

**Africa Region Human Development  
Working Paper Series No. 91**

# **The Human Resources for Health Situation in Mozambique**

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**Africa Region  
The World Bank**

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## LIST OF ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome	IMF	Agencies International Monetary Fund
AMETRAMO	NGO representing traditional healers	INCO-DEV	Programme of the European Commission
ANEMO	Nursing Association of Mozambique	INE	National Statistics Institute
APE	<i>Agentes Polivalentes Elementares</i>	MOH	Ministry of Health
AIDS	Acquired Immunodeficiency Syndrome	NGO	Non Governmental Organization
AMETRAMO	NGO representing traditional healers	NHS	National Health Service
ANEMO	Nursing Association of Mozambique	NISS	National Institute of Social Security
BA	Baccalaureate	PARPA	Action Plan for Reduction of Absolute Poverty
CDFMP, or	Cuadro de Despesas Financeiras	PDI	Institutional Development Plan
MTEF	a Medio Prazo, Mid Term Expenditure Framework	PDRH	Human Resources Development Plan
CHAEM	Environmental Hygiene and Medical Examination Centre	PERMAS	Public Service Reform and Modernization Programme
CRDS	Regional Centre for Health Development	PES	Social and Economic Plan
CSR	Country Status Report	PHC	Primary Health Care
DPC	Planning and Cooperation Department	PIS	Personnel Information System
ECG	Electrocardiogram	PROAGRI	Agriculture Programme
FARMAC	Pharmaceutical Para-statal Network	PRSC	Poverty Reduction Strategy Credit
GACOPI	Cabinet for Cooperation and Investment	PRSP	Poverty Reduction Strategy Paper
GDP	Gross Domestic Product	PSAC	Portuguese Speaking African Countries
HIHS	Higher Institute of Health Sciences	PTIP	Three Years Investment Programme
HIPC	Highly Indebted Poor Country Initiative	SIS	Health Information Systems
HIV	Human Immunodeficiency Virus	STD	Sexually Transmitted Diseases
HQs	Headquarters	TBA	Taditional Birth Attendants
HRH	Human Resources for Health	TC	Training Centre
HSI	Health Sciences Institutes	UEM	Eduardo Mondlane University
IDA	International Development	UN	United Nations
		UNAIDS	United Nations HIV-AIDS Programme
		US	United States
		USD	United States Dollars
		WHO	World Health Organisation



# Acknowledgements

We gratefully appreciate financial support from the Dutch Government and the Norwegian Trust Fund for Education that was provided to carry out and published this study. The following people contributed greatly to this report:

Dr. Emilia Virginea

Dr Fátima Hipólito

Dr. Fátima Simão

Dr. Ferrucio Vio

Dr. Jorge Tomo

Dr. Jaime Manjate

Dr. Gerturdes Machatine

Dr. Gilles Dussault

Dr. Isabel Viandro

Dr. Lucas Gulube

Dr. Mario Dal Poz

Dr. Mohamed Rafik

Dr. Rui Alves

Mr. Carimo Hage

Mr. Luciano Nguambe

Mr. Maiba Wache

Dr. Maria João

Mr. Manuel Mario António

Mr. Omar Fernando

Ms. Brigitte Christensen

Ms. Matilde Basilio

Thanks are also due to Elsie Laurretta Maka who has overseen the production of the publication.



# Executive Summary

**T**he amount of work and strategic thought around issues related to human resources for health (HRH) in the Mozambican health system is significant. The Mozambican track record is one of innovation, steady improvement, meeting targets and adaptability. With limited human resources, much has been achieved. This report reviews the literature, published and unpublished, available on HRH in Mozambique. It also carries out some secondary data analysis and presents data from interviews and focus group discussions with key informers and stakeholders. The study of the human resources situation in Mozambique followed a frame of reference that addressed key issues related to the context, professional policies, labour market, management of human resources, and performance and coping.

## The context

The current context in which HRH must be considered is one of extreme poverty, and unequal benefit from economic growth among provinces. The health services have gone through a period of rapid expansion after a long civil war. However, access to health care is still poor, despite the fact that health care is offered not only by the

public sector, but also by an urban based private-for-profit sector. The epidemiological profile is dominated by diseases of poverty, including the exponential growth of the HIV epidemic. Rapid economic growth is very dependent on foreign investment and developments such as tourism. In this regard, the availability of good health services is of strategic economic importance not only to ensure a health workforce but also to instil confidence on foreigners willing to travel to Mozambique for business or pleasure.

## Professional policies

The complex career structures in Mozambique have been recently reviewed as a lopsided pyramid, in which the base (largely unskilled health workers) is too wide and the middle layers (mid-level health workers at progressively higher levels of education) are too narrow at present. This has required the rethinking of the structure of the training facilities supported by the Ministry of Health (MOH) and the Ministry of Education.

The training sector is plagued by great difficulties concerning the linkage with HRH requirements for the country, accommodation for students, quality of the learning environment,

financial constraints, and dependency upon donor support.

Registration and regulation of health workers is the responsibility of the MOH, but often health workers are registered only if they work for the National Health Service (NHS). Accreditation of foreign health workers is automatic in order to facilitate their integration into a health care system highly deprived of human resources.

## Labour market

The health labour market is dominated by the public sector. Nevertheless, with the appearance and growth of the private-for-profit sector and health NGOs, there is a growing proportion of the workforce working not only in both sectors, but also exclusively in the private sector. As this last group is not counted in official statistics, the numbers presented, particularly for the university trained professionals and for some professional groups such as those associated with the pharmaceutical sector, have to be accepted with some reservation.

In 2003 there were 100.77 NHS health workers per 100 000 population and 3.8 NHS physicians (national and expatriates) per 100 000 population. Male participation is greater than female participation, although it varies among different professional groups. Seventy nine percent of the health workers are between 30 and 59 years old.

HRH are concentrated in the urban areas of the country. Auxiliary nurses and midwives are the health staff who are more present in rural areas than in urban areas compared to the other occupations: 60% of auxiliary nurses and 68% of auxiliary midwives work in the rural area, this is 15 persons out of 25 for auxiliary nurses, and 25 persons out of 37 for auxiliary midwives: Only 3% of the physicians work in rural areas.

The median distribution of inhabitants per doctor for Mozambique is 45,943 in Tete Province. The best served provinces are in the south

of the country, with the exception of Gaza, while the northern provinces as the worst served provinces in terms of doctors. Only a minority of the workforce has a university degree. The distribution per level of training is very unequal among the provinces. During 2003, of the 712 doctors working in the NHS, 42% were hospital specialists, 58% were generalists and there were only three were trained as public health specialists.

The largest proportion of health workers (55%) are located in health centres, whereas 41% work in hospitals. The majority of midwives, auxiliary nurses and auxiliary midwives, and pharmacists and are located in health centres; in contrast physicians, nurses and physiotherapists are primarily located in hospitals.

Although, Mozambique seems protected from health professional immigration for linguistic and social reasons, there is some evidence of a growing immigration to South Africa and Portugal. The information available about the Mozambican health professionals working in Portugal confirms the impression that its magnitude is considerable, but not as significant as for the other Portuguese-speaking African countries (PSAC)..

## Human resources management in the NHS

HRH development and management has been guided by the HRH Development Plan 1992–2002, and more recently by the HRH Development Plan 2001–2010.

The central organs maintain the responsibility for the management of health cadres with university training, as well as the responsibility for supervising the professional administrations and the medical directors. Health cadres with mid-level, basic, or elementary training are decentralised to the provincial administration. However, human resources management is lacking in the same managerial, leadership, and administrative capacity observed to be missing in other areas of the health system. In order

to modernize the administration of the MOH and its institutions, doctors and nurses should be progressively replaced in their non-clinical management positions by professional administrators with university training.

A health sector staff establishment was approved during 2001. However, the management of this establishment is varied, particularly at the most peripheral levels.. Job descriptions of health professionals, published in a national bulletin, are not consistently applied across the country. The lack of staff also means that many workers perform duties that are not in their job description. Of those positions predicted in this establishment, not all are filled because of budgetary restrictions, delays resulting from the difficult bureaucracy associated with the appointment process, or the unwillingness of staff to be deployed to peripheral units. Vacancies are a substantial problem, manifest most prominently in Sofala, Zambezia, Nampula, Manica and Inhambane in decreasing order. In addition, there are major staff losses associated with leave to work in another area/department/service, or leave to study or work outside the public sector that are not routinely quantified. In addition, loss due to mortality of staff is starting to assume worrying proportions, particularly among the youngest staff. There is a perception that AIDS is a significant problem among hospital personnel, with anecdotal evidence of many health workers dying from it. This is attributed to a risk greater than that faced by the general population, as a result of inadequate protective mechanisms and protocols for health workers. Health workers are aware of this occupational risk, and demand better working conditions

The mix of personnel has improved over the years, yet the mix achieved in the different provinces is far from standardised. In urban hospitals, all the different occupations of the health workforce are present. Rural hospitals are mostly staffed by nurses and midwives, with the the small number of physicians and pharmacists being particularly noticeable. The management of the work schedules of health

workers and of the day to day work also seems to reflect serious problems, but again, this is not well documented. Work shifts may be excessive or too lax. They do not seem to be properly coordinated with activities, availability of personnel and patient attendance. Supervision and personnel evaluation systems are inadequate; they are not systematic enough and suffer from the lack of skilled supervisors. Their effectiveness is also limited by failure to give feedback to the workers supervised.

In regard to training related to continuing education, coordination is carried out at the central level, planning at provincial level, and implementation is carried out by the districts with different level of support from the province.. At provincial level, Continuing Education Units have been emerging over the years. These units are usually poorly staffed. At district level training is poorly developed, without a systemic approach, particularly to the training of the most peripheral workers. This training lacks a link with the professional development demanded for career progression. Criteria for selection of the trainees are also acknowledged as inadequate.

The proportion of the salary mass in the running expenses of the MOH was 46% in 1997. This salary mass is highly subsidized by donors.

The poor working conditions of health workers may easily be captured on a superficial visit to any facility. These poor conditions can make it difficult for health workers to utilize the skills learned either in the initial training or in continuing education programmes, lead to poor efficiency, may contribute to poor patient , and raise significant doubts about the effective meaning of some of the productivity statistics.

A personnel information system (PIS) was created in 1998. The capacity to use statistical data is limited, due to the lack of trained personnel to use the information adequately in the decision-making process. It covers all hospitals, but does not yet cover all health centres nor any of the health posts, and does not track information on health workers outside the NHS.

Disciplinary procedures need a careful review and an approach that, *inter alia*: (i) would support and protect the public; (ii) promotes a cultural change among health workers from the time they enter for professional training; (iii) addresses mechanisms to correct the systemic determinants of the poor performance that leads to disciplinary procedures; (iv) strengthens the health inspectorate system; (v) and binds other state organisms to the disciplinary decision of the health institution.

## Performance and coping

The quality of clinical work is reported as being weak in the peripheral health units: patients are not examined, prescriptions are done only on the basis of the symptoms reported, antibiotics are over prescribed, and antimalarials are wrongly dosed. The work of doctors is often disconnected from the work of other members of the health team, such as medical technicians and agents. And even when patient management flowcharts are available, they are hidden out of sight, behind the prescriber's door. Asepsis rules are not obeyed. Admission criteria are not respected, and a significant proportion of patients report low trust in the health worker they have recently seen. Human resources related problems reported by civil society included: poor interaction with the health staff in the health units, illicit payments, lack of personnel, and lack of pharmaceuticals.

Although public sector employment continues to be considered the principal employment, many health workers also take on additional clinical work in the private-for profit-sector, a second job in the public sector, or employment outside the medical field, like complementary economic activities. The principal reasons given to engage in these economic activities are to “meet the cost of living”, “to support the extended family” and “to educate one's children”. Besides dual employment, the steady reduction in health workers' earnings stimulated the progressive

diffusion of under-the-desk charging. Aware of the inadequacy of the salary levels, the MOH has been unwilling to curb these schemes. The result is deregulation of health care provision, where each health worker pursues his /her own compensating strategy. No effective control is possible, which forces patients pay significant sums.

Although job satisfaction was never formally studied as such, there is some evidence on factors reported as sources of “unhappiness” at work. This evidence suggests that job satisfaction is lower among nurses than among doctors.

Patient satisfaction studies in Mozambique are limited. Satisfaction seems positively associated with increased training level of the provider and with provider availability. Sources of patient dissatisfaction include illegal fee charging, and lack of motivation of health personnel.

Violence in the workplace against health workers has been documented. The forms of acknowledged violence are, in decreasing order of frequency: sexual, physical, damage against property, verbal abuse or bullying. This violence is most frequently directed against administrative personnel, technicians, nurses and managers, in order of decreasing frequency.

## Conclusion

HRH developments are heavily influenced by the context reviewed earlier in this report. Poverty, isolation, poor career prospects, inadequate social activities to support cultural interests, and family requirements push health professionals away from rural areas and from the most peripheral units. In the urban areas several factors, including the possibility of dual employment, pull health workers toward them. An unstructured civil society limits citizens' watchdog function, and allows some impunity of health workers. Significant donor dependency introduces difficult issues of coordination, control, and respect for local specificities. It also creates opportunities that have been used well in terms

of supporting the training and deployment of personnel and providing them with improved financial incentives.

The public sector administration is, like in many other countries, a constraint on the exploration of flexible alternative solutions that plague the system. Some reforms, such as decentralization, had limited success. But administrative challenges remain, particularly in areas such as recruitment. At the macro-level the situation is clearly diagnosed and the solutions properly considered in existing strategic documents. Yet, one is nevertheless left with the impression that at the micro level the situations are not well diagnosed and that national solutions are not necessarily locally relevant.

## **Recommendations**

Based on the results of the literature review, data gathering, interviews, and focus group discussions the authors have identified significant challenges for the future. Besides the contextual

determinants, a key obstacle in addressing these issues seems to be the widespread lack of skilled management cadres. Also, all policy documents should more explicitly make the commitment to key equity criteria in issues related to HRH development.

Routine data gathering though the PIS should also be strengthened at all levels, particularly at the most peripheral levels. PIS developments should go hand in hand with the development of skills to use PIS information for decision making at all levels. The authors have identified data which should be routinely made available to policy-makers and managers responsible for human resources development in health care services in Mozambique. Before many of these data developments become routine, it is probably appropriate that much of the data gathering should be done on a project basis before integrating them into the PIS. The greatest priority should be given to data gathering on micro management issues, working conditions, patient perceptions of health workers performance and HRH equity indicators.

# Background

**T**he World Bank (WB) is preparing a new Poverty Reduction Strategy Credit (PRSC) in Mozambique, which will focus on the improvement of health services. Part of the analysis needed to prepare the new lending operation is the completion of a Country Status Report (CSR) on Health and Poverty. The WB PRSC project preparation team and counterparts from the Government of Mozambique have agreed that one area the CSR should focus on is human resources for health (HRH). This choice of focus area is dictated by the severe constraints currently faced by the country in the production, deployment, retention, and management of all cadres of health workers including physicians, medical officers, clinical assistants, registered and enrolled nurses, and other polyvalent workers.

## Purpose

The purpose of this study was to support the Government of Mozambique and the WB health team in identifying key Programme and policy issues related to the planning, production, deployment, retention, and management of HRH. In this scope of work, HRH included professional health workers (physicians, nurses,

etc.) as well as different categories of polyvalent health workers, including community health workers.. The key findings and results of this study will be incorporated in the Mozambique CSR on Health and Poverty, and will be used in the Bank's policy dialogue with the government and donors.

## Tasks

In order to achieve the above purpose the authors:

- Reviewed the existing published and unpublished literature pertaining to the planning, production (pre-service and in-service training), deployment, retention, and management of HRH in Mozambique. The review focused on key constraints and major bottlenecks.
- Organized available secondary data, focusing on stock and flow of HRH by major cadres, geographic distribution, distribution by levels of care, filled vs. unfilled positions (vacancies), migration, expatriate personnel, estimates of need or requirements, and pay-scales. The sources of secondary data were grey literature, published literature, and the personnel

information system (PIS) of the Ministry of Health (MOH).

