estimate is presented for infrastructure expenses for implementation of the designed scenario 3 (high), as well as the current expenses needed for the operation of health facilities in the next few years.

Salaries, subsidies, and incentives: Include the workers' base wage and the main subsidies to which they are entitled as public servants,

namely the leadership bonus, special bonus, risk subsidy, shift, family allowance, and over time. The average salary in each career level[19] was used as a basis to calculate the base salary according to the 2006 pay sheets.

The subsidies were calculated based on an average percentage of the gross staff wage per level and career. In addition, the urgency subsidy enforced in 2007 is calculated based on the values of this subsidy per worker level or career and the number of existing and projected health facilities by 2015.

The incentives paid with external funds are also considered, as are other incentives introduced by the MOH, such as installation and subsistence kits, the initial payment of staff accommodation for those placed in provincial capitals, worker prizes, etc.

The projected expense with incentives assumes that, despite the need to alter the content of the current incentive package within the MOH, their dimension relative to the "salary and subsidies" mass shall remain the same.[20] In this perspective, the expense with incentives was calculated based on the current percentage of salary and subsidy-related expenses[21] applied to the projected yearly expense. To avoid distortions in the resulting projected values in the three variations above, the percentage was applied only to variation A, and the resulting absolute value was maintained in the two other variations in each scenario. This approach allows that the variation in the value of the incentives depends only on the number of workers and prices in each year (inflation adjustment). The expense projection for salaries and remuneration was made based on the projected staff needs and multiplied by the gross salary, i.e., including base wage and additional subsidies of each worker.

The MOH made the following decisions regarding the desirable salary policy until 2015:

- The work of the specific careers should be valued differently:
  - Elementary and basic level workers (specific career) will be increased 75% over their base salary;
  - Secondary and higher level workers (specific career) will be increased 50% over their base salary;
  - All specific career workers shall have a rent subsidy corresponding to 25% of the base salary;

[19] Given that some workers are within the lowest categories in each level/career, the use of the average creates a sub-estimate of the real salaries. In fact, in most cases, workers are not promoted/progressing due to lack of budget allocation and/or delays in the process. In this perspective, we opted for an average salary, intended to present the real needs of a well-operated progression and promotion system in which the workers are placed in the correct categories according to the years of service, training, etc.

[20] Given that the MOH's incentive policy is still being finalized, it is not currently possible to estimate the costs vertically, i.e., estimating the cost of each type of incentive based on the number of beneficiaries and its unit cost.

[21] The analysis of the 2006 expenses shows that the values spent with incentives corresponds to 26% of expenses with salaries and remunerations, including all sources of funding for the latter (State's Budget, Common Provincial Fund and PROSAUDE).

  - These increases shall be made in a certain year and in the subsequent ones the salaries shall be adjusted according to the estimated inflation.
- Workers in the general regimen shall benefit from an annual salary increase corresponding to the estimated inflation;
- The subsidies and incentives shall continue to be integrated in the salary mass and are calculated as a percentage of salaries and remunerations BEFORE the introduction of a salary policy;
- The special bonus will be kept, but if possible it will be integrated into the base salary.[22]

Expatriate doctors: The calculation of expatriate doctor costs was made based on the difference between the estimated needs and the Mozambican general practitioners and specialists being trained by 2015, considering the country's production capacity. The average monthly salary for these doctors shall be US $3,000.00.

Pre-service training: The pre-service training comprises six main cost sub-components:

- Fixed costs for training institutions, which correspond to operating expenses and do not vary directly with the number of students.
- Variable costs per student are calculated based on the number of students per level/type of course chosen. The estimated cost per student per year varies from US $2,300.00 to US $3,500.00, with an average of about US $2,920.00 per year.
- The value for central procurements was estimated for the purchase of books and durable training material.
- Investments in the training network were estimated for the first three years of plan implementation to accelerate strengthening of the training capacity.
- Teacher capacity-building costs correspond to payment of a Master's degree in education for all higher level teachers, and a licentiate degree for secondary level teachers.
- It is important to reconsider the costs with private entity contracts to provide education services, mainly during the first years when the training capacity is still being reinforced.