- Conducted focus group discussions with health workers from the civil-service, non-government organizations (NGOs), and for-profit facilities (annex I) in order to get a better understanding of their attitudes, behaviours, and motivations for work; the incentives they receive or would want to receive; the work constraints that they face; their views on how these constraints could be addressed; their knowledge, attitudes and practices with respect to dual practice and moonlighting; the career ladder and structure of promotion; and the overall working environment.
- Conducted selected interviews discussions with key HRH stakeholders including representatives of the government, donors, academia and training institutions, and civil society representatives (annex I).
- Based on the results of the literature review, data gathering, interviews, and focus group discussions the authors:

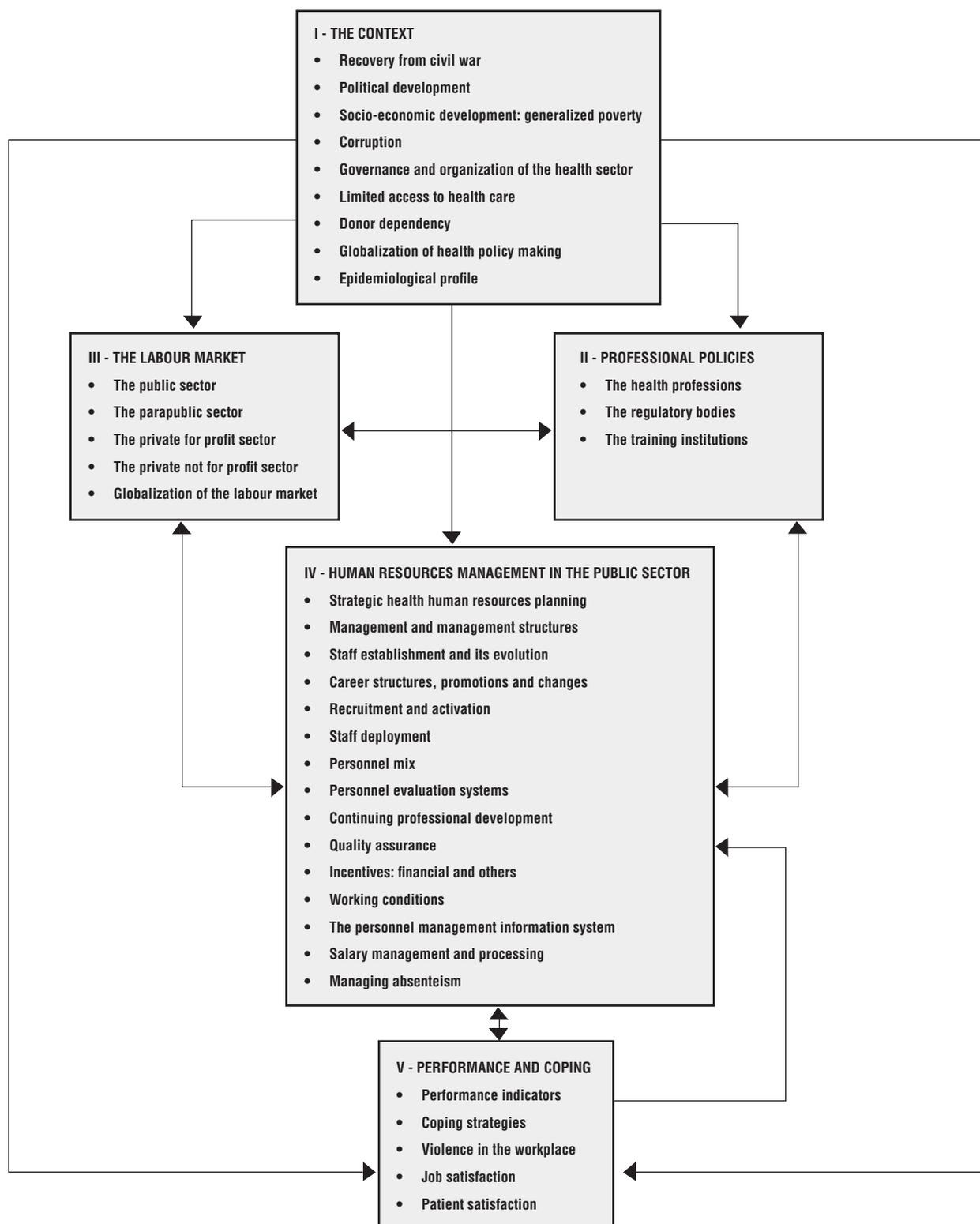
- present a list of key issues in the production, deployment, retention, and management of HRH.
- identify additional data-gathering, analytical, and modelling activities that need to be undertaken to quantify the HRH problems and to identify and clarify the issues.
- identify the critical next steps that should be done to address these issues.

## Frame Of Reference

The Mozambicans devote a fair amount of private and public financial resources to health care services. Like in any other country, the way in which human resources are recruited, trained and deployed, their conditions of employment, and their work settings all have an impact on the volume and the quality of services produced.

In order to approach the study of the human resources situation in Mozambique, the following frame of reference was adopted (figure 1):

**Figure 1**  
**Frame of reference for this report.**



# Context

**M**ozambique is located in the South-Eastern coast of the African continent, bordering the Indian Ocean between Tanzania and South Africa,.. The country is divided in 11 provinces, including the capital city, and 147 districts (table 1).

Since independence in 1975 it has suffered from civil war, flood and drought, while seeking to define and build its economic and social institutions.

**Table 1**  
**Mozambique's provinces and districts**

Regions	Provinces	Number of districts
North	Cabo Delgado	17
	Niassa	16
	Nampula	21
Centre	Sofala	14
	Manica	10
	Tete	14
	Zambezia	17
South	Inhambane	14
	Gaza	12
	Maputo Province	8
	Maputo City	4

## Socio-demographic indicators

Table 2 summarises, province by province, some of the most important socio-demographic indicators. Mozambique has a young population, with 44 % of a total population of 18 million under 15 years of age, and only 3 % over 65 years. Life expectancy is low, as expected for a country with a high fertility rate and some of the worst indicators in the world regarding infant and maternal mortality (Macassa et al 2003). Table 2 also reflects significant regional inequalities within the country.

## Epidemiologic profile

Mozambique has a classical profile of the diseases of poverty, with significant levels of paediatric malnutrition and a predominance of infectious diseases (malaria, tuberculosis, AIDS). These overlap with the emergence of other health problems associated with economic development, namely traffic accidents, particularly in rapidly urbanizing areas. These problems of poverty have been aggravated by natural disasters such as drought and floods (Bloomfield 2000, Moore et al 2003).

The spread of HIV infection has increased at an alarming speed in recent years. According

to UNAIDS, HIV prevalence among male STD (sexually transmitted disease) clinic patients tested in Maputo increased from 3% to 20% between 1987 to 1996. Outside of Maputo, HIV prevalence among male STD clinic patients tested was 37% in 1998, and 26% among female STD clinic patients in 1997. The overall estimated HIV prevalence rate for adults (ages 15–49) in Mozambique was 13.2% in 1999 (UNAIDS, 2000), but increased to 16.1% in 2000 according to the United Nations (UN) and the Mozambican MOH. The very latest estimates, however, based on better surveillance methods show a prevalence of 12%. The number of AIDS-related deaths is expected to rise from 118,000 in 1998 to approximately 400,000 in 2002 (UNAIDS, 2000). This will have a significant impact on the country's population structure, principally in regard to the economically active young population and to the human resources for health (HRH) in particular.

## Recovering from war

After independence, Mozambique began to successfully implement a primary health care (PHC) strategy (Ministério da Saúde 1978), building on the experience acquired during the liberation war (Walt & Melamed 1983). The health care system was particularly targeted by rebel forces during the 16 year civil war that ended in 1992. The combined effects of the negative economic consequences of the war, the forced displacement of over a million people, and the destruction and disruption of health services worsened the health of the population, with increases in mortality rates, famine, and epidemics (Cliff & Noormahomed 1988, Garenne et al 1997, Coninx et al 1998).

Between 1982 and 1987, 729 primary health care facilities had been destroyed (Garenne et al 1997). By the end of the war, nearly 700 health posts and health centres had been destroyed. Health workers were the favoured targets of the rebels, and many were killed or kidnapped.

Many others left their posts or were even prevented from providing care.

Rehabilitation of health infrastructures and services was tentatively attempted in Mozambique over 1991–3 as part of a full-scale rehabilitation requiring an estimated 500 million USD. Because of donor dependency, this overall strategy shifted to a project based approach (Green 2000). More than 400 health care facilities have been rehabilitated or built after the peace accord. By 1997, the rehabilitation/ expansion process was roughly half way toward projected completion (Yates & Zorzi 1999). The building plan to rehabilitate facilities destroyed during the war is presented in table 3.

Specific aspects of the reconstruction effort addressed HRH issues such as Box 1.

## Transition to democracy and a plural society

The end of the civil war coincided with newfound political growth, including the introduction of multiparty general elections for a national parliament, direct popular voting for the country's president and, more recently, with elections for municipal authorities.

This political opening up brought with it a greater tolerance for the non-governmental economic sector which, for the health sector, coincided with the explicit recognition of non-governmental provision of health care and of new sources of income for health professionals.

## Economic growth and poverty

Income is low, with the gross domestic product (GDP) per capita in the range of \$230 USD. By the late 1990s, the economy had made remarkable progress, with double-digit growth rates. According to the National Statistics Institute (INE) the inflation rate in 2000 was 11.4%, i.e. almost double of 1999. But the figures are only based on the Maputo Consumer Price Index,

**Table 2**  
**Socio-demographic indicators per province (INE 2001)**

Indicators	Maputo City	Province of									
		Maputo	Gaza	Inhambane	Sofala	Manica	Tete	Zambezia	Nampula	Province of Cabo Delgado	Province of Niassa
Area (Km <sup>2</sup> )	316	25053	75720	68615	68018	61661	100724	103129	81606	82625	125056
% share of the country's pop	6.14	5.14	6.57	7.06	8.77	6.19	7.30	20.34	19.47	8.16	4.85
Inhab./Km <sup>2</sup>	36.8	16	21.8	21.8	21.8	19	13	32.92	43	19	7.1
Population growth rate (%)		2.3	2.2	2.3	2.3	2.8	2.8	2.5	2.2	2.0	2.7
Illiteracy rate (%)	13%		43.8		53.5	50.8	57	74.7	69.9	73.3	65.3
Prevalence of poverty (%)	47.84	65.60	64.66	82.60	87.92	62.60	82.27	68.10	68.92	57.40	70.64
Average life expectancy at birth (years)	61.4	54.9	49.8	50.3	45.1	46.9	46.6	39.8	42.3	42.2	45.1
Birth rate	33.9	35	38.3	40.5	41.3	44.5	44.9	47.3	42.7	41.1	45
Mortality rate	9.7	11.9	15.9	16.1	18	16.9	17.3	22.8	20.3	20.2	18.2
Fertility rate	3.96	4.95	5	5	5.4	5.9	6.4	6.3	6	5.4	6.4
Infant mortality rate	49.0	92.0	96.5	92.9	127.7	113.9	112.7	165.1	151.0	144.6	134.1

**Table 3**  
**Rehabilitation of health facilities destroyed during the war, 2000–2005**

Extent of the building	Central and psychiatric hospital	Provincial hospital	General or rural hosp	Health centre in district capital	Type II health centre	Urban health centres	Type III health centres and health posts	Total
Rehabilitation	4	5	5	15	2	2	32	65
Rehabilitation and new construction	—	—	—	2	—	1	—	3
Rehabilitation and extension of the facilities	—	1	15	9	4	3	15	47

Source: GACOPI, 2000.

and do not reflect the variations in the rest of the country.

Large increases in GDP coexist with grinding poverty for the bulk of the population. The GDP growth rate peaked at 11.3% in 1997, and averaged nearly 10% in 1996–99. By 1997, the inflation rate had declined to 5.5%, from 54% in 1995. In 1998, for the first time, average prices actually fell and the inflation rate for the year was minus 1.3%, before rising again to a modest 4.8% in 1999. Despite this macro-economic “success story”, 69% of Mozambicans

still live below the poverty line, particularly in the countryside where 80% of the population lives below the poverty line.

Until 1994, defense spending was easily the largest single item of recurrent expenditure in the annual budget. But after the 1994 elections, resources were shifted, and each year saw a real increase in allocations to the social sectors. This effort was not adequately supported when in the 1990s, 18 of the world’s richest creditor nations failed to agree on a rescue package (Logie 1998, Logie et al 1999).

### Box 1

#### Human resources aspects of the post-war reconstruction effort

- Restructuring the health personnel pyramid, increasing the proportion of staff with middle or higher level training.
- Improving the regional deployment of personnel, favouring in particular the provinces in centre and the north.
- Improving the staffing of the most peripheral units, particularly rural primary health care facilities.
- Replacing staff with general training (e.g. nurses providing PHC in health posts and health centres) by staff with specific training (e.g. curative medicine agents).
- Strengthening the management capacity within the health system

Source: Gish & Pavignani 1992

During 2000, according to the National Health Accounts, the government health expenditure as a percentage of total health expenditure was 66.6% (Yates & Zorzi 1999). As well, the total health expenditure as percentage of GDP was 5.7% (WHO 2004). In the 1998 and 1999 budgets, the education and health ministries benefited from significant increases in both capital and recurrent allocations, while funds for the military and the intelligence service were cut. The trend continued in the 2000 budget, with rises in recurrent expenditure of 21% for education, and no less than 80% for health<sup>1</sup>.

### Poverty reduction strategy

Most poverty studies are based on The Household Survey of Living Conditions of 1996/97. It estimates that 69.37% of the population live in absolute poverty, i.e. less than one dollar a day. 82% of the poorest are concentrated in the rural areas, where most survive on subsistence farming. Lack of roads and trade posts make it difficult to sell an eventual surplus and get access to money to buy tools, seed, and fertiliser (tables 4 and 5).

The Government of Mozambique has been working on poverty reduction for over a decade.

**Table 4**  
**Poverty indicators per region**  
**(Ministério do Plano e Finanças 2000)**

	<b>Prevalence of poverty (%)</b>	<b>Depth of poverty (%)</b>
Rural	71,25	29,92
Urban	62,01	26,67
North	66,28	26,62
Centre	73,81	32,71
South (including Maputo city)	65,8	6,8
South (excluding Maputo city)	71,67	30,17
National	69,37	29,26

During the early 1990s, poverty reduction was part of the national reconciliation process. In 1995, an initial poverty reduction strategy was formulated and a poverty unit was set up in the Ministry of Finance and Planning, which steered the first National Poverty Assessment in 1996/7. In 1996, the Highly Indebted Poor Country Initiative (HIPC) was the first international debt-relief scheme to tackle all debt. Under the umbrella of HIPC, Mozambique, attempted in 1998 to reduce its debt to sustainable levels. Initial efforts were not very successful. In 2000, foreign donors paid nearly half of the public expenditure (47.9%). Under HIPC-2 in 2001, the total foreign debt servicing for the year was brought down to 54 million USD. The money released by the debt alleviation (HIPC and HIPC-2) will mainly be allocated to education, health, infrastructure and rural development, according to the Action Plan for Reduction of Absolute Poverty (PARPA).

In 1999, a policy framework for poverty eradication was developed in the form of 'Guidelines' and an 'Action Plan' for the 'Eradication of Absolute Poverty'. The PRSP (PARPA 2000–05) has a diagnosis of poverty, improved prioritization of sectoral programmes, an expanded justification of macroeconomic policy, a new priority area on good governance, and a financing plan linked to the Medium Term Expenditure Framework. The overall objective of PARPA is to reduce poverty by about 30% over thirteen years, from 70% in 1997, to below 60% in 2005 and 50% by 2010. PARPA has been disseminated to donors, civil society groups and the private sector.

To implement this strategy, the document identifies six priority and 11 complementary areas: education; health; agriculture and rural development; basic infrastructure; good governance; and sound macroeconomic and financial management. The complementary areas are: employment and business development; social action; housing;

<sup>1</sup> *Afrol.com* at [http://www.afrol.com/ms\\_index.htm](http://www.afrol.com/ms_index.htm) on 20th of September 2003

mines; fisheries; tourism; industry; transport and communications; technology; the environment; and protection against natural disasters.

PARPA is the first widely disseminated official document of the government to recognize the need to address corruption, which was one of the issues raised during the consultation process.

In the health sector, PARPA focuses on PHC, combating the major epidemics, improving the network of basic health facilities, developing human resources, and improving planning and management for the sector. These measures will be implemented through the recently approved Health Sector Strategic Plan, and will improve health services for the poor and reduce the health risks to which they are disproportionately affected. Special attention is given to HIV/AIDS in the health sector (IMF & IDA 2001).

## Corruption

A study on the public's perception of corruption, released in September 2000 at the launch of a new anti-corruption NGO "Ethics Mozambique", revealed that key state institutions such as the police and the courts have lost credibility. Forty-two percent of the sample thought the government had no interest in tackling corruption, while 20.6% thought it had a great deal of interest. The score for the police was substantially worse - 50.5% thought the police had no interest in eradicating corruption, while 15.8% believed they had a great deal of interest. Asked how many members of the government they believed were involved in corruption, 58.8% of the sample replied "many" or "most", and only 6.8% answered "none" or "almost none". Forty-five percent said they had been victims of corruption in the past six months. Of those, 31% paid less than \$6 USD, 45% paid \$6–60 USD, and 22% had to pay \$60–600 USD.

The most common demands for money were in health (30%), education (27%), and the police (21%). Bribes are not just financial; almost 5% of respondents said that they had been required

to "sleep with a government official". In most cases, the issue is administrative corruption; bribes were paid to obtain something to which the person was entitled—in one case, to obtain anaesthetic during an operation (Hanlon 2002).

## Civil service administration

Civil service in Mozambique is hampered by rigid rules which do not allow the needed flexibility to compensate workers in strategic sectors such as health with the needed incentives (Reis et al 2004). A civil service reform has been announced many times, but has never materialized (Pavignani & Durão 1999).

## Governance and organization of the health sector

Since its independence, Mozambique has gone through an unrelenting process of change. Ideological options made at independence, were challenged and reversed as a consequence of economic decline, civil war, and structural adjustment (initiated in 1987). More recently, as a result of the peace prospects in 1991–1992 and the ensuing reconstruction effort, the MOH undertook a comprehensive policy review, and service utilization and coverage has since been gradually expanding (Pavignani & Durão 1999). This process of reform included the decentralization of human resources management regarding nurses and ancillary staff (see later under governance of human resources) (Saide & Stewart 2001).

The key policy document for the health sector in Mozambique is the "*Plano Estratégico Sector Saúde (PESS) 2001–2005–(2010)*" (Strategic Plan for the Health Sector 2001–2005–(2010) (Box 2).

Currently, the Mozambican health system is a mixed economy of public and private sector players, and some institutions which are a

**Box 2****Inconsistencies in the strategic orientations for the Mozambican health sector**

The health policy of Mozambique is articulated in several documents, including the *Plano do Governo (2000–2004)*, the *Plano Económico e Social (PES)*, the *Programa Trienal de Investimento Público (PTIP)*, the *Plano de Acção para a Redução da Pobreza Absoluta (PARPA)*, the *Cénario de Despesas e Financiamento de Médio Prazo (CDFMP, or MTEFF)*, and the *Plano Estratégico do Sector de Saúde (PESS)*. Stated cornerstones of such a policy are primary health care, equity, and better quality of care. When these documents are considered together, a number of shortcomings emerge:

- Inconsistencies within and among documents, which present different goals, figures, indicators. Goals are often formulated as mortality and morbidity rates, which are sometimes unavailable or outdated, or result from guesswork. Thus, these goals, albeit valid in conceptual terms, are generally unhelpful as programming and monitoring tools.
- A split dividing policies from resource allocation. Without the hard resource constraints to discipline planning, this leads to absent or inadequate prioritisation of goals and activities, which together exceed available resources and implementing capacity.
- Conceptual difficulties, such as including outcomes and means to those outcomes among the chosen goals.
- These problems are hardly specific to the MOH, affecting instead the whole public sector. Nor are they exclusive of Mozambique: “...*unplanned budgets which do not reflect policy choices, and unbudgeted plans which can not be implemented*” are rather common, particularly in developing countries.

After a decade of discussions, the direction of the reforms to be introduced in the health sector has been articulated by the PESS. They include a formal separation of regulatory and financing functions from the provision of services, decentralisation, a public-private mix, cost-sharing, human resource development, internal restructuring of the MOH, an integration of vertical programmes, and the rationalisation of external support. Some of these reforms are part of the wider package introduced across the public sector. Others, such as revamping the cost-sharing system, wait for further definition of concrete measures and resolute implementation. Since the publishing of the PESS, little progress in most of these areas has been registered. Whether the MOH is genuinely committed to the proposed reforms remains to be seen.

A major hurdle to sound decision making is the budget structure, which does not allow for checking whether chosen policies are backed by concrete allocative decisions. The introduction by the Ministry of Finances of the functional and organic classifications in the budget structure has tried to address this flaw, but in the health sector this improvement has been undermined by the choice of ineffective classifiers. Nor is it easy to find workable solutions to disaggregate district expenditure, which by its nature is shared by most activities. Until the problem is satisfactorily solved, no decision maker in the sector will be able to assess whether allocations are consistent with policies (short of launching specific analytical studies).

The serious flaws affecting policy formulation, planning and budgeting in the health sector are made more serious by the proliferation of off-budget funding lines (internal and external), but are not exclusively caused by these. Indeed, some off-budget schemes, for example the revenue retention run by one tertiary hospital, were introduced to overcome the faults of standard

(continued on next page)

**Box 2** (continued)

financial management systems. Without addressing these conceptual and technical flaws, the benefits of moving on-budget will fall short of the high expectations prevailing in some donor circles. Clearly, by simplifying the picture and providing consolidated financial information, on-budget resources offer the potential for better, rational decision-making. Nonetheless, rational decision-making would not be realised in full if policy formulation, priority setting, and resource allocation remain disconnected as they are now. Increasing the amount of external resources transparently managed by recipient health authorities should be conceived as the main incentive to change inveterate working habits, rather than a panacea-like end in itself.

The challenge is to bring together all policy documents into a comprehensive and consistent planning instrument, where policies are clearly prioritised and linked to resources. Such an instrument, if properly used, would provide a major boost to sector performance. No doubt progress in this area will demand a sustained effort over time, and a radical change in the way public sector managers, as well as donor officials, run operations and interact (Pavignani et al 2002).

combination of the two. The public sector actually involves eight Ministries, but is dominated by the services provided by the MOH. Despite recent improvements, the public sector remains under-resourced, with the result that services are of variable quality and can only cover a minority of the population (Yates & Zorzi 1999).

The private sector, consisting of profit-making and non-profit-making organizations, is already a significant player in the health sector and is growing, especially in urban areas (Yates & Zorzi 1999).

Mixing public and private sector health activities is potentially an area of great interest. Already this mix is occurring, but not always in an appropriate way (e.g. illegal payments in public health units and the often “foggy” arrangements at the Special Clinics). In the future though, public/private mixes of health services using NGOs, employers, and even for profit providers, could improve the supply of good quality health services in the country (Yates & Zorzi 1999).

### Management capacity

The recognition of the heavy capacity constraints, which frustrate progress in the health

sector, is old. As old are the attempts at addressing them. They include:

- Organisational studies, aimed at identifying constraints and correcting them, such as the one carried out by PriceWaterhouseCoopers in 2000.
- Institutional development plans and programmes, such as PERMAS and PDI.
- In-country post-graduate management training, such as that provided for two decades by the *Centro Regional de Desenvolvimento Sanitário* (CRDS).
- Post-graduate training abroad in management and public health.
- Training (usually short-term) for managers of special programmes, such as tuberculosis control.
- On-the-job training, such as that provided within the framework of the provincial integrated programming exercises.

Over the years, new initiatives followed, and often overlapped, with previous ones. Hundreds of managers received capacity-building training. Unknown, but certainly large costs, were incurred by the system. Despite the intensive

work done, most informants refer to inadequate capacity within the health sector as a major obstacle to progress. To understand why this is the case is central to the design of future, more effective interventions. Some tentative explanations are offered below:

- Most efforts focused on providing management skills to individual cadres. Yet, even strong skills deployed in dysfunctional environments remain unused and are quickly lost.
- Few initiatives took full advantage of the work previously done in this area, most of them starting from square one instead. Precious experience went lost, while repetitions proliferated. Few if any of these initiatives were evaluated, so as to learn from the work done previously.
- The lack of an overarching institutional development strategy meant that most initiatives were introduced piecemeal and not sustained over the years. Few initiatives lasted throughout a period extended enough to allow for the expected benefits to emerge and consolidate.
- Often, interventions were conceived and implemented by outsiders, and poorly conversant with the context. Blueprinted models were introduced in a top-down fashion, without adequate adaptation.
- Few of these initiatives took explicitly into account the incentives (positive and negative) at work in the system (Pavignani et al 2002).

Despite persistent complains about inadequate capacity and recurrent requests for the hiring of additional high-level staff, it should be acknowledged that in the health sector the aggregate endowment of technical skills has expanded dramatically. National university-level cadres (many with international qualifications) posted at MOH-HQs grew three-fold during the 1990s, and mid-level cadres at central level doubled in number. National and expatriate advisers proliferated even more, as evident to the visitor to the MOH (Pavignani et al 2002).

Considering that provincial authorities acquired additional competence to a higher degree, thus reducing the need for support work carried out by HQs, it can be argued that the skill shortage is not anymore the absolute constraint that it used to be in the past. However, the individual capacity already in place, may sit around underused, or trapped within specific units, and thus not available to the whole system. A review of the available capacity to identify untapped skills, followed by a redistribution of cadres, is therefore in order at central level. Only after such an exercise, to be soon carried out within the framework of Public Sector Reform, should demands for additional high-level expertise be considered. The recently completed evaluation of PROAGRI shows how difficult is to act upon the results of a functional analysis, particularly when it comes to reallocating or dismissing staff. Only when backed by strong political leadership, does such an exercise stand a chance of being successful (Pavignani et al 2002).

In a health sector dominated by medical doctors, capacity constraints in the financial management area are particularly serious. Hands-on financial training is given low credence and priority by top managers (perhaps afraid of betraying their own inadequacies), and is often left to under-resourced and low-level cadres. To find the right incentives to make officials conversant with financial management issues and techniques and committed to devote their best energies to manage public resources effectively remains an unanswered challenge (Pavignani et al 2002).

Organisational settings and management rules within the health sector need a dramatic overhaul. Departments tend to work apart, without much collaboration, leading to duplication of efforts.. The prevailing organisational culture is top-down, rigidly hierarchical. Subordinate cadres don't take the initiative, waiting for orders and rarely discussing them. When important system tasks are carried out, they are done so by individual cadres that are informally linked in a "who you know" arrangement to others across departments. Official thinking is

that this “alternative” way of working is due to organisational weaknesses, an unpleasant reality to be corrected as soon as the system improves. Perhaps, the MOH leadership should consider that these informal networks have been often more productive than the official ones, and that managing by task across departments could become the rule rather than the anomaly. Indeed, this alternative management style looks distinctively state-of-the-art, according to recent management theory (Pavignani et al 2002).

### Health care financing

The Mozambican health sector accounted for US\$122 Million in 1997, plus a considerable amount of funding (probably in excess of US\$30M) from households. Using the total identified to date, the NHS accounted for US\$106 Million (87%) of resources and the private for profit sector accounted for US\$7.5 Million (6.1%) (Yates & Zorzi 1999).

The NHS is predominantly financed by the MOH (71%) with NGOs contributing 23%. The MOH itself receives US\$46.8 Million of its funding (62%) from Grant and Credit Funders and its remaining US\$28.5 Million (38%) from the Public Treasury. Grant and credit funders (including NGO sources) supported the health sector through the MOH with 64% of their health funds, whilst channelling 36% through NGOs. Most of the latter funds though were used to support the NHS (Yates & Zorzi 1999).

The Mozambican health sector involves a large and well established donor community, which finances the NHS using different mechanisms (through NGOs, direct budget support and directly implemented programmes) (Yates & Zorzi 1999).

The share of Government in the MOH financing is increasing. It finances essentially personnel costs and other recurrent costs. On the other hand, 86% of the drugs and investments are still paid for by the Grant and Credit Funders. The health unit fee revenues, albeit increasing over recent years, still represent a minor contri-

bution of the governmental budget (3%) (Yates & Zorzi 1999).

The MOH, together with the Ministry of Education are the only two Ministries that are given the opportunity to make yearly budget proposals for their respective central and provincial institutions. These yearly budgets are discussed, modified and approved at the Assembly during the last trimester of each year. The agreed upon ceilings are then transferred to the Provincial Directorates of Finance. The Provincial Governor does not have the authority to reallocate these funds to other activities (although he or she can do so for others sectors). In contrast to other Ministries (Public Works for example), the agreed yearly budget is always respected for the MOH. The total MOH spending (75.3 Millions USD) for the NHS corresponds to \$4.79 USD per capita in 1997. However, if we include the funds channelled from the donors (source) to the NGO (financing agent), which are then put again for the NHS, we can add a value of \$24.4 Millions of USD. We then reach a total of governmental, donor, and credit per capita expenses, through the NHS of \$6.34 USD.

Apart from the MOH, other Ministries play a minor role in the financing of institutions supplying health related services. The Ministry of Labour offers a social security package through the National Institute of Social Security for all private firm employees. The Ministry of Education finances the Faculty of Medicine. External funds for this institution are irregular. The Ministry of Defence finances an expanded health network. The National Directorate of Water finances water and sanitation programmes (Yates & Zorzi 1999).

A Medical Assistance Fund for civil servants was started in 1996, based on monthly deductions from salaries. It is still in a start up phase and does not represent a significant financing source for the NHS. Private health insurance, providing health benefits in Mozambique, is still virtually non-existent. However, negotiations are ongoing between providers and companies interested in launching a medical aid scheme.

Households are undoubtedly a significant source of funds for the health sector (Yates & Zorzi 1999).

In the private sector, employers are believed to have contributed at least US\$9.0 Million to the health sector in 1997 by either supplying health services directly or purchasing health services for their employees and families. Increasingly, employers are choosing to establish their own health posts, mostly because they are dissatisfied with the public sector and they find the private sector too expensive. They are interested in other models of providing health benefits, but are not organized collectively (Yates & Zorzi 1999).

There is currently an outflow of health financing to foreign providers (particularly in South Africa) from wealthy residents in search of high quality and/or specialist health services. These resources could be utilized, mostly by the private sector, were services in Mozambique to improve (Yates & Zorzi 1999).

## National Health Service

The NHS is the by far the largest provider of health care services. The NHS plans to expand rapidly in the coming years. However, it will have to face a series of challenges such as: increased needs for mobilization and utilization of available funds, reduction in the fund allocation inequities and improved quality of services.

The NHS has three systemic levels of management: the Ministry of Health in Maputo, Provincial Directorates of Health, and District Directorates of Health. Institutional levels of management relate differently with the systemic levels. For example, district hospitals management teams may or may not overlap with district management teams (Conceição et al 2004).

The management system is top-down, with resources being allocated from one level to the level immediately below, but with a high degree

**Table 5**  
**Number of NHS facilities per Province (MISAU-SIS, 2003)**

Province	Central hospital	Provincial hospital	General hospital	Rural hospital	Health posts and health centres	Total	Hospital beds	Maternity beds
Niassa		1		1	121	123	622	177
Cabo Delgado		1		3	85	89	1007	317
Nampula	1		2	3	181	187	2649	681
Zambezia		1		4	168	173	1628	509
Tete		1		3	97	101	1214	358
Manica		1		1	75	77	1005	315
Sofala	1			4	141	146	1817	548
Inhambane		1		2	91	94	1346	525
Gaza		1		4	108	113	1321	528
Maputo prov			1	1	76	78	1036	386
Maputo city	1		2		36	39	2441	471
Total	3	7	5	26	1181		16,156	4,815

of autonomy at each level on how to utilise these resources (Pavignani & Durão 1999).

A network of 3 central hospitals, 7 provincial hospitals, 31 rural and general hospitals, 672 health centres, and 507 health posts under Government control compose the public health care system in Mozambique with 16,156 beds, staffed by 18,000 health workers (about 60% of whom have professional training) (MISAU-SIS 2003) (table 4). The country has 178 laboratories associated with the public sector units, as well as the CHAEM (*Centro de Higiene Ambiental e de Exames Médicos/Environmental Hygiene Laboratory*).

Three types of services are offered in a public hospital or health centre: the regular public services, the private services, and the special clinics (Yates & Zorzi 1999).

In the rural hospital or health centre, the distinction between the regular and the special services is not really apparent. What then often happens is that a couple of rooms are reserved for special treatments, and the health staff allocate part of their time for these (Yates & Zorzi 1999).

There are two types of pharmacies owned by the public services: the state pharmacies located in each health unit and managed by the health professionals, and the FARMAC which are parastatal institutions. Prices in the state pharmacies are fixed by the government and are strongly subsidized; In addition, the professional staff is paid and appointed by the state. Among the FARMAC, selling prices include a margin of 76,3%. The total revenue of the 42 existing FARMAC in 1997 is estimated to be 1,953 Millions USD (Yates & Zorzi 1999).

The yearly analysis of the governmental and direct budget support external funds for the recurrent expenditures disbursed for the four level of health care show the distortion between the primary level (health posts and health centres) and the central hospitals. The primary level furnishes 37% of the activity output (measured as Service Units), but only receives 22% of these funds. On the contrary, the three central

hospitals produce 15% of the Service Units, but receive 37% of these funds. Although provincial and central hospitals offer specialized services, which are more costly, this discrepancy is hard to justify. Their referral role is also questionable in such an expanded country, where the higher socioeconomic groups tend to easily procure health care outside the borders. The policy of some donors linked to budget support is to try to compensate this inequitable state fund distribution (Yates & Zorzi 1999).