In-service training: The main expense for in-service training is for the trainings to be conducted at the central and provincial levels. The estimate used the average cost calculated per participant per day for central/regional and provincial[23] level trainings and is based on the need to ensure that the trainings occur in all key areas in the sector, including the most neglected ones (chronic diseases, environmental sanitation, etc). The capacity of the training department at the central

[22] This decision implies significant changes in the total cost initially estimated; therefore, all the designed scenarios and variations within them considered the abolition of this incentive.
[23] The unit cost calculated per participant per day varies from 3,496.00 MTn to 2,146.00MTn, depending on the scope of training and the worker's level. The cost includes per diems, meals, transportation, facilitator remuneration, and didactic material.

level, and of the divisions at provincial level, to coordinate and manage the projected trainings was also considered. It is assumed that the capacity at both levels will increase progressively during the next few years, therefore allowing additional trainings. The second cost component is the cost to reinforce the provincial in-service training divisions, mainly the purchase of equipment for the training room.

Scholarships and post-graduate internships: The expenses for this component are the costs for the specialization of Mozambican doctors, which includes internships abroad as well as national and international scholarships awarded to health workers. Although the specialization costs were calculated based on existing projections of the number of specialists graduating over the next few years, the scholarship costs estimate that the current percentage of beneficiaries from national and international scholarships will remain unchanged until 2015. The average annual cost per specializing doctor was calculated as 91,478.00 MTn, and the average annual cost per national or international scholarship student was estimated at 93,174.00 and 518,029.00 MTn, respectively.

Human resource management: This area includes the estimated costs necessary for the training of health facility managers on management, which will be performed by the RCSD. The cost for installation and maintenance of an intranet system in all provinces, as well as district institutional capacity building on human resource management and procurement of computers for the district, were also included. Finally, the costs for the development of an HHRO based on WHO's estimate for this activity in the sub-Saharan region were also included.

Community health workers: The cost of community health workers is based on the MOH's proposal to support the GAVI HSS (Strengthening of the Health Service System) and includes their training, remuneration, and procurement of C kits. According to the proposal, by 2012 the system shall have 3,000 community health workers whose estimated monthly salary is US $60.00.

NPHHRD implementation: The costs related to this component include the expenses anticipated for the MI-NPHHRD responsible for plan implementation, as well as the technical assistance anticipated for the activities reported in the plan. The MI-NPHHRD's expenses include in-country trips, national workshops, and long-term technical assistance and/or remuneration for the members of the group. The costs related to technical assistance were projected based on the estimated type of support (national, regional, international, etc.) and their duration.

Health service system: The expenses related to the health service system presented herein include the infrastructure to be constructed and/or expanded, as well as the estimation of health facility and support system operation expenses. The projections for operational expenses are based on the cost estimate for the HSSP 2007–2015 and include drugs and specific expenses for health programs.

NPHHRD 2008–2015 IMPLEMENTATION COSTS BASED ON THE ESTIMATED SALARY POLICY

Shown below are the cost projections for the NPHHRD 2008–2015 based on the MOH's decisions.

1. Annual and total expenses for implementation of the NPHHRD 2008–2015.

Table 1 presents the global summary of the annual and total expense estimated as necessary for the timely and complete implementation of the NPHHRD 2008–2015. The total estimated cost is almost 53,000 million MTn, which corresponds to 2,000 million USD. The projected expenses increase from 3,200 million MTn in the first year of implementation to almost 10,200 million MTn in 2015. Comparing these results with the computed expense in 2006 (1,500 million),[24] means that the sector should spend two times of the actual incurred expenses with human resources in 2008.

The selected salary policy implies an average salary per worker of 14,194 MTn in 2015, of which 37% represents subsidies. However, as discussed below, the difference in the salary of specific and general area workers increases significantly.

[24] As seen in Table 1, some expense components are missing; therefore, it was not possible to compute this information. However, given that most of the differences are in the salary and remunerations component, the comparison made remains significant, despite such gaps.

Table 1. Projection of Total and Annual Expense for Implementation of NPHHRD 2008–2015