### Other public sector sub-systems

Other Ministries are involved in the health care system, namely:

- **Ministry of Defense:** has 3 hospitals, 11 health centres, and a series of health posts; it offers curative care to soldiers and their families; it has a membership of 21,000 persons.
- **Ministry of Education:** supports the training of doctors in the Faculty of Medicine.
- **Ministry of Interior:** offers curative care in Police Health Posts.
- **Ministry of Justice:** offers curative care to prisoners in Prison Health Units.
- **Ministry of Public Works:** the National Directorate of Water supervises water and sanitation programmes to all the population
- **Ministry of Labour:** through the National Institute of Social Security (NISS). It offers a social security package for employees of private firms (Yates & Zorzi 1999).<sup>4</sup>

### Private for profit sector

There were 30 private-for-profit health services organizations (24 medical, 5 dental, and one training institute) and 41 private pharmacies operating in 1997, with a large concentration in Maputo. Only two large clinics offer hospital type services; 16 of the 24 medical care institutions provide some type of specialist consultations. Prices, activity levels and therefore income levels vary dramatically. In general, private

providers report only slow growth in their businesses, which they put down to: a small middle class, competition (from company clinics, South Africa and the Special Clinic), and the lack of medical aid schemes in Mozambique. Private-for-profit providers are continuously looking to expand their activities, and this should be taken into account by health planners (Yates & Zorzi 1999).

The pharmaceutical sector is particularly visible in the private for profit sector. Currently, at least 208 pharmacy technicians are working in this sector (No authors listed, undated c).

### State insurance

Two forms of State Insurance are prevailing in Mozambique: the social security package for private companies and the Medical Assistance Fund.

#### *Social security package for private companies*

The Social Security Law passed in 1989 established the National Institute of Social Security (NISS) within the Ministry of Labour. The NISS is managed by a tri-partied Administrative Board of 11 members (three representing employees, three employers, and three the State: Ministry of Labour, Ministry of Finances, and MOH). The social security package is compulsory for all the salaried employees in the private and parastatal sectors of all enterprises. Since 1995, the social security system was extended to the whole country. And since May 1997, all the companies—even the ones with less than 10 employers—have to register. The current contribution is a total of 7% of monthly salary, with 4% contributed by the employer and 3% deducted from employee salaries. The number of private sector salaried employees covered by the NISS has grown constantly (reaching a total of 279,838 registered employees in 1998). This does not necessarily reflect the growth in enterprises, but the fact that registration has increased

as NISS branches have been opened in almost all provinces. However, the current compliance of the employees has dropped from 68% (1990) to 40% (1998) (Yates & Zorzi 1999).

The primary NISS objective is to guarantee the worker (and his family) livelihood in a situation of failing or decreased work capacity. Nine different types of benefit are offered, ranging from old-age pension on retirement, and sickness benefit to invalidity allowance and survivors pension for unemployed widows and dependent children. The contributing period in order to benefit from the services varies between six months (illness subsidies, funeral subsidies) and 10 years (pension on retirement). However extra NISS raised funds are used to pay worker inpatient fees at the hospital as well as funeral subsidies for the worker family. These extra, or “Special Funds”, are issued from the collection of donations, accumulated benefits not requested by the employees, or from other NISS revenues gathered during social events (Ministerial Diploma 143/93). Only 0.04% of all the registered employees (126/260,834), or 0,1% of the active employees (126/116,186), were sick and could benefit for this service in 1997. On the other hand, the average charge paid per each case by the NISS is fairly high (\$14,645 USD per case). This indicates that employees and/or employers proceed to NISS inpatient fee reimbursement only for cases of extended in-patient periods (Yates & Zorzi 1999).

The NISS is not yet in a position to increase the range of benefits by including health care benefits. The objective is rather to try to improve the application of the already existing types of benefits. The NISS services cannot indeed be extended with such a heavy administrative system and low compliance rate. A range of health package benefits is not defined. If health benefits are included in the range of NISS services, the necessary contribution percentages may rise dramatically. It is worth mentioning that a total monthly contribution of 7% represents one of the lowest applied in Africa (Yates & Zorzi 1999).

### *The civil servants Medical Assistance Fund*

An estimated 200,000 civil servants are entitled to a Medical Assistance Fund. The contribution is based on a deduction of 2% of the monthly salary. In case of illness episodes, the civil servants should only pay a moderate fee according to their level of training and current position in the state administration (20–50% of the standard prices for the outpatient, in-patient, and drug fees). Each Ministry has to proceed to the inventory of their civil servants and family dependents and to deliver an appropriate access card. This registration process has started in 1996, and is not yet completed (Yates & Zorzi 1999).

The monthly deducted amounts retained by the Ministry of Finances are transferred to the Provincial Directorates of Health or to the respective central hospitals. The Provincial Directorates of Health then proceed to distribute the collected fund between all the health units (Yates & Zorzi 1999).

Distribution criteria between the health units have not been established clearly. Use of these funds by each province is vague for the MOH Administration and Finance Department (Yates & Zorzi 1999).

Probably a high percentage is benefiting the provincial and central hospitals. An administrative control system in order to consolidate the information on the necessary flows of reimbursements of the health unit expenses does not exist (Yates & Zorzi 1999).

The total value of the collected funds from October 1996 to December 1997 was \$395,754 USD. However this value is clearly underestimated, as the information sent by the provinces is far from complete (three provinces did not send any information, others only sent information for the first semester) (Yates & Zorzi 1999).

This Medical Assistance Fund is still in an organizational phase. It still does not represent a consequent financing source for the NHS. On another side, civil servants of higher level of training contest this system because they do not

have the right to access to special clinic services with reduced fees (Yates & Zorzi 1999).

### **Private insurance**

To this day, the private health insurance market is virtually non existent in Mozambique. In September 1997 a scheme was launched by a banking group, which is aimed at its high earning customers wanting to insure themselves and their dependents against high medical costs. Premium rates are US\$85 per month for an individual, with falling incremental payments per dependent (for example a three dependent premium is set at US\$180). Most significantly, the benefits offered by this scheme only cover health care services consumed at selected providers in South Africa—it does not cover any Mozambican services. Therefore, for its Mozambican resident clients the insurance is really only useful for meeting the costs of medical evacuations and hospital inpatient treatments, as members are unlikely to travel to South Africa for “free” ambulatory care. With these restrictions, it would appear that this plan does not offer good value for money. However by the end of 1997, 150 families had become members and these were typically senior managers in organizations which paid a large proportion of the premium. If one were to assume that the growth of the scheme was linear over the last four months of 1997 and that each family had three dependents, then the total income received would have been US\$54,000. Subsequently, it has been reported that the growth in membership has been disappointing, with only five to ten new contracts being signed each month. Apparently the insurance company concerned has been trying to make the scheme more attractive by including Mozambican services, but has not been able to negotiate viable rates with the providers concerned (Yates & Zorzi 1999).

In addition to this scheme, two private for profit health providers have set up their own low cost medical schemes to provide coverage for varying proportions of the costs at their own premises.

A number of international medical aid / insurance companies have identified this business opportunity and have been exploring the possibilities of setting up local schemes within Mozambique. To date though nothing tangible has come for these investigations, because the companies have felt that they would not make reasonable profits, especially in the short term (Yates & Zorzi 1999). This is for a number of reasons:

- Firstly the potential market for their product is small. With the richest members of society not needing insurance, it is the middle classes that would make up the bulk of customers and they are still a relatively small group. This is a paramount concern for insurance companies because medical aid schemes must be of a certain size (a local industry expert estimates 3,000 members) if they are to be viable.
- Secondly, it would appear that in the opinion of the potential insurers, *the prices charged by local private health providers are too high*. Furthermore, providers have been reluctant to negotiate group discounts for insured patients. In addition, the limited range of health services on offer would restrict benefits packages to the lower, less profitable end of the market.
- Thirdly, establishing a viable medical insurance programme would require a considerable investment in terms of administrative personnel and systems. At present there is limited capacity in this regard, both within the local insurance sector and within the private health providers.
- Finally, there is almost no legislation in place concerning the establishment and management of medical aid schemes, which is acting as a disincentive to risk-averse investors (Yates & Zorzi 1999).

However, despite these present conditions, it is likely that the economic logic of insurance payments for private health care provision will prevail and new local medical aid schemes will

be introduced in the future. Talks are ongoing between private health care providers and insurers, and with employers increasingly expressing an interest in such arrangements, this could provide the additional impetus needed to launch a large-scale scheme (Yates & Zorzi 1999).

### **Employer supported health services**

Historically, before independence, company facilities were important providers of health care, not only to their workers, but to the population in general. This was particularly the case in rural areas, where there were large plantations. At independence all these facilities were nationalized to become NHS units. In 1991 the law changed, allowing companies once again the opportunity to manage their own facilities. However, it has been only industrial companies in urban areas, providing services for their staff and families, who have tended to take up this option. The recent history of employer/public health provision has therefore been more a case of changes in ownership rather than simultaneous mixes of services. However there are signs that this situation could change in the future, with certain employers expressing an interest in supporting government facilities in rural areas. In addition, unofficial arrangements with public sector staff indicate a willingness on behalf of the employers to purchase services from public facilities (Yates & Zorzi 1999).

### **Private not for profit sector**

Approximately 112 private non-profit organizations (NGOs) contributed US\$26.4 Million to the health sector in 1997. NGOs provide personal and public health services, tending to concentrate their activities on assisting disadvantaged communities in rural areas. Around 90% of NGO programmes attempt to support public services (very few are totally independent), but there is a variable success rate at working collaboratively with Government services. Some NGOs are keen to implement health financing

initiatives, and could therefore be useful partners in pilot projects (Yates & Zorzi 1999).

### **Traditional sector**

There has been a troubled history between the large, but still unquantified traditional sector, and formal health services. But recently there has been a greater acknowledgement of the role of traditional providers. Government made the practice of traditional healing illegal. This legislation was unsuccessful, and in effect the two forms of health services continue to operate in parallel. However, recently there have been examples of attempts being made at engaging certain aspects of the traditional sector. At a national level, the MOH has been holding discussions with AMETRAMO (an NGO representing traditional healers) concerning safety issues and the correct use of herbal medicines. Also at a local level some public health facilities, often supported by NGOs, have been looking to incorporate neighbouring traditional healers in consultative exercises and training programmes. Adopting policies to involve the traditional sector would seem to be a sensible course of action for the public sector, because it is clear that a large proportion of their patients mix services from both sectors (Yates & Zorzi 1999).

### **International development agencies (IDA) and globalization of health policy making**

International aid in Mozambique covers a range of approaches that reflect the multiplicity of the donors and organizations or governments involved.

Portugal's official involvement is more limited than for other PSAC. This is illustrated by the observation that while, between 1989 and 1997 108 children from all the other PSAC were medically evacuated for treatment in a single hospital in Portugal, the number of children evacuated from Mozambique to the same hospital was 0

(Lucas et al 1998). This abhorrence to medical evacuation as a matter of principle reflects the national will to ensure that resources are invested locally rather than in highly visible and expensive evacuation schemes with little impact on population health (Black et al 1996).

Notwithstanding this commitment to strengthening the national infrastructures, the limited per capita budget available for health makes Mozambique highly dependent not only on foreign money to finance its health care, but also on the many global health policy initiatives which are so fashionable, but which change every so often, to the extent that they do not ensure a continuing and sustainable line of action<sup>2</sup>.

Conditions imposed for financial support are sometimes ruinous (Jeter 2001) or unfair to the poorest in the population (Logie et al 1999). Decision making by donors is cumbersome, highly centralized away from the recipient country, and frequently not open to the opinions of other donors (Pavignani 2000). In addition, there has not been genuine control over budgets and project development .

For some time, international aid has been increasingly channelled through NGOs. This has "fragmented the local health system, undermined local control of health programmes, and contributed to a growing local social inequality", as well as contributing to pull HRH away from their public sector duties using a number of financial incentives: per diems, seminar training with per diems attached, extra-contracts for tasks conducted during off-hours, and travel opportunities, temporary topping up of salaries (Pfeiffer 2003).

Acknowledging the problem of the plethora of organizations involved in health support and financing, the "Kaya Kwanga Code of Conduct" was signed in 2000 by the majority of major players in the health field, committing them to respect MOH defined priorities,

<sup>2</sup> Examples include the safe motherhood initiative of FIGO (Benagiano & Thomas 2003)

to respect national fees and remunerations for civil service employees, and to avoid encouraging the drain of qualified professionals out of the public sector (No Authors Listed and undated, Pfeiffer 2003). Since then, several mechanisms for donor coordination and resource pooling have been developed with some success (Pavignani & Durão 1999, Walt et al 1999, Ministério da Saúde 2000, Ministério da Saúde 2001).

### **Access to health care**

It is estimated that about 50% of the population have access to basic public preventive and curative health services and live within 10 km

of a facility. The national household survey of 1996–1997 indicates that the closest medical service is the care provided by traditional healers, located at an average distance of 1.5 km from the rural household. Doctors are 46 km away, and a health post 19 km away. Traditional healers treat 94% of the people in the villages, nurses 17%, midwives 20%, and doctors only 1–2% (Newman et al 1998).

While service outputs per capita are increasing, they tend to be unequally distributed, with Maputo City residents receiving the most care. Within the provinces, Zambezia (the largest) stands out as the one with the lowest care units per person. Resource allocations have gradually increased, from 9% of the recurrent budget in 1998 to 13.4% in 2000.

# Health Professions Policies

## The health professions

The General Law of Public Servants (law n° 14/87, of May the 20th) defined not only the regulations for the administration of public servants but also institutionalised the principle of professional careers in the State Staff Establishment. Law n° 64/98, created these careers, contemplating the health sector with a Specific Regimen of Health Careers, differentiated and undifferentiated (*Carreiras de Regime Especial da Saúde, Diferenciadas e Não diferenciadas*) (table 6) (Reis et al 2001).

The development of BA level professionals is the major challenge for the current decade, involving both the MOH and the Ministry of Education. As this development evolves, specialised mid-level technicians should be given equivalence to BA professionals.

Although not necessarily legislated as careers or specializations, the scarcity of health professions with sufficient training motivated the MOH to start special training programmes in order to endow mid-level professionals with scarce skills, such as three year courses of training for specialist assistants medical officers in surgery (in 1984) and in anaesthesiology. Their training has been described (Vaz & Bergström 1992, Garrido 1997, Vaz et al 1999) and their performance

evaluated (Pereira et al 1996, Vaz et al 1999) with no significant differences in patient outcomes when compared with results obtained by trained medical specialists and at a cost 10 times cheaper than training medical specialists.

### Box 3

#### The nursing careers seen as a solution for all sorts of problems in the NHS

There is a great diversity of careers for the nursing profession, which hampers the development of the class. “Nurse” is a name used to solve a variety of staff establishment problems in the health sector. As an example: an elementary nurse, with one year of training, is placed in a rural area, isolated, and expected to be a clinician without having received adequate training for that. But not only a clinician. He or she is also expected to be a nurse, a prescriber, a manager ... The development of a university degree for nurse is seen as a very positive development for the class<sup>3</sup>.

<sup>3</sup> Interview with Nurse Matilde Basilio President of the Nursing Association of Mozambique.

The nursing careers are problematic. They have been used to compensate for the lack of resources. So many times they are provided with supplementary training in order to fulfil a wider range of tasks in areas such as anaesthetics. This is not well accepted by the current leadership of the nursing professions (Box32).

Elementary nurses are placed at the most peripheral levels as providers of comprehensive health care, even though their training does not prepare them for that function. Generalist basic nurses are used for general nursing functions in hospitals and as providers of primary health care in health centres and posts; these results from some confusion resulting from the title and from a lack of specificity regarding their functions in the health team. MCH nurses' tasks overlap with those of basic nurses, medicine agents<sup>4</sup> and agents of preventive medicine. The category of nurse midwife included in the Technical career seems inappropriate in the presence of a MCH Nurse in the same career. The category of general nurse in the Specialized Technical career seems also inappropriate, and should probably be reclassified to the Technical career in order to allow for the development of specialist nurses (Pereira 2001).

Some careers—Technical Assistants and Specialized Agents—include staff categories without any career prospects. (e.g. post-mortem assistants, burial agent, ECG operator). Through continuing education programmes they should be encouraged to progress into the next highest career level (Pereira 2001, no author listed undated, c).

Some feel that the careers of Auxiliary technicians and Specialized assistants should fade slowly and the existing stock should as much as possible be reconverted in Health Technicians (Pereira 2001).

Regarding the medical professions it has been recognised that there is a need to differentiate between a general specialist (like the family physicians in other countries) and the non-specialised medical officer. At the moment this last group is treated as a specialist group in terms of

salary progression and career prospects (Pereira 2001).

### Community based health cadres

Community based health cadres are a significant source of health care and this is likely to increase. In response to accepted cultural practices (e.g. traditional birth attendants (TBA) and traditional healers) there have been attempts at recruiting these traditional professionals in support of the NHS.

An example is the training of TBA carried out in the past (Gloyd et al 2001, Thomas 2002). This started in 1991 and in 1998 it supported 3734 TBA, 1/3 in Zambezia. In 1995 an evaluation of their work was cautiously positive, but more recent evaluations were less enthusiastic (Ministério da Saúde 1995, Ministério da Saúde 1999). Current policy is to continue supporting TBA that carry out more than 50 deliveries per year (no authors listed, undated c).