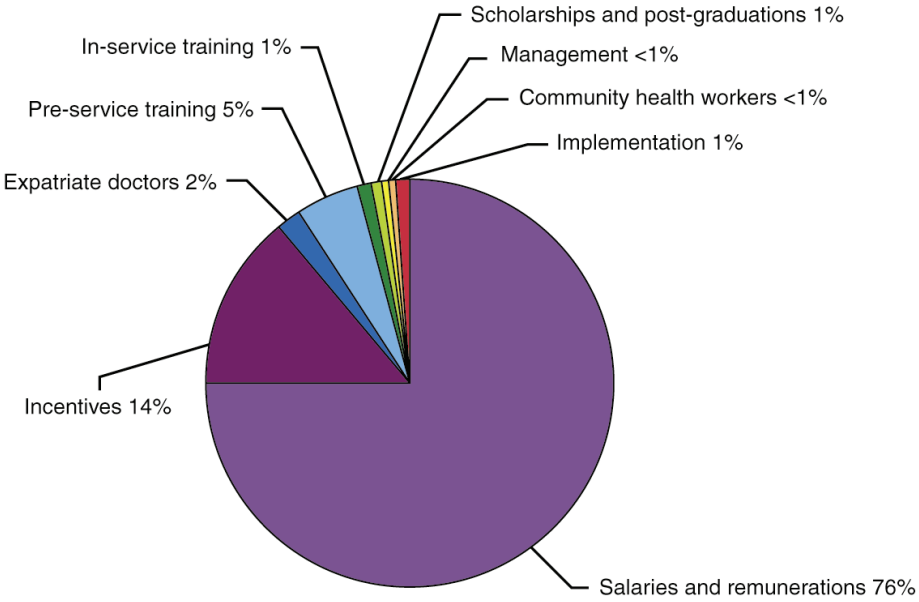
Mil MTn

Cost Component	2006 Expense	Cost Projection								
		2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
1.Salaries and subsidies	**1,042,465**	**1,869,740**	**2,124,302**	**3,875,999**	**4,629,410**	**5,619,146**	**6,466,487**	**7,399,500**	**8,352,341**	**40,336,926**
Base wage		1,234,033	1,397,899	2,531,250	3,016,887	3,639,849	4,153,068	4,715,034	5,290,091	25,978,111
Subsidies		635,708	726,404	1,344,748	1,612,524	1,979,297	2,313,419	2,684,466	3,062,250	14,358,815
2. Incentives	**268,383**	**488,870**	**556,895**	**651,885**	**777,793**	**942,608**	**1,089,963**	**1,254,098**	**1,424,795**	**7,186,906**
3. Expatriate doctors	**58,546**	**219,564**	**192,380**	**165,197**	**138,013**	**110,829**	**84,014**	**90,804**	**97,594**	**1,098,395**
4. Pre-service training	**132,798**	**444,306**	**689,523**	**380,187**	**340,364**	**227,161**	**233,407**	**236,194**	**231,062**	**2,782,205**
Training institute fixed/operational costs		40,605	42,798	44,980	47,274	49,685	52,219	54,882	57,681	390,126
Variable training institute costs		108,504	190,380	275,172	284,716	169,102	172,814	172,938	171,718	1,545,344
Central procurement		1,535	1,535	1,662	1,662	1,662	1,662	1,662	1,662	13,043
Training network investment		286,440	447,588	51,150						785,178
Teacher capacity building		6,711	6,711	6,711	6,711	6,711	6,711	6,711		46,980
Service contracts		512	512	512						1,535
5. In-service training	**NA**	**18,001**	**25,943**	**33,885**	**41,442**	**41,442**	**41,442**	**41,442**	**41,442**	**285,037**
Training organization		17,616	25,558	33,500	**41,442**	**41,442**	**41,442**	**41,442**	**41,442**	283,882
Strengthening provincial in-service divisions		385	385	385						1,155
6. Scholarships and post-graduate internships	**NA**	**54,237**	**58,767**	**64,141**	**71,429**	**78,894**	**83,984**	**89,062**	**93,911**	**594,426**
Doctor's specialization in Mozambique		10,520	12,715	14,545	16,832	18,844	20,948	23,052	25,156	142,614
Scholarships		43,717	46,052	49,596	54,597	60,049	63,036	66,010	68,755	451,812
7. Human resource management	**8,724**	**15,867**	**19,855**	**20,607**	**21,673**	**22,363**	**21,217**	**18,698**	**19,411**	**159,690**
Management training		3,197	6,394	6,394	6,394	6,394	6,394	3,197	3,197	41,559
Operation of management schools	8,724	10,337	10,895	11,451	12,035	12,649	13,294	13,972	14,684	99,317
HHR decentralization		491	851	971	1,529	1,529	1,529	1,529	1,529	9,959
Development of HHRO		1,843	1,715	1,792	1,715	1,792				8,855
8. Community health worker	**NA**	**3,836**	**31,457**	**57,032**	**57,032**	**55,242**				**204,600**
9. Plan implementation		**108,300**	**108,300**	**108,300**	**4,500**	**4,500**	**2,000**	**2,000**	**2,000**	**339,900**
MI-NPHHRD		6,000	6,000	6,000	4,500	4,500	2,000	2,000	2,000	33,000
Service contracts		102,300	102,300	102,300						306,900
GRAND TOTAL	**1,510,916**	**3,222,723**	**3,807,423**	**5,357,232**	**6,081,656**	**7,102,185**	**8,022,514**	**9,131,798**	**10,262,555**	**52,988,086**
1000 US$	***59,078***	***126,011***	***148,873***	***209,471***	***237,797***	***277,700***	***313,686***	***357,060***	***401,273***	***2,071,870***

NA = Not applicable.

Figure 1 graphically presents the composition of the total expenses for 2008–2015. As shown, 90% of the estimated expense corresponds to staff expenses, including salaries and remuneration (76%) and incentives to be paid to the workers (14%). Expenses for expatriate doctors total 2%. The expenses for pre-service and in-service expenses totalize 5 and 1% of the estimated total. The figure highlights that, despite representing significant values in absolute terms, the estimated expenses for human resource management and community health workers are relatively low when compared with other expenses.

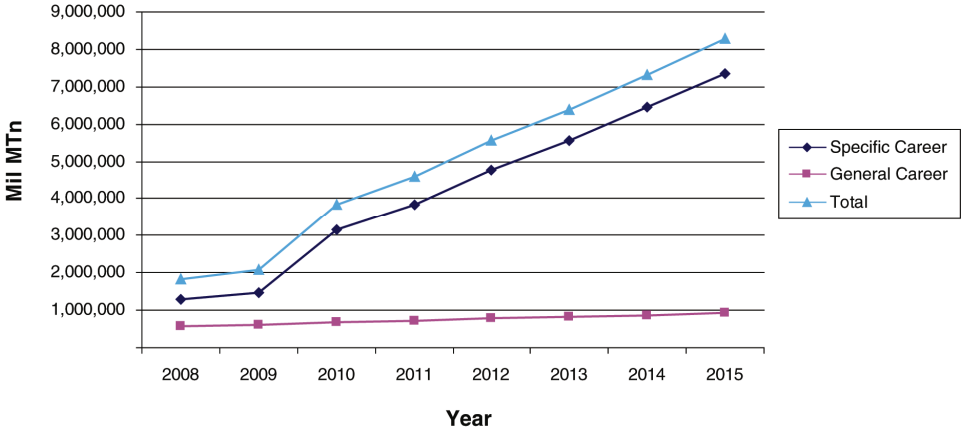
Figure 1. Total 2008–2015 Expense Composition



2. Salary and remuneration expense evolution 2008–2015

Figure 2 presents the evolution of the expenses for salaries and remunerations between 2008 and 2015, highlighting the general and specific careers. As shown, from 2010, the growth rate for this expense in the specific careers will be significantly higher than for general careers. This is due to two major factors—the prioritization of MDG professions in the selected scenario and the emphasis on specific careers in the salary scale. Although some workers in the specific area benefit from a 100% increase in their salary in 2010 (75% + 25% of rent subsidy), in the general career area the increase is made only based on estimated inflation.

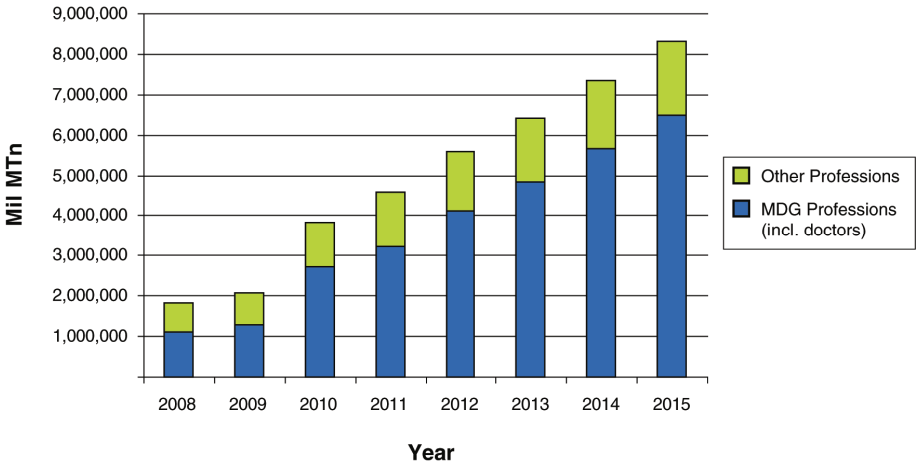
Figure 2. Salary and Remuneration Expense Evolution 2008–2015 for Specific and General Careers



3. Expenses for salaries and remunerations for priority MDG professions

Figure 3 shows the evolution of the expenses of salaries and remunerations between 2008 and 2015, comparing the proportion assigned to the priority professions in the MDG with others. The expense of priority professions grows significantly more than the others and represents a great percentage of the annual expense of salaries and remunerations, increasing from 61% of the total in 2008 to 78% in 2015.