Besides traditional community-based careers the NHS, soon after independence, developed, trained and supported a polyvalent workers, the APE, to be selected and to be supported by the community. These Chinese style barefoot doctors were supposed to support preventive and public health oriented work such as sanitation projects. The success was doubtful because of a high rate of abandonment and lack of support from the communities (Ali et al 1994). In 1995 there were still 600–700 active APE. With adequate support and properly integrated they might be useful elements to respond to new needs associated with the development of home based care (no authors listed, undated c).

More recently, in response to the HIV epidemic, there have been significant development

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<sup>4</sup> An “agent” is a basic support category of health worker which may be used in hospitals (medicine agents) or in health centres (preventive medicine agent) or even in other services such as the mortuary or the laboratory.

**Table 6**  
**Legislated special health careers**

Auxiliary technicians	Assistant technicians (or specialized assistants)	Health technicians	Specialized technicians	Higher level technicians N2 (BA)	Higher level technicians N1 (BA Honours)	Physicians and health specialists
Pharmacy auxiliary	Pharmacy assistant	Pharmacy technician	Pharmacy technician	Pharmacy technician	Pharmacist	<b>1. public health doctors</b>
Rehabilitation auxiliary	Agent of physical and rehabilitation medicine	Technician of physical and rehabilitation medicine	Technician of physical and rehabilitation medicine	Technician of physical and rehabilitation medicine	Physiotherapist	consultant principal assistant
Electro medicine technical assistant	Elect medicine agent	Elect medicine technician				<b>2. hospital doctors</b>
Odontho/oral technical assistant	Odontho/oral agent	Odontho/oral technician	Odontho/oral technician	Odontho/oral technician	Dentist	consultant principal assistant
Elementary nurse	Nurse	General nurse		Nurse		<b>3. generalist doctor</b>
Microscopist	Laboratory agent	Laboratory technician	Laboratory technician		Laboratory technician	consultant principal assistant
Autopsy assistant	Mortuary agent					
	Hospital administration agent	Hospital administration technician	Hospital administration technician	Hospital administration technician	Hospital administration technician	1st class intern 2nd class intern.
	Entomology agent	Health statistician				
	Medicine agent	Medicine technician	Medicine technician	Medicine technician		

(continued on next page)

**Table 6** (continued)  
**Legislated special health careers**

<b>Auxiliary technicians (or specialized assistants)</b>	<b>Assistant technicians</b>	<b>Health technicians</b>	<b>Specialized technicians</b>	<b>Higher level technicians N2 (BA)</b>	<b>Higher level technicians N1 (BA Honours)</b>	<b>Physicians and health specialists</b>
	Preventive medicine agent	Preventive medicine technician	Preventive medicine technician	Preventive medicine technician	Nutritionist	
	Nutrition agent	Nutrition technician		Nutrition technician		
	MCH agent	MCH nurse	MCH nurse	MCH nurse		
	Electrocardiography operator					
	Midwife					
	Anaesthesiology technician	Anaesthesiology technician	Anaesthesiology technician	Anaesthesiology technician		
	Instrumental technician	Instrumental technician	Instrumental technician	Instrumental technician		
	Ophthalmology technician	Ophthalmology technician	Ophthalmology technician	Ophthalmology technician		
	Prosthesis technicians	Prosthesis technicians		Prosthesis technicians		
	Psychiatry and mental health technician					
	Radiology technician	Radiology technician		Radiology technician		
					Clinical psychologist	
	Radiotherapy technician	Radiotherapy technician	Surgery technician	Radiotherapy technician		

in terms of, for example, home based care (Asghar et al 2002, Silva et al 2003). This care is usually provided by NGOs with the support of activist or home visitor who received on the job vocational training. It is likely that these categories will increase in the near future and their training and work should be regulated.

## The regulatory bodies

By law health workers certification is the responsibility of the MOH. Even so, this registration is waved away when expatriate health professionals are recruited (Noormohamed 2000).

WHO's country profile reports that only around three-quarters of the health personnel are certified to practice as health care providers. Auxiliary midwives have the lowest registration

rate, 38% only; whereas 97% of physicians have a certification for practicing as health providers. More than half of the health workers in the other category are certified as providers (WHO 2004)<sup>5</sup>.

With respect to membership of professional associations, on average only 20% of the health workforce belongs to a professional association. Physicians (Box 4) and nurses (Box 5) show the highest degree of membership, 41% and 43% respectively. Around 28% of midwives and auxiliary nurses belong to such an association. Much lower is the participation of auxiliary midwives and for the other category membership of an association is around 6%. On the other hand, pharmacists and physiotherapists do not have such a link in their occupations (WHO 2004)<sup>5</sup>.

### Box 4

#### The Medical Association wants to contribute to the quality of the care given to patients

Membership of the Medical Association of Mozambique is voluntary. Even so the Association captures a membership equivalent to 60–65% of all the national doctors. The Association is not a Union or a Medical Council. There is a submission to the Cabinet for the creation of this Council. If approved by the Cabinet it will have to be approved by Parliament before becoming effective. The appearance of the Council does not imply the disappearance of the Association.

The general objective of the Association is to fight for a better quality of the care given to patients. This is only possible if due attention is given to: improving working conditions, innovating incentives available for doctors, and to better training<sup>6</sup>.

### Box 5

#### Develop nursing as a science

The Nursing Association of Mozambique (ANEMO) affiliates about 30% of the country's nurses. The objective of ANEMO is to preserve and bring together the class, to obtain greater social recognition and from patients, to preserve nursing as a science and to fight to improve the working conditions of the class<sup>7</sup>.

- <sup>5</sup> There is a discrepancy between figures found in the WHO 2004 report referred to in the text and the information provided by the Presidents of the Professional Associations as per boxes 4 & 5. It is the author's opinion that the figures in the boxes are more up to date than those reported in the text.
- <sup>6</sup> Interview with Mohamed Rafik, President of the Medical Association of Mozambique, March 2004.
- <sup>7</sup> Interview with Matilde Basilio, President of the Nursing Association of Mozambique, March 2004.

## Training and training institutions

Training of health professionals is a shared responsibility between the Ministry of Education and the MOH. The Ministry of Education licenses the training institutions, approves the training syllabus and recognises training diplomas or degrees obtained outside Mozambique. It also finances and manages public institutions providing higher education degrees<sup>8</sup>.

The MOH “runs all other training institutions”, from defining the syllabus of the different courses to employing the teachers. Post-graduate and mid-level technicians training is a central responsibility. Training basic, elementary, or polyvalent personnel is a provincial responsibility<sup>9</sup>.

In general there are serious problems of quality in the training provided. This is compounded by the poor quality of the internships associated with the training programmes (no authors listed, undated c).

Training needs are estimated with the understanding that most trainees will have to be absorbed by public sector facilities. Nevertheless, “losses” to the private sector are starting to be an important consideration for laboratory and pharmacy related professions. Other factors considered in estimating training needs are the development of the sanitary network, the reclassification of staff, the mobility of staff, the estimated growth of the population and the evolution of the epidemiological profile. The task of estimating and meeting needs is made complex by the complexity of the career structures (25 careers and 6 levels<sup>10</sup>). Often, training is accomplished by trying to combine several courses in a common educational programme, even when such a solution is not adequate (no authors listed, undated c).

## Medical education

In Mozambique medical students are trained in two faculties. The Maputo based public sector Medical Faculty of the University Eduardo

Mondlane, and the private sector Faculty of Medicine in Beira that is integrated in the Catholic University. There is currently talk of a third private Faculty in Nampula<sup>11</sup>.

The Beira Faculty of Medicine is a recent institution, functioning since 2001, which has accepted three classes of students, with the most advanced cohort frequenting the third year of medical training.

The principal source of undergraduate medical training has been the Faculty of Medicine in Maputo. Medical education has tried to keep up with the changes in the health care system. Established in 1963 in the colonial period it has, since independence, trained doctors to partially meet the needs of an exclusively public sector socialist health care system, partially free at the point of delivery.

More recently, the Medical School tried to adapt its medical syllabus to accommodate a more nuanced and realistic vision of the Mozambican society. The existence of a multitude and diversity of health care sectors is acknowledged.

The training *curriculum* introduced after independence remained unchanged up to 1982. In 1985 the teaching of several ideological subjects (Marxism-Leninism, and Political Economy) was dropped. The course duration was increased from six to seven years. New subjects were introduced such as informatics, English, and physical education. These three subjects were subsequently dropped following further *curriculum* reform in 1995/96 (Sousa Jr et al 2004). A new curricular revision is contemplated in the 2003–2005 Strategic Plan of the Faculty (Universidade Eduardo Mondlane 2003). The

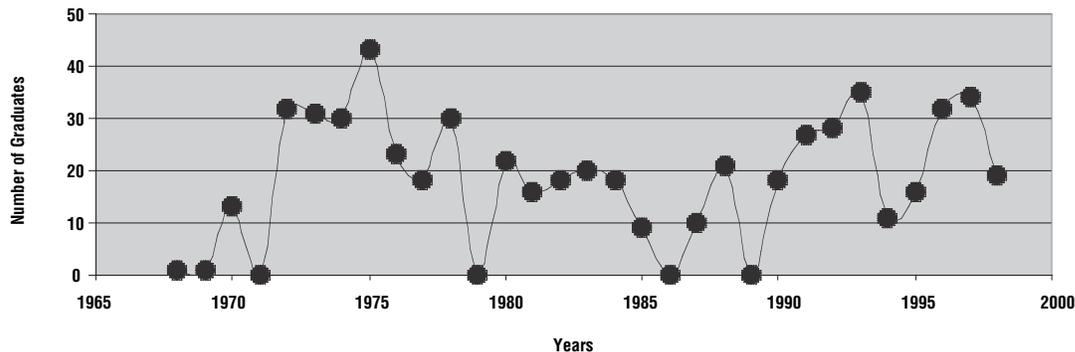
<sup>8</sup> Interview with Ferruccio Vio, MOH, consultant for human resources training, March 2004.

<sup>9</sup> Interview with Ferruccio Vio, MOH, consultant for human resources training, March 2004.

<sup>10</sup> Elementar, básico, médio, médio especializado, bacharel, licenciatura.

<sup>11</sup> Interview with Rui Alves Pereira of the Faculty of Medicine, March 2004.

**Figure 2**  
**Number of Graduates of the Medical Faculty of Maputo - UEM**



**Source:** Sousa Jr 2001

yearly output of medical graduates has been erratic (figure 2).

Although the Faculty is an institution of the Ministry of Education, medical training is heavily supported by the MOH, right from the first year of training. Medical students carry out practical work and internships in MOH facilities, with the logistic support of the MOH and at no cost to the Faculty. The MOH, as the major employer and the major regulatory entity of doctors, has a major say in the content of the training received by the students at the Faculty. The Maputo Central Hospital is the main centre for the clinical training of students. As it is also used for the training of many other categories of health professionals, it is overloaded and the conditions of training have deteriorated over the years. As a result, the search for a solution has included possibilities like decentralizing practical clinical training to other hospitals in Maputo or even in Beira or Nampula, not to mention the possibility of building a new academic hospital in Maputo<sup>12</sup>.

The collaboration with other training institutions in the country has been limited. There is some collaboration with the Higher Institute of Health Sciences in Maputo in terms of supporting the quality of teaching, and from the perspective of the current BA courses being upgraded to BA Honours degrees (*licenciaturas*)<sup>13</sup>.

The Faculty has been somewhat inactive in terms of post-graduate training. During 2001 the Faculty registered 16 post-graduate students for the first edition of a two-year public health masters programme. In the same year the Faculty had about 170 students, and about 190 in 2002, attending short (four-month) non-degree courses. Approximately 99% of students completed the course work on time (Ferrinho et al 2003).

### *Medical students*

Medical students are not representative of the diversity of the Mozambican population. Although most are from outside Maputo, expectations of getting into medical school are already associated with a migration from the periphery to the capital city, even before entering medical education. This sets the tone for the concentration of physicians in the capital city once their term of compulsory rural employment as junior doctors is completed (Sousa Jr 2001).

<sup>12</sup> Interview with Rui Alves Pereira of the Faculty of Medicine, March 2004.

<sup>13</sup> Interview with Rui Alves Pereira of the Faculty of Medicine, March 2004.

Students take the decision to enter medical faculty at an early age. Although this decision seems to be in order to fulfill the students' wishes of contributing to public sector values, it is undeniable that a close proximity with family and/or friends already in the health professions is likely to have an enormous influence on them. Close relatives, or family friends are an especially important variable in encouraging, reinforcing, and promoting the desire to be a doctor (Sousa Jr et al 2004).

Academic performance is dismal. During 1999, 6% of the 79 first year students were repeating it for the second or third time. Only 32% of the 143 students enrolled in the subsequent years had not failed any academic year (Sousa Jr 2001). This seems to be related to several difficulties such as inadequate financial support, poor high school preparation, and a high degree of student dissatisfaction with the quality of teaching (Sousa Jr et al 2004). In order to address some of these issues the Faculty contemplates a number of goals in its strategic plan as listed in table 7.

Only one fifth of the students reported receiving financial support from the Mozambican government, a figure that compares unfavourably with the 45% reported for the students who had

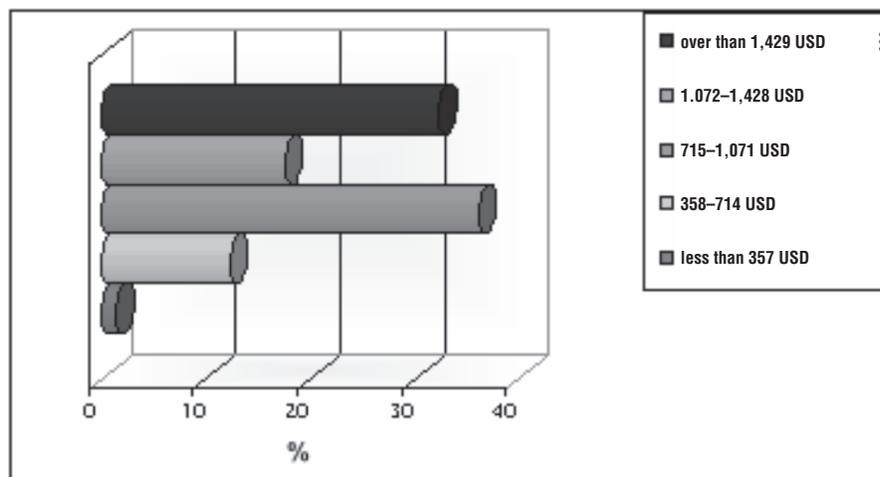
completed their studies in the previous 5 years (Sousa Jr 2001)

Medical students seem to know that they will be needed in the public sector, and that would represent their opportunity to contribute to the public's welfare. Nevertheless, their expectations are, in order to improve their earnings, to combine their public sector practice with private medical work. Their monthly income expectations were: for one third of the students \$715 up to \$1071 USD, and for another third over than \$1429 USD. This is at a time when the salary of a newly graduated doctor is about \$357 USD a month (figure 3). This sets the scene for the reality, many times unregulated, of dual practice (Sousa Jr et al 2004).

### *Post-graduate training of doctors*

Training Mozambican medical specialists has been a very slow endeavour, at an average of 5–6 per annum. The aim is to increase this rate to about 14 per annum by the end of 2004. As a result, there is great dependence on expatriate specialists to provide the needed care. At the predicted rate of training, and not considering losses of national specialists from the system,

**Figure 3**  
**Expectations of Future Monthly Income**



**Source:** Sousa Jr 2001

**Table 7**  
**Some strategic objectives and goals of the Medical Faculty in Mozambique for the period 2003–2005**

Objectives and goals	Target date	Costs (USD)	Source of funding
<b>Strategic objective N° 2</b>			
TO ENSURE EXCELENCE AND QUALITY			
Curricular reform	2004	23750	University budget
Align the medical degree according to SADC standards	2005	28100	University budget
System of evaluation of internships and other practical work	permanent	1500/year	University budget
Periodical publication of lecture notes and manuals	permanent	3250/year	University budget
Development of a compulsory rural internship in the final year	permanent	80000/year	University budget & ARO-Sweden
Yearly course on introduction to scientific research	permanent	5000/year	University budget
Yearly course on nursing practices	permanent	5000/year	University budget
Yearly course on survey of a health district	permanent	2000/year	University budget
Ensuring health related research by 4th and 5th year students	permanent	10000/year	University budget
Support students in their clinical years with the necessary clinical tools	permanent	5000/year	University budget
Sustain the Masters Course in Public Health	permanent		NORAD
Develop the resource centre of the faculty	permanent	10000/year	
<b>Strategic objective N° 5</b>			
STABILISE AND DEVELOP THE HUMAN RESOURCES			
Review the staff establishment of the faculty	2003	750	University budget
Continuing professional development of teachers and other workers	permanent	7000/year	University budget/ own income
<b>Strategic objective N° 6</b>			
INCREASE THE INTAKE OF STUDENTS			
Increase the intake to 150/year	2005	30000	University budget
Develop a BA Honours in Biotechnology	2004	2535000	
Develop a BA Honours in Dentistry	2004	1950000	
Develop a BA Honours in Nutritional Sciences	2004	525000	
Continuing education programmes based on telemedicine, telematics and e-learning	2005	59700	

Source: Universidade Eduardo Mondlane 2003.

it will take about 20 years to replace the 260 foreign specialists currently working with the support of technical assistant. In order to accelerate post-graduate medical training, a number of considerations have been discussed:

- Re-structuring the Post-Graduate Commission, including decentralizing it to allow for the training of medical specialists in the other hospitals, namely the central hospital, in Beira and Nampula.