Figure 3. Evolution of Expense with Salaries and Remunerations with Priority MDG Professions and Others



4. Salary and remuneration expense evolution per level and type of career

Figure 4 highlights the differences in the evolution of the expense of salaries and remunerations, not only between the two types of careers but also between the levels. In the specific career, the greater evolution occurs in the secondary level, followed by the higher level. The expense of elementary level staff salaries and remuneration increases at a lower rate. In the general career, the greatest increase in absolute terms occurs in the expense for the elementary and basic level, and the distribution of the expense in percentage terms remains the same between 2008 and 2015.

Figure 4. Salary and Remuneration Expense Evolution per Level in Specific and General Careers

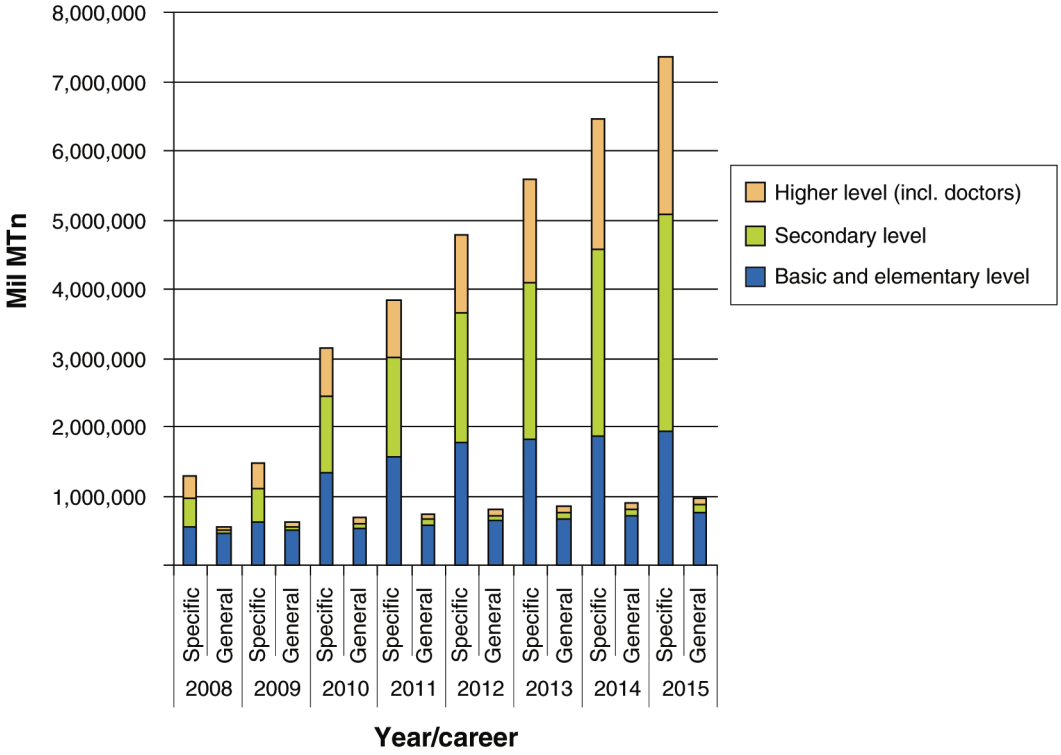


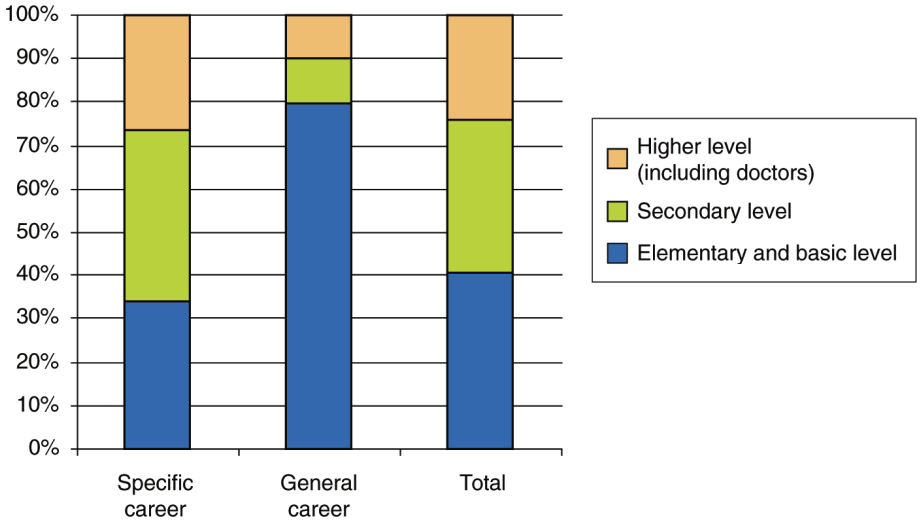
Table 2 highlights the percentage evolution in the expense per level in the specific careers. Although the basic and elementary level expense decreases from 43% to 26% between 2008 and 2015, the secondary level expense increases from 32% to 43% and the corresponding percentages for the higher level are 25% and 31%.

Table 2. Percentage Evolution of Expense per Specific Career Level

Level	2008	2009	2010	2011	2012	2013	2014	2015
Basic and elementary level	43%	42%	42%	41%	37%	33%	29%	26%
Secondary level	32%	33%	35%	38%	39%	41%	42%	43%
Higher level (including doctors)	25%	25%	23%	21%	24%	26%	29%	31%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Figure 5 shows the percentage of the total expense with salaries and remunerations in 2008–2015 per level, separating the specific and general careers. In the specific career, the greater percentage occurs with the secondary level, and in the general career, 80% of the 2008–2015 expense occurs with the basic and elementary level. Given that the expense in the specific career is significantly higher in absolute terms, the pattern of the distribution of the expense between the levels in total terms is almost the same.

Figure 5. Percentage of Total 2008–2015 Expense with Salaries and Remunerations per Type of Career and Level



5. Evolution of the workers gross salary 2006–2015

Table 3 shows the evolution of the estimated average gross salary of the workers per level in the general and specific career. As expected, the increase is considerably higher in the specific career, particularly for the elementary and basic level. Looking at the average evolution in each type of career, the salary increase between 2006 and 2015 is about three times higher for the workers in the specific area.

Table 3. Estimated Average Gross Salary Evolution for Workers per Type of Career and Level 2006–2015

Career/Level	Estimated 2006	Projected								
		2008	2009	2010	2011	2012	2013	2014	2015	% evol 2006–2015
Specific										
Elementary level	2,950	3,431	3,650	7,487	7,869	8,270	8,692	9,135	9,601	225%
Basic level	4,229	4,918	5,233	10,733	11,280	11,856	12,460	13,096	13,764	225%
Secondary level	7,129	8,291	8,821	15,887	16,697	17,549	18,444	19,385	20,373	186%
Higher level (incl. doctors)	21,831	25,391	27,016	48,655	51,136	53,744	56,485	59,366	62,394	186%
Average	***9,035***	***10,508***	***11,180***	***20,691***	***21,746***	***22,855***	***24,020***	***25,245***	***26,533***	***194%***
General										
Elementary level	2,562	2,924	3,082	3,239	3,405	3,578	3,761	3,953	4,154	62%
Basic level	3,006	3,432	3,617	3,801	3,995	4,199	4,413	4,638	4,875	62%
Secondary level	5,582	6,372	6,716	7,059	7,419	7,797	8,195	8,613	9,052	62%
Higher level (incl. doctors)	12,259	13,994	14,750	15,502	16,292	17,123	17,997	18,915	19,879	62%
Average	***5,852***	***6,681***	***7,041***	***7,400***	***7,778***	***8,174***	***8,591***	***9,030***	***9,490***	***62%***

EXPENSE OF THE HEALTH SERVICE SYSTEM

Table 4 presents the projected financial needs for goods and services and capital (current component of the State's Budget) in the health sector between 2008 and 2015. According to the cost estimate in the 2007–2012 HSSP, which served as the basis for this cost estimate, the expenses were disaggregated between those directly benefiting from the provision of services and the amount corresponding to the support system.