- Reducing the duration of training from 3–4 years.
- Recruiting a higher number of candidates to specialist training.
- Improving the coordination between the Post-Graduate Commission, the National Health Directorate and the Human Resources Department, in order to ensure that vacancies to post-graduate medical training meet the projected needs for the country.

This initiative will have significant cost implications for the public sector salary mass to be supported by the MOH (no authors listed, undated c).

### Training of other health professionals

Other cadres of health workers are trained at three types of institutions: Higher Institute of Health Sciences (HIHS), Health Science

**Table 8**  
**Network of training institutions**

Training institution	Level	Hostel capacity	Lecture rooms	Lecture room capacity	Situation
HIHS/HSI Maputo	Midlevel Midlevel specialised	280	14	350	Being extended
HSI Beira	Basic Mid-level	160	7	175	In construction
HSI Nampula	Basic Mid-level	150	6	150	
HSI Quelimane	Basic Mid-level	130	6	150	Possibly to be replaced by a new building
<i>Sub-Total</i>		<i>673</i>	<i>32</i>	<i>825</i>	
TC Lichinga	Basic	70	2	60	To move to new facilities
TC Pemba	Basic	72	4	120	
TC Tete	Basic	100	5	150	
TC Manica	Basic	100	3	90	
TC Chicuque	Basic	105	3	90	
TC Chicumbane	Basic	120	3	90	
<i>Sub-Total</i>		<i>567</i>	<i>20</i>	<i>600</i>	
TC Montepuez	Elementary	24	1	30	
TC Monapo	Elementary	30	1	30	
TC Nhamatanda	Elementary	64	2	60	
TC Mocuba	Elementary	60	2	60	
TC Marracuene	Elementary	108	3	90	To be reconstructed
<i>Sub-Total</i>		<i>286</i>	<i>9</i>	<i>270</i>	
Total		1,526	51	1,695	

Source: Human Resources Department

Institutes (HSI), and Training Centres (TC) (table 8).

The training capacity of the network is not being used to its full potential for a number of reasons related to financial constraints, deficient human resources, and other pedagogic considerations. Nevertheless, the output of the network has not been negligible, as can be seen from table 9

These data are not available at Ministry level, but for the past decade about 50 elementary level health workers have been produced every year (Ferruccio Vio, personal communication April 2004)

The current capacity of the training network is enough to meet the training needs identified in the Human Resources Development Plan. In financial terms, the functioning of the training network is highly dependent on international aid. The management of the institution in the network is highly centralized. It has been recommended that these institutions should have greater administrative and financial autonomy, while the MOH would maintain regulatory power over the content and the quality of the training (no authors listed, undated c).

### Centro Regional de Desenvolvimento Sanitário (CRDS)

The CRDS was established in 1983 by an agreement between the Government of Mozambique and WHO-Afro. Its mission was to provide practical post-graduate training for health professions from the PSAC, in areas conducive to Health for All by the year 2000 (Eben Moussi 2001). It is an institution of the MOH.

During 2001 the CRDS had about 13 students, and about 15 in 2002, attending short non-degree courses on epidemiology, epi-info, education (teaching and learning), management and planning, and health education. All completed the course work on time. Further to these short courses, the CRDS also runs one month continuing education programmes, attended by 64 students in 2001 and by 90 in 2002. Again, all completed the course work on time (Ferrinho et al 2003).

Over the years the CRDS has been subjected to several evaluations (Eben Moussi 2001). The perspective of these evaluations has been how to make the institution survive, rather than to question its own objectives and its relevance. Its future should be considered in the context of all the developments taking place in terms of post-graduate public health training in all the PSAC, and in Mozambique in particular.

**Table 9**  
**Output of the training network**

Level of training	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Elementary	*	*	*	*	*	*	*	*	*	*	*	*
Basic	167	166	187	160	325	233	247	235	335			
Mid-level	97	23	32	115	217	309	127	210	111			

*Source:* Department of Human Resources. Does not take into account courses for the promotion and specialization of personnel already on the job.

# The Labour Market

## Stock of health personnel

In Mozambique, of a total salaried workforce of 1.5 million workers in 2000, 121,562 workers were public servants and 14% of these worked for the health sector (Ministério da Saúde 2004 a).

According to the WHO Global HRH Database, in 2000 there were 33 health workers per 100,000 population (physicians, nurses, midwives, dentists and pharmacists). From the same database, there are 2.4 physicians per 100,000 population and 20.5 nurses per 100,000 population. In 1990 there were 112 health staff per 100,000 population in Mozambique (including health occupations of superior level, like physicians and others; middle level like nurses and technicians; basic level like associate nurses and health agents; elemental level, like other associate nurses, midwives and auxiliaries; and the “other” level, for operators and orderlies) (WHO 2004). According to 2003 figures, there are 100.8 NHS health workers per 100,000 population and 3,8 NHS physicians (national and expatriates) per 100,000 population.

## Demographic characteristics

Regarding the total HRH, male participation is greater than female participation, although it varies among different professional groups: there is a larger proportion of males than females among auxiliary nurses, the “other” category, physiotherapists, and physicians. Females predominate in the midwifery occupation (WHO 2004).

Seventy nine percent of the HRH are between 30 and 59 years old, 4% above 60 and 16% under 30. Taking a closer look to each occupation, 5.3% of physicians are under 30 and an equal proportion is above 60. The number of physicians under 30 is the lowest among all health workers. The proportion of auxiliary nurses, pharmacists, and physiotherapists above 60 years of age approaches zero (WHO 2004).

## Workforce distribution

### Urban and rural distribution

HRH are concentrated in the urban areas of the country. Auxiliary nurses and midwives are the health staff that are more present in rural areas than in urban areas compared to the other oc-

**Table 10**  
**Ratio of inhabitants per health worker (MOH 2004 b)**

Province	Inhabitants			Health workers – 2002			Health workers - 2003			Ratio inhabitant/ health worker – 2002			Ratio inhabitant/ health worker - 2003		
	women	men	Total	women	men	Total	women	men	Total	women	men	Total	women	men	Total
Cabo Delgado	786330	739307	1525637	289	661	950	341	690	1031	2721	1118	1606	2306	1071	1480
Niassa	466329	450341	916670	279	561	840	400	657	1057	1671	803	1091	1166	685	867
Nampula	1713846	1696294	3410140	782	1369	2151	889	1412	2301	2192	1239	1585	1928	1201	1482
Zambezia	1791382	1685099	3476481	589	1131	1720	700	1179	1879	3041	1490	2021	2559	1429	1850
Tete	717977	670227	1388204	582	722	1304	702	783	1485	1234	928	1065	1023	856	935
Manica	626902	580430	1207332	443	625	1068	499	642	1141	1415	929	1130	1256	904	1058
Sofala	778097	738067	1516164	772	1054	1826	953	1123	2076	1008	700	830	816	657	730
Inhambane	735133	591714	1326847	583	539	1122	740	587	1327	1261	1098	1183	993	1008	1000
Gaza	709540	556890	1266430	573	382	955	660	407	1067	1238	1458	1326	1075	1368	1187
Maputo Province	521424	482568	1003992	590	356	946	714	413	1127	884	1356	1061	730	1168	891
Maputo City	532670	509963	1042633	861	408	1269	949	442	1391	619	1250	822	561	1154	750
Central Hospital Maputo				1033	741	1774	1128	776	1904						
Central organisms				304	501	805	332	547	879						
Total	9379630	8700900	18080530	7680	9050	16730	9007	9658	18665	1221	961	1081	1041	901	969

cupations: 60% of auxiliary nurses and 68% of auxiliary midwives work in the rural areas. On the other hand, only 3% of the physicians in this sample work in rural areas (1/38 physicians) (WHO 2004).

### Provincial distribution

The median distribution of inhabitants per doctor for Mozambique is the ratio of 45943 persons/doctor found in Tete. The best served provinces are in the south of the country, while Gaza joins the northern provinces as the worst served provinces in terms of doctors (tables 10, 11,12).

#### *Medical doctors*

During 2003, of the 712 doctors working in the NHS 297 (42%) were hospital specialists, 412

(58%) were generalists and there were only three trained as public health specialists. Of the 451 non-foreign doctors, 99 (22%) were hospital specialists, 349 (77% were generalists) and there were only 3 public health specialists. The ratio of inhabitants per NHS employed national doctors is represented in figure 5. The distribution of the hospital specialists by the different medical specialties is presented in table 14.

### Distribution by level of care

The distribution of HRH by type of facility, the largest proportion (55%) is located in health centres whereas 41% works in hospitals: the majority of physicians, nurses and physiotherapists are located in hospitals; however midwives, auxiliary nurses and midwives, pharmacists and the others are mostly located in health centres.

**Table 11**  
**Ratio of inhabitants per health worker according to level of training (MOH 2003)**

	University trained <sup>14</sup>	Mid-level	Basic level	Elementary level	Support	Total for doctors	Generalist doctors	Hospital specialists
Cabo Delgado	81936	9669	4865	9853	4174	111199	111199	—
Niassa	55364	5409	3338	4278	2586	78433	78433	—
Nampula	85010	10312	5677	7832	4039	120187	139417	871355
Zambezia	107876	13088	5788	12945	5205	131849	142397	1779962
Tete	49113	7157	3383	4828	2633	74961	74961	—
Manica	56529	7147	4173	6008	2826	73155	73155	1243638
Sofala	25812	4542	2539	6347	1886	44250	44250	387187
Inhambane	61982	6684	3505	5185	3037	64933	64933	1363596
Gaza	68396	7342	3249	7220	4466	92823	92823	649761
Maputo Province	30568	6705	3188	6793	2264	37119	37119	1039321
Maputo City/Central								
Hospital Maputo	5190	1998	2021	5982	2084	21609	21609	105883
Central Organisms <sup>15</sup>	108949	63429	149365	173096	99577	430727	430727	1234750

<sup>14</sup> Including doctors

<sup>15</sup> Reference population was the total country population

**Table 12**  
**Inhabitants per doctor per province in 2003 (Min. Saúde, 2004)**

Province	N° of doctors		N° of inhabitants	Inhabitants/doctor	
	appointed	appointed & with contract		appointed	appointed & with contract
Cabo Delgado	14	24	1556788	111199	64866
Niassa	12	22	941195	78432	47781
Nampula	29	55	3485420	120186	63371
Zambézia	27	49	3559923	131849	72651
Tete	19	31	1424263	749612	45943
Manica	18	32	1243638	69091	38863
Sofala	39	72	1548748	39711	21511
Inhambane	22	34	1363596	61981	40105
Gaza	16	24	1299521	81221	54146
Maputo Province	29	33	1039321	35838	31494
Maputo City/ Central Hospital	165	336	1058833	6417	3907
Central institutions	—	65	18521246	—	284942
Total	390	647	18521246	47491	28626

## Globalization of the labour market

### Expatriate technical assistance

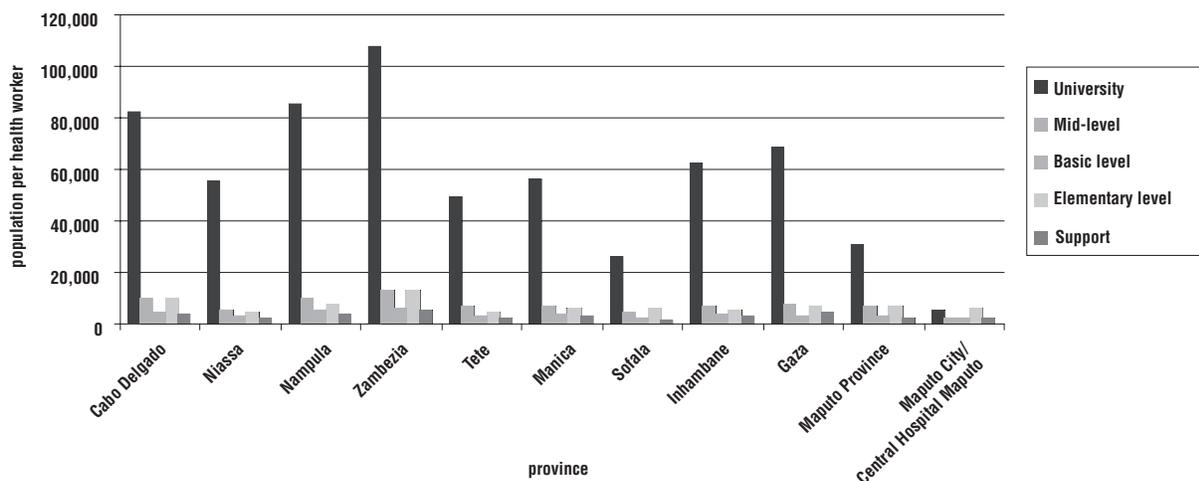
There have been two distinct periods of expatriate technical assistance. Immediately after independence, until the early 1980s, hundreds of left-leaning health professionals came to support the health sector, working mostly within government health structures for local pay in very difficult conditions. In the early 1990s, with the increase in foreign aid agencies and NGOs, expatriates came as staff of these agencies on conditions of employment far above those of their local counterparts in the public sector (Pfeiffer 2003).

By 1986 there were 130 Mozambican doctors and 230 *cooperantes*. In 1998, about 300 foreign doctors worked within the Mozambican NHS, while less than twenty Mozambican doctors worked abroad (Noormohamed 2000). By 2003, of the total of 712 doctors working in

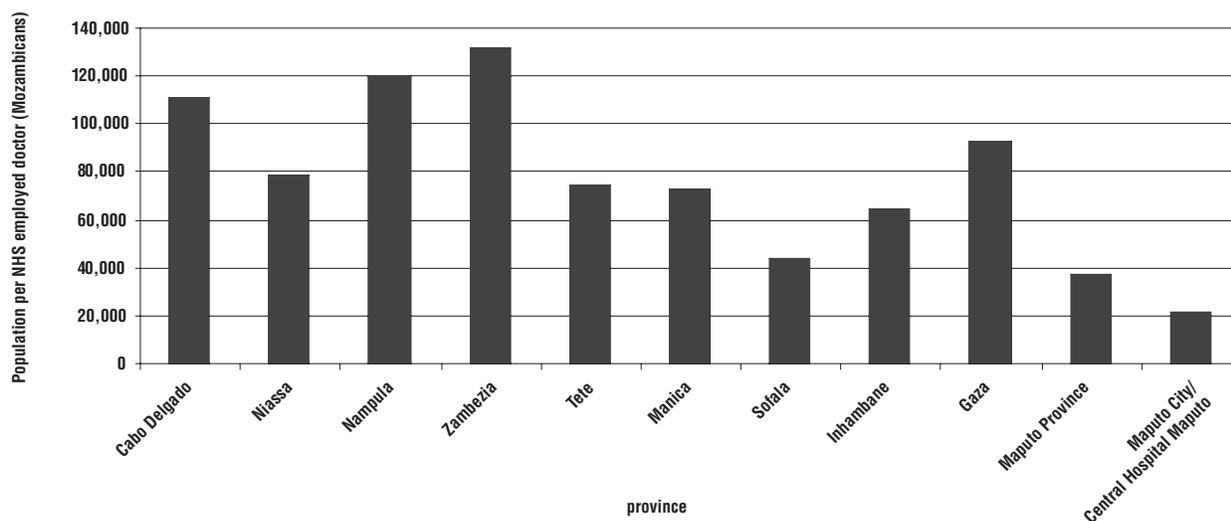
**Table 13**  
**Workforce distribution by level of training (Martins 1995)**

Level of training		1995
University	Medical graduate	219
	Other	65
	Sub-total	284
Middle level	With clinical duties	1060
	Other	155
	Sub-total	1215
Basic level	With clinical duties	4319
	Other	1367
	Sub-total	5686
Elementary level	With clinical duties	1303
	Other	459
	Sub-total	1762
Other	Manual workers	?
	Orderlies	?

**Figure 4**  
Ratio of inhabitants per health worker according to level of training (MOH 2003)



**Figure 5**  
Ratio of inhabitants per NHS employed national doctors per province (MOH 2003)



the NHS, 261(37%) were foreigners; among the foreigners, 198 (76%) were hospital specialists and 63 (24%) were generalists, representing 67% of hospital specialists and 32% of hospital generalists working in the NHS. In some provinces foreign doctors are the main provider of medical care (figure 6).

Expatriate professionals rarely face professional hurdles to practising inside the country, as almost every medical qualification is accepted (Noormohamed 2000).

**Table 14**  
**Number of medical specialists trained, in training and to be trained (MOH, 2003)**

Specialty	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Pathologic anatomy							3						1						4
Anaesthesiology			1					1				2	3			3			10
Cardiology	1							1	1	2			1						5
General surgery	2	1	1	1	1	3		1	1				1						9
Maxillo-facial surgery	1							2						3					3
Paediatric surgery													1						1
Plastic surgery													1						1
Dermatology & Venereology	1							1	1										3
Gastroenterology					1							1	1						3
Haematology			1	1															2
Internal Medicine		2	1	1	2	2		5	2	2		3							15
Legal Medicine							1												1
Neurology																			0
Neurosurgery									1			1							2
Gynaecology & Obstetrics	4	1	1	2	2	2		2	3	3		2	4						20
Orthodontia																2			2
Ophthalmology								1	1			1	1	1			1		6
Orthopaedics & Traumatology	1	2					1			1		1	1	1	1		2		10
Ear, nose and throat	1				2							1	2	1					7
Pneumonology	2																		2
Prosthesis																1			1
Urology																1			1
Total	9	3	5	4	5	10	2	10	5	8	3	12	15	6	1	7	3	0	108

## The brain drain

Although, for a number of linguistic and social reasons, Mozambique seems protected from health professional immigration (Noormohamed 2000) there is evidence of a growing immigration into South Africa and Portugal. The information available about the Mozambican health professionals working in Portugal confirms the impression that its magnitude is not as significant

as for the other PSAC, the largest group being constituted by the less than 50 doctors identified by the MOH as working in the Portuguese NHS (even so, this means that over 10% of Mozambican doctors are registered and working abroad). The majority of the health professionals tracked to be working in Portugal are females under the age of 40 years (figures 7 to 14). The reasons for migrating are diverse (box 6).

### Box 6

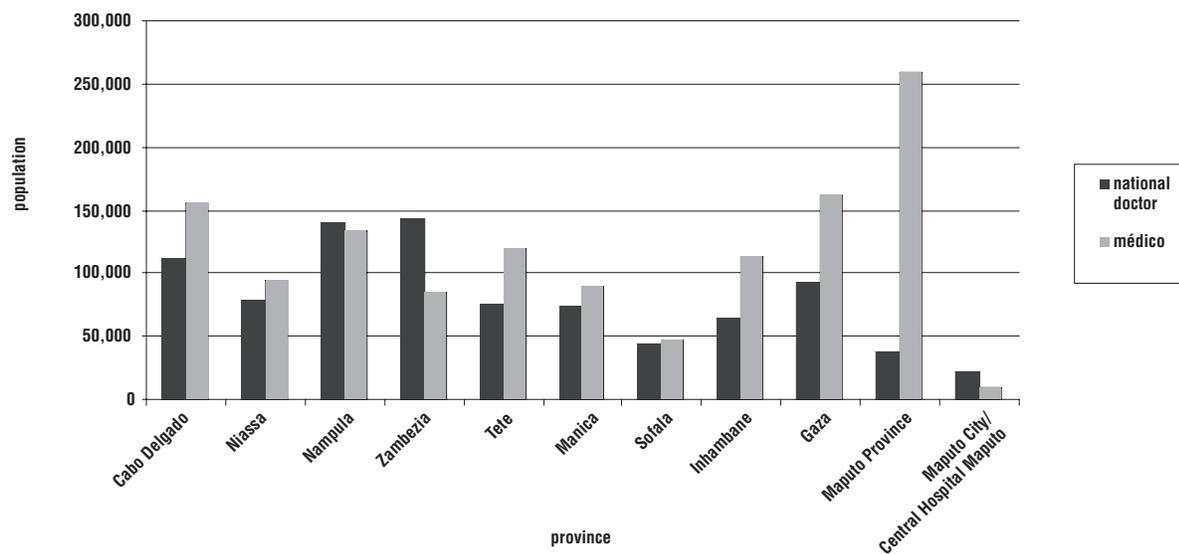
#### Determinants of the brain drain from the migrants perspective

Inadequate salaries, family reasons, and education of their children are pointed as the principal factors for emigration of health professionals from the PSAC. In most cases, a combination of two or more of these reasons applies. This suggests that for these health professionals the decision to emigrate—like most major personal decisions—is multiply-determined. One implication for policy-makers of the causal complexity among factors spurring emigration is that the marginal effect of policy reforms addressing one or more of the multiple determinants of emigration may be sufficient to retain some proportion of health professionals, even when other determinants of emigration are present. For example, improving educational opportunities for the children of health professionals may reduce brain-drain even when salaries remain low and other, family-related reasons for emigration remain unaltered (Luck et al 2000).

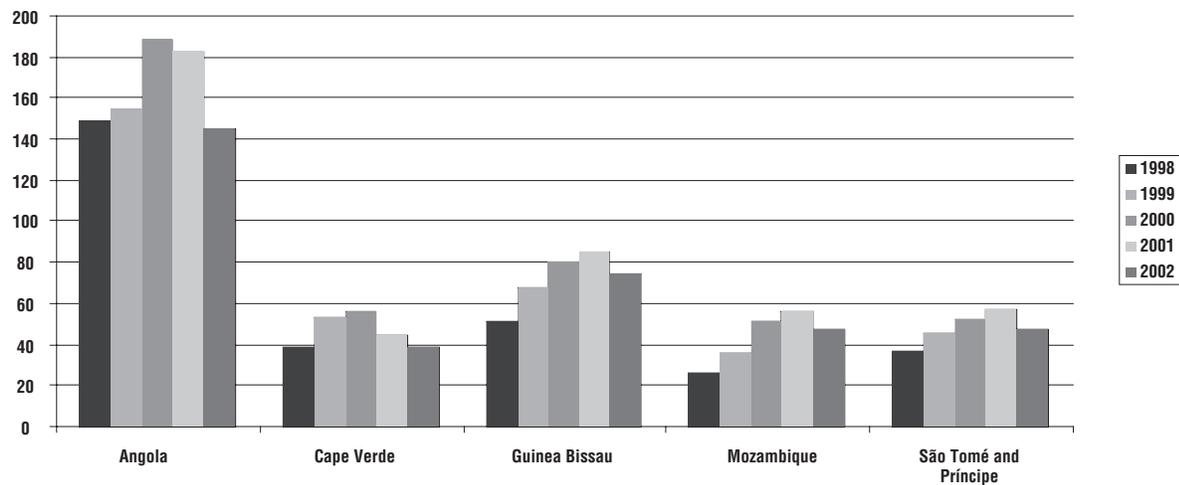




**Figure 6**  
**Inhabitants per doctor per province (2003)**

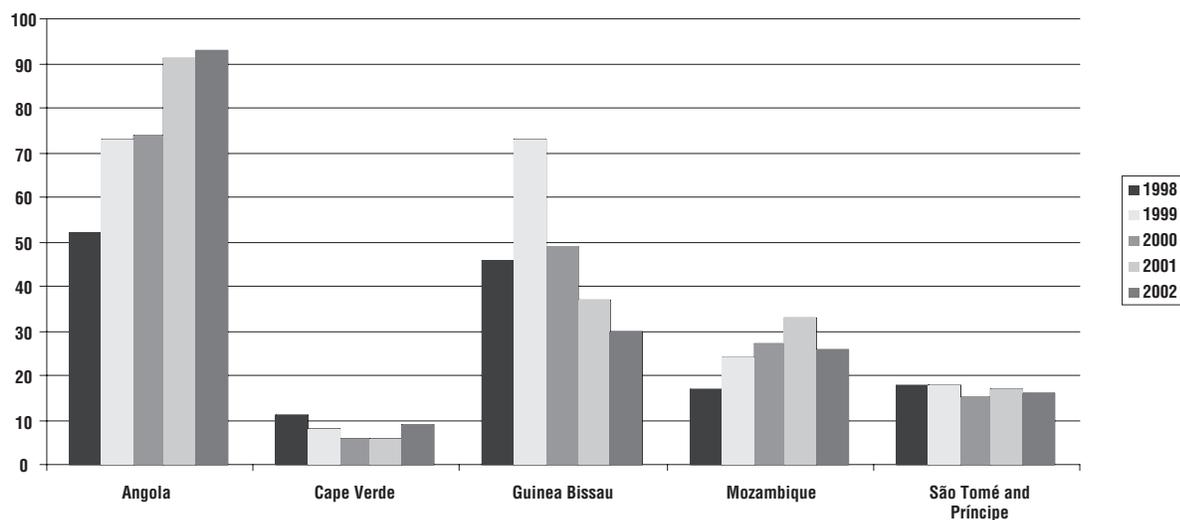


**Figure 7**  
**PSAC Physicians working in Portugal (1998–2002).**



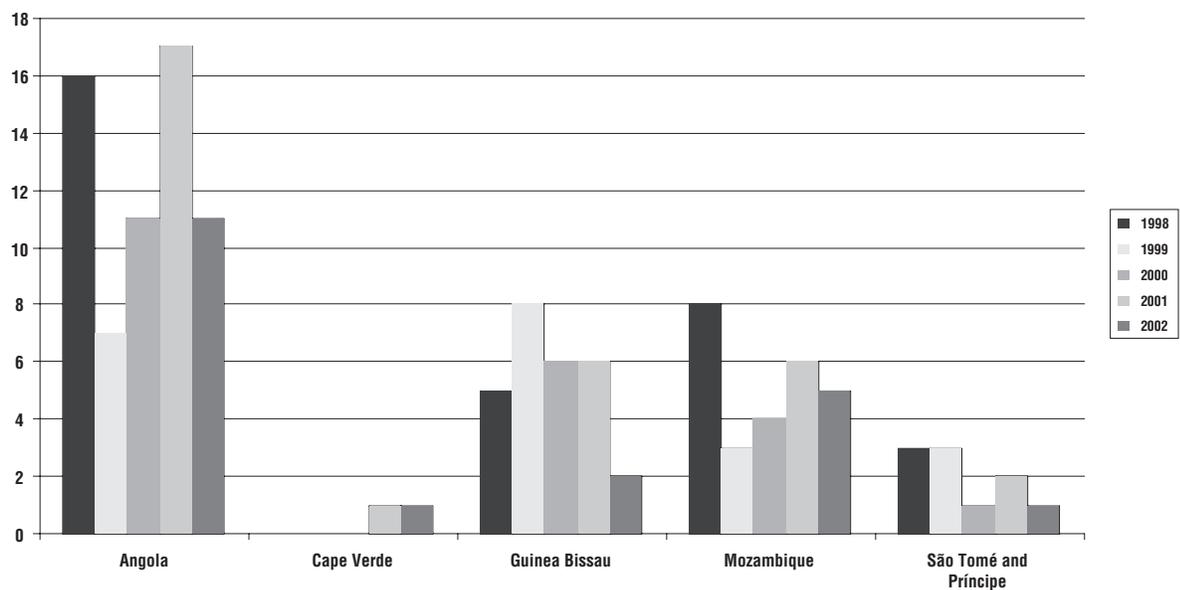
**Source:** Department of Modernization and Health Resources , Lisbon

**Figure 8**  
**PSAC Nurses working in Portugal (1998–2002).**



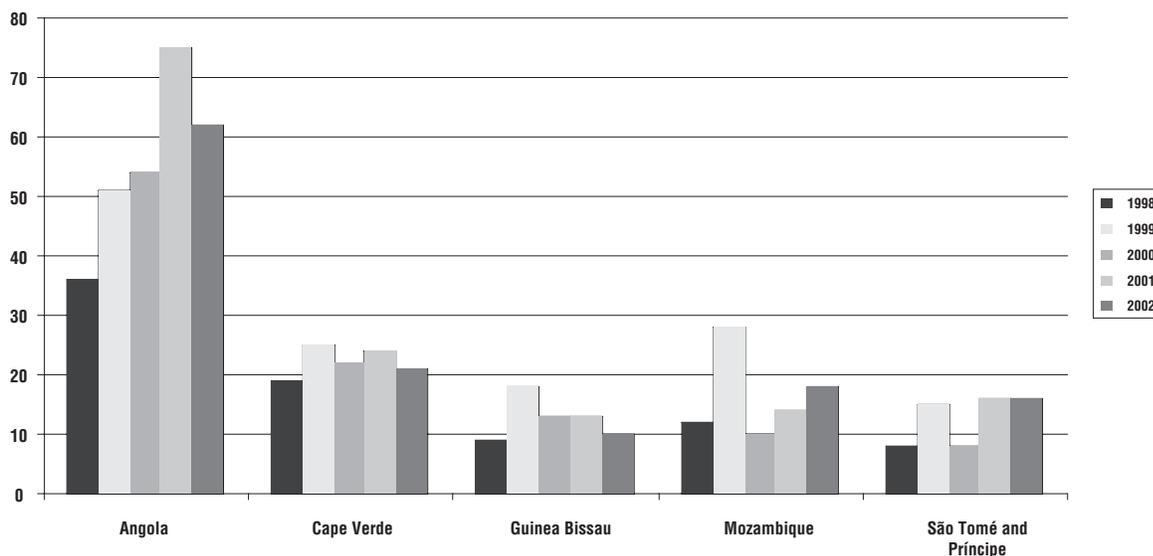
*Source:* Department of Modernization and Health Resources, Lisbon

**Figure 9**  
**PSAC Health Technicians working in Portugal (1998–2002)**



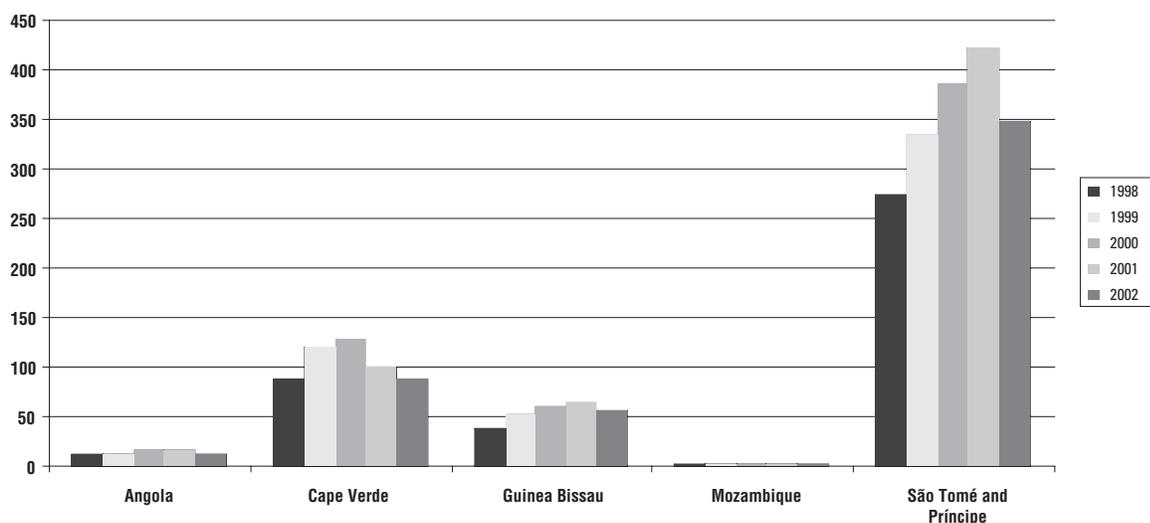
*Source:* Department of Modernization and Health Resources, Lisbon

**Figure 10**  
**PSAC Other Health Professionals working in Portugal (1998–2002).**



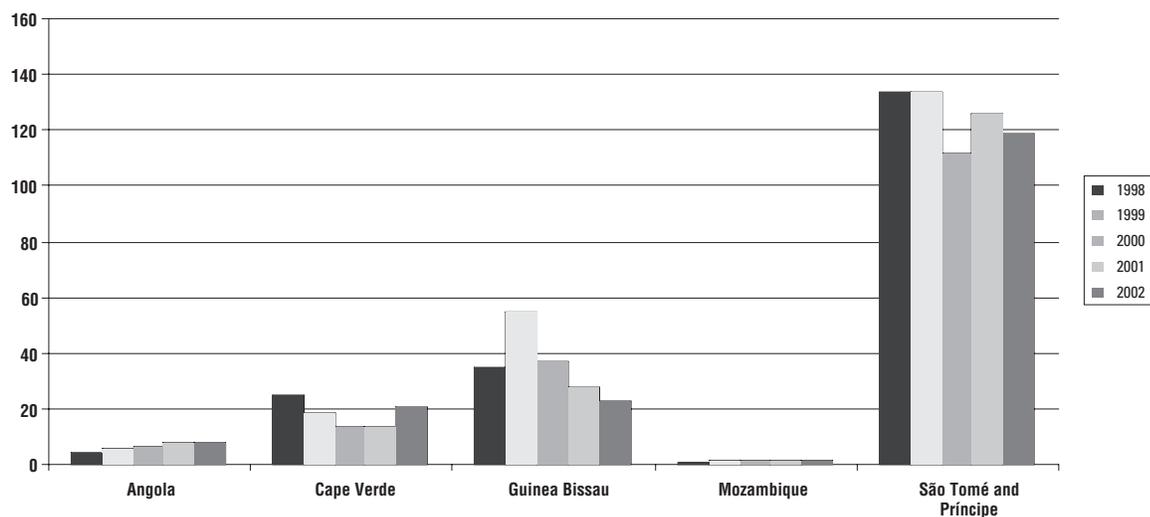
*Source:* Department of Modernization and Health Resources, Lisbon