Table 4. Projected Expenses (Thousand MTn) with Goods and Services and Capital in Health Sector between 2008 and 2015

Expenditure component	2008	2009	2010	2011	2012	2013	2014	2015	Total
Health care provision	7,813,291	8,155,299	9,094,190	10,163,089	11,331,402	12,201,034	12,942,796	13,523,212	85,224,313
Support services	526,297	531,038	534,851	540,878	545,725	549,388	552,365	554,644	4,335,186
Total	**8,339,587**	**8,686,338**	**9,629,041**	**10,703,967**	**11,877,126**	**12,750,423**	**13,495,162**	**14,077,855**	**89,559,499**
Mil USD	***326,084***	***339,642***	***376,502***	***418,532***	***464,404***	***498,550***	***527,670***	***550,454***	***3,501,838***

As shown in the table, the total amount needed increases from 8,339 million MTn in 2008 to 14,077 million MTn in 2015, i.e., from $326 million to $550 million USD. From this amount, 96% of the expenses would be directly destined to service provision, and the remaining 4% would strengthen the functioning of the support system.

This estimate shall be adjusted based on the new investment plan to be developed and the number of functioning health facilities. Additionally, it shall be updated based on the cost estimation exercises recently performed in many key areas of the sector. However, the values presented in Table 4 highlight the extent of the financial needs expected for the next few years to ensure operation of the health service system, in addition to human resource expenses, which represent a key component of this system.

FINAL CONSIDERATIONS AND RECOMMENDATIONS

The main cost component relates to the projected staff expense. The significant growth of this expense was conditioned both by the additional staff and the gross salary that they should get to ensure the entrance and retention of qualified staff in the health sector, as well as increasing the quality of services provided. In other words, the staff salary serves, to a certain extent, as an incentive to attract staff to the health sector and for their good performance. On the other hand, the salaries being paid to workers depend entirely on the Government's salary policy, which has significant implications on the value of the total wage.

In addition to this salary, there is a need to create an incentive package to retain staff and ensure the placement of qualified workers in underserved areas, as well as the allocation of sufficient funds for this critical activity.

A series of actions to be carried out in the future have been identified to reinforce the expense projection developed to date and ensure the proper use of the presented data and models, especially in the Mid-Term Fiscal Scenario design. These actions include the following:

- Define a clear and comprehensive incentive policy. Once the package is selected, its cost and the necessary expense for each component shall be calculated. A cost-benefit study for the package or individual incentives should be implemented to inform future selections;
- Analyze the most cost-efficient way to provide in-service training for workers. This analysis should include the cost-opportunity of worker's time used in training rather than working at the health facilities;
- Design norms to determine the number of days/hours of training to which each worker in a certain level/career is entitled;
- Perform an evaluation to determine the most effective mix of staff and contracted teachers for a certain course and/or institution;
- Routinely update expense projection models developed in this exercise, especially regarding staff expenses;
- Conduct a NPHHRD feasibility analysis, paying particular attention to the components of the health service system as a whole that should be implemented (construction of infrastructure, additional operational expenses, etc.); and
- Improve the system for gathering internal, external, present, and future financial information.

PROPOSED MINISTERIAL DECREE FOR ESTABLISHMENT OF NPHHRD MONITORING AND IMPLEMENTATION GROUP

RATIONALE

The Government's Program for the health sector focuses on HHR and its importance to ensure accessible and high-quality health services, and an impact on the population's health.

In response to the provision of the Government's Five Year Plan, technical assistance was requested to define work fronts, identify strategic lines and operational targets based on experiences within the Ministry, and obtain the input from several relevant institutional and social partners. It was also intended to identify operational measures and activities to be scheduled and executed within the short- and mid-term to achieve a National Plan for the Development of Human Resources in Health (NPHHRD).

These objectives were met. In fact, the technical assistance group presented the priority lines of action for the development of policy guidelines on HHR, as well as its cost projection. These actions anticipate the creation of a monitoring and implementation group to conduct the global start-up, coordination, and follow-up processes for the HHR reconfiguration strategy.

This HHR monitoring and implementation group, intended to implement the effective reforms in this sector of the national workforce, motivates this proposal for the Joint Ministerial Decree from the Ministers of Health, Finances and Public Civil Service, with the indication that during the process of harmonization of this Joint Ministerial Decree, it consulted with the Ministry for Public Civil Service, Finances, Labor and Planning and Development.

REPUBLIC OF MOZAMBIQUE
MINISTRIES OF HEALTH, PUBLIC CIVIL SERVICE AND FINANCES

JOINT MINISTERIAL DECREE No. ……. /2008

OF ……..

With the need to institutionalize a technically differentiated monitoring and implementation group to coordinate the implementation of the National Plan for Health Human Resources Development (NPHHRD), under the competences to the awarded, the Minister of Health determines:

Article 1: The creation of a group to coordinate the implementation of the NPHHRD designated as NPHHRD Monitoring and Implementation (MI-NPHHRD), under the direct supervision of the National Human Resource Director.

Article 2: The MINPHHRD shall conduct the global start-up, coordination, and follow-up of the Health Human Resource reconfiguration strategy.

Article 3: The MI-NPHHRD wishes to achieve in the short-term the objectives related to the capacity building of the training and management system by staff recruitment and placing, and retention where they are needed the most.

Article 4: The MI-NPHHRD shall perform its duties in coordination with the Human Resources Directorate (HRD) within the Ministry of Health (MOH) and the Provincial Health Directorates. Such duties include:

a) Provide technical coordination of the global start-up and implementation process for four strategic lines identified in the NPHHRD, as well as other specific implementation aspects;
b) Propose, together with the MOH's HRD, guidance for pre-service and in-service training for workers and the performance, retention, and quality incentives to be applied in the health facilities;
c) Create a list of criteria and methodologies to evaluate and classify the training units in different levels of development;
d) Create the terms of reference for agreements between the health administration and foundations, non-profit non-governmental organizations, and the profitable private sector;
e) Propose, according to law, modalities for the participation of municipalities, cooperatives, and social and private entities in the implementation of the NPHHRD;
f) Design and execute a Communication Plan for the different NPHHRD audiences, ensuring continuous and sustainable contact over the group's period of activities;
g) Integrate the Installing Commission for the Health Human Resource Observatory (HHRO);

h) Promote, incentivize, and validate planning exercises conducive to provincial, district, and municipal ownership of the NPHHRD to create Provincial HHR Plans;
i) Identify partners for different activities in the many strategic lines by establishing agreements and partnerships with public services to ensure access to necessary and adequate resources for the purpose;
j) Create a Technical Assistance Plan for the Completion of the NPHHRD, allocating parts of management of this plan to different stakeholders involved in its implementation;
k) Create a Mozambican HHR Research Plan and follow-up its implementation;
l) Monitor the approach to issues such as new careers, salaries and incentives, and community health worker management. It shall follow up the evolution of indicators for the targets defined in the NPHHRD. It shall also infer greater access to priority competencies on the level of coverage and production impact; and
m) Perform other duties as assigned by the Minister of Health.

Article 5: The MI-NPHHRD shall be managed by a coordinator, with National Director competencies, and equivalent to a Permanent Secretary for remuneration and subsidy purposes.

Article 6: The coordinator shall be advised by a multidisciplinary team composed of a maximum of 10 elements with higher education, to be appointed by an order from the Minister of Health, based on public service turnover mechanisms.

Article 7: All positions shall be filled on a full-time basis, with exclusivity and permanent availability.

Article 8: The coordinator shall:

a) Manage the Monitoring and Implementation Group and provide, with the competent services and bodies, for the attainment of means and instruments needed for the performance of his/her duties;
b) Advise the central, provincial, municipal, and district administration on HHR related issues, namely planning decisions, service procurement and installation, and adequate resources and technology for the objectives to be achieved;
c) Present follow-up reports on NPHHRD implementation on a regular basis;
d) Propose and organize, as necessary, external consultancy services; and
e) Propose the deployment or transfer of necessary support staff from the MOH or other ministries, universities, public institutes, and municipalities.

Article 9: ….. is appointed to perform the duties of MI-NPHHRD coordinator.

Article 10: The MOH's HRD shall be responsible for providing logistic support to the establishment and operation of the monitoring and implementation group.

Article 11: The MOH's Administration and Finance Department shall be responsible for the financial support for the establishment and operation of the Monitoring and Implementation Group.

Article 12: MOH services and bodies and the provincial and district health administrations shall be responsible for collaborating with the Monitoring and Implementation Group created by the Joint Ministerial Decree, according to the competence framework for each administration level.

Article 13: A support team shall be created by the Governor in each provincial administration in functional coordination with the MI-NPHHRD, which shall be coordinated by a worker chosen by mutual agreement between the MI-NPHHRD coordinator and the respective Provincial Governor, and shall be constituted by four higher technicians recruited from the health services, based on public service turnover mechanisms.

Article 14: The MI-NPHHRD shall serve for a 36-month term.

Article 15: This Ministerial Decree is effective from the date of publication.

Maputo, , 2008

THE MINISTER OF HEALTH

PAULO IVO GARRIDO