**Figure 11**  
**PSAC Physicians working in Portugal per million inhabitants at the country of origin (1998–2002).**



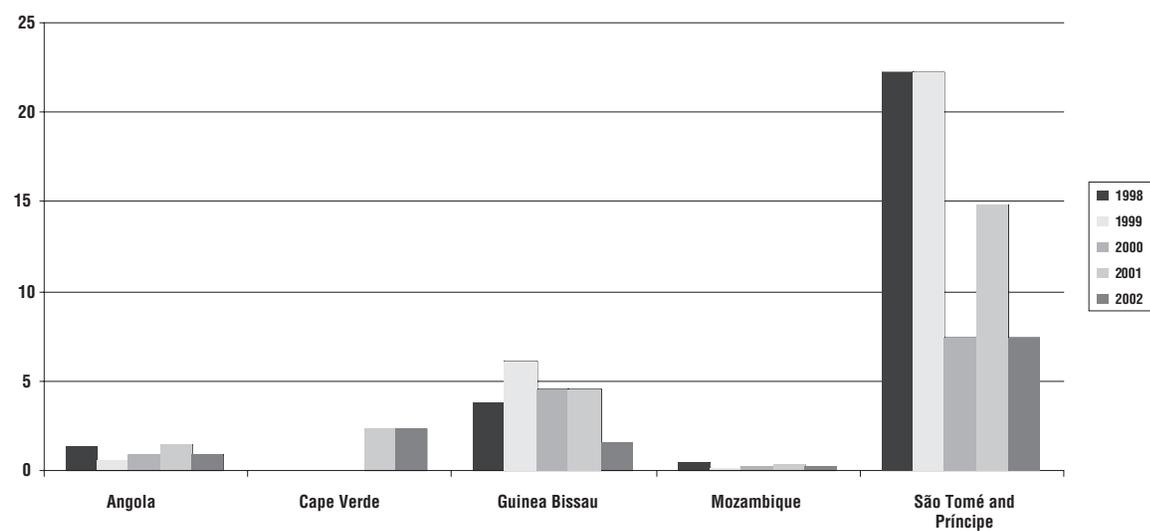
*Source:* Department of Modernization and Health Resources, Lisbon

**Figure 12**  
**PSAC Nurses working in Portugal per million inhabitants at the country of origin (1998–2002).**



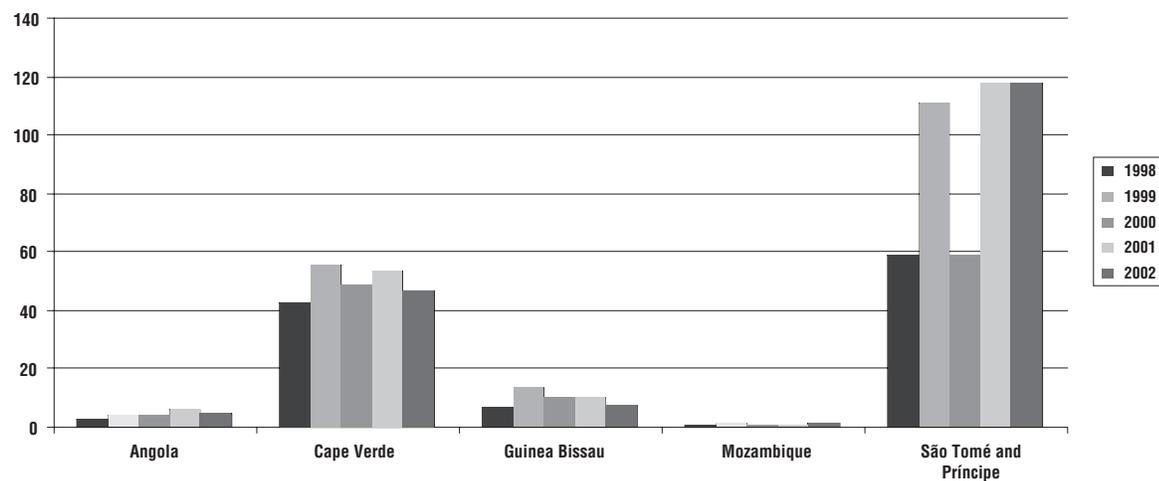
**Source:** Department of Modernization and Health Resources, Lisbon

**Figure 13**  
**PSAC Health Technicians working in Portugal per million inhabitants at the country of origin (1998–2002)**



**Source:** Department of Modernization and Health Resources, Lisbon

**Figure 14**  
**Other PSAC Health Professionals working in Portugal per million inhabitants at the country of origin (1998–2002)**



**Source:** Department of Modernization and Health Resources, Lisbon

# Human Resources Management in the Public Sector

## The human resources development plan

HRH development and management has been guided by the HRH Development Plan 1992–

2002 (Box 7), and more recently by the HRH Development Plan 2001–2010.

The current “*Plano de Desenvolvimento dos Recursos Humanos Atualizado (PDRH +) 2001–2010*” (Updated Human Resources Development

## Box 7

### Highlights of the evaluation of the HRH Development Plan 1992–2002

Considering the targets defined in terms of HRH production, the Plan can be considered a success:

- The target for training elementary, basic and mid-level personnel was 4,889; 3,293 had been trained by 2000. These together with the 1,200 still expected, makes a total of 4,493 by 2002, 92% of the target. However, the target should be met once the count is corrected for unregistered training courses.
- The staff pyramid narrowed its untrained base and widened the more technically differentiated top. Personnel with higher or mid-level education increased almost by a factor of three, while basic and elementary staff remained unchanged and auxiliaries were reduced from 51% to 42% of the total workforce.
- There is a noticeable trend towards a greater equity. Yet, the gap between Maputo City and the northern provinces is still very marked.
- In the mean time:
  - The lack of specialist doctors makes the system very dependent on Technical Assistance.
  - Deployment of doctors and other HRH to rural areas is proceeding at a slow pace.

(continued on next page)

**Box 7** (continued)

- The increase observed for mid-level personnel was achieved as a result of courses to upgrade lower level personnel, and many were administratively promoted.
- The rate of production of new staff did not keep pace with the rapid expansion of the network of facilities. As a result, in many facilities services are provided by inadequately trained staff.
- Costs of training were in excess of the quality observed. Classes were small, success rates were low, quality of teaching many times was not satisfactory, the courses ran late, and management was inefficient.
- The rate of absorption of newly produced staff constitutes a significant bottleneck. This is related to financial constraints, and to a very centralized system of appointment and deployment.
- Deployment is done without taking into account the specific skills of the person being placed.
- At the peripheral levels, including the provincial level, information for management is not collected or integrated in the personnel information system.
- The supervisory system lacks quality and a systematic approach.
- Human resources management remains highly centralised and bureaucratic (Dal Poz & Machatine 1999).

Plan 2001–2010) gives continuity to the previous plan and adds some new dimensions (Box 8).

### **Decentralization of personnel management**

In the context of the public sector reform being undertaken, with the new system of careers and remuneration (law 64/98), the central organs maintain the responsibility for the management of health cadres with university training as well as the responsibility for supervising the provincial administrations and the medical directors. Health cadres with mid-level, basic, or elementary training are decentralised to the provincial administration<sup>16</sup>. (Box 9).

Human resources management is currently deficient in the same management skills observed to be lacking in the health system at all levels. In order to modernize the administration of the MOH and its institutions, it has been recommended<sup>17</sup> that doctors and nurses are progres-

sively replaced in their non-clinical management positions by professional administrators with university training.

### **Staff establishment and vacancies**

The health sector staff establishment was approved during 2001. This establishment was further reviewed by ministerial law 127/2002<sup>18</sup>.

How this establishment is organised and managed at the most peripheral levels seems to

<sup>16</sup> Interview with Isabel Viandro, Head of the Department of Planning and Management of the Directorate for Human Resources of the MOH, March 2004.

<sup>17</sup> “Plano estratégico para reforma e modernização administrativa do MISAU” (“PERMAS”).

<sup>18</sup> Interview with Isabel Viandro, Head of the Department of Planning and Management of the Directorate for Human Resources of the MOH, March 2004.

**Box 8****Updated Human Resources Development Plan 2001–2010**

- The rehabilitation of health facilities was associated with needs for extra financing, more human resources, and more skilled management.
- In the current context the 2001–2010 HRH development plan will support the stabilization and strengthening of the health facilities, giving priority to qualitative increments. These mean redeploying personnel to rural areas and upgrading professionally existing staff, without great investments in terms of quantitative increases. The aim is to have well trained, motivated staff, integrated in a supportive social environment. As a result, the targets in terms of training are conservative
- Special attention is paid to professional and career issues and the system of incentives. This approach implies solutions that go beyond the formal authority of the MOH, requiring negotiations with other Ministries.
- This plan will be evaluated yearly and with particular depth at mid-course, around 2004–05. Particular attention will have to be paid to personnel losses associated with AIDS, and to the financial performance of the system.
- In the training sector, the focus should be on improving the quality and efficiency of the training system, rather than its capacity

**Box 9****Decentralization of human resources management**

The decision to move towards the decentralization of human resource management has its origin in the observation that centralized human resource management causes serious problems for individual health workers, such as the speed and efficiency of processing personnel documentation (appointments, pay, movement orders and like) and administrative activities in general. In implementing decentralization policies, a major objective was that the central level institutions would not be overloaded with routine human resource management issues, and so would be released to concentrate on broader strategic and policy issues.

At local levels, the competence of human resources management in the decentralized system is the responsibility of the provincial Governor, who may delegate some responsibilities to provincial directors. As these only stay a few years at provincial level, to improve the quality of personnel administration it is essential to professionalize and stabilize the human resources management functions.

The Government concluded that decentralization of human resources management had led to an excessive delay in the formal deployment of health workers, due to internal problems in relation to financial and administrative issues. Also, human resources management practices were considered weak, particularly in relation to actions taken against poorly performing workers as well as workers with disciplinary problems. These workers were usually transferred from one duty station to another, or to other provinces, without adequately solving their problems.

*(continued on next page)*

**Box 9** (continued)

There is some human resources planning at provincial level, but mostly limited to training. Decentralization has resulted in improvements in administration of the retirement process of health workers and the introduction of a better personnel information system.

At district level, in many instances, the same person accumulates all administrative and financial functions. Very little planning is done. Health workers' individual files remain typically incomplete, lacking specific information such as recent training information, supervision information, disciplinary occurrences, leave, rewards and distinctions (Saide & Stewart 2001).

vary. For 31 district hospitals studied during 2001, the staff establishment of the hospital and the district was common to the hospital and the district in 9 hospitals, separate for the health district and the hospital in 16, separate for each health facility in 3, and not detailed for another 3 (Conceição et al 2004).

Not all positions predicted in this establishment have been filled because of budgetary restrictions, with delays resulting from the difficult bureaucracy associated with the nomination process and with the unwillingness of staff to be deployed to such peripheral units<sup>19</sup>.

These vacancies are not insignificant. In 2000, there were 207 health facilities without technical personnel; of these, 144 were health posts and 63 were type III health centres (health units with a small rural labour ward); 157 type III health centres had a single technical person not meeting the minimum establishment of at least a medicine agent, or a basic nurse and one MCH nurse or elementary midwife. This gives a total number of vacancies in the order of 427 for this first level of care. These vacancies were most marked in Sofala, Zambezia, Nampula, Manica and Inhambane, in decreasing order.

## Job descriptions

Job descriptions of health professionals are published in a national bulletin (*Boletim da República de 14/03/1994 5º suplemento-I Série nº 10 Resolução 3/94 do Conselho Nacional*

*da Função Pública*). Nevertheless these are not consistently applied across the country. On the one hand, access to these documents at the more peripheral levels has been described as poor. On the other, the lack of personnel means that many workers perform duties that are not in their job description regardless of access to job description documents (Saide & Stewart 2001).

## Recruitment, appointment and deployment

Once his/her training is completed, a health technician will be deployed to the staff establishment of a province as per existing plans. Once in the province, the provincial health authorities will decide on where specifically he or she will be deployed.

This process of recruitment of new health workers is guided by a recruitment plan (table 16), but limited by administrative and financial constraints. Delays in recruitment are seen as often reducing the motivation of newly appointed health workers (Saide & Stewart 2001). Nevertheless, the perception is that decentralization of recruitment and deployment has reduced waiting times for appointment.

<sup>19</sup> Interview with Isabel Viandro, Head of the Department of Planning and Management of the Directorate for Human Resources of the MOH, March 2004.

**Table 16**  
**Plan for the recruitment of new staff during 2003 (Min. Saúde, 2002)**

	Niassa	C. Delg.	NPL	Z. Norte	Z. Bezia	Tete	Manica	Sofala	Z. Centro	Ilhane	Gaza	Map. P	Map. C	Z. Sul	O. C.	HCM	O. C.	Total	Total
	N	N	N	%	N	N	N	N		N	N	N	N	%	N	N	%	N	%
UNIVERSITY TRAINED																			
<i>Médica Hospitalar</i>																			
<i>Médica Generalista</i>	1	1	3	3	1	2	3	1	1	2	2			20			0		
<i>Médica de Saúde Pública</i>			1											1					
<i>Especialista</i>	3	3	3	3	3	3	3	3	3	3	3		3	36					
<i>Técnico Sup. de Saúde N1</i>	1	1	1	2	1	1	1	1	1	1	1	2		14					
<i>Técnico Sup. de Saúde N2</i>	1		1				1				1			4					
<i>Técnico Sup. Admin. Púb. N1</i>		1										6		7					
<i>Técnico Sup. Admin. Púb. N2</i>														0					
<i>Técnico Sup. de Informática</i>												2		2					
<i>Instrutor Téc. e Pedagógico N1</i>												2		2					
<i>Técnico Superior N1</i>	1	1	1	2	1	1	1	1	1	1		6	3	20					
<i>Técnico Superior N2</i>	1	1			1	1		2		1	1	1	1					10	
<i>Insoector Técnico</i>														0					
<i>Docente N1</i>														0					
Sub-Total	8	8	10	1.8	11	7	7	11	2.3	7	7	8	8	1.9	18	6	1.9	116	7.5
MID-LEVEL																			
<i>Técnico Especializado de Saúde</i>					1	1								2					
<i>Técnico de Saúde</i>	13	15	25	25	20	12	20	15	20	14	10		10	199					
<i>Técnico Profissional Admin. Púb.</i>	1						1					10		12					
<i>Técnico Profissional Admin. Trab.</i>												10		10					
<i>Técnico Profissional</i>	3	3	6	5	3	5	4	2	2	4	2	10	5	54					

(continued on next page)

**Table 16** (continued)  
**Plan for the recruitment of new staff during 2003 (Min. Saúde, 2002)**

	Niassa	C. Delg.	NPL	Z. Norte	Z. Bezia	Tete	Manica	Sofala	Z. Centro	I bane	Gaza	Map. P	Map. C	Z. Sul	O. C.	HCM	O. C.	Total	Total
<i>Técnico</i>	1	2	10	3	2	2	4	2	2	3	2	10		43					
<i>Programador</i>												2		2					
<i>Operador de Sistemas</i>												2		2					
<i>Docente N3</i>														0					
Sub-Total	18	20	41	5.1	33	26	20	29	7.0	19	24	21	14	5.0	44	15	3.3	324	21.0
<b>BASIC LEVEL</b>																			
<i>Assistente Téc. Saúde</i>	22	22	78	77	25	25	32	25	26	16	21		5	374					
<i>Assistente Téc.</i>	3	6	5	8	4	3	10	4	4	5	3	12	4	71					
Sub-Total	25	28	83	8.8	85	29	28	42	11.9	29	30	21	24	6.7	12	9	1.4	445	28.7
<b>ELEMENTARY LEVEL</b>																			
<i>Auxiliar Téc. Saúde</i>	5	5	6	6	5	5	5	5	5	15	5			67					
<i>Auxiliar Administrativo</i>	3	2	5	6	4	3	6	6	3	3	3	10		54					
Sub-Total	8	7	11	1.7	12	9	8	11	2.6	11	8	18	8	2.9	10	0	0.6	121	7.8
<b>SUPPORT</b>																			
<i>Auxiliar</i>	2	6	10		10	10	8	8		4	10	10	8		15			101	
<i>Agente de Serviço</i>	30	30	50		40	25	25	30		15	20	20	25			30		340	
<i>Operário</i>	6	6	10		10	5	6	10		8	5	6	10		8	10		100	
Sub-Total	38	42	70	9.7	60	40	39	48	12.1	27	35	36	43	9.1	23	40	4.0	541	35.0
<b>TOTAL</b>	97	105	215	27.0	201	111	102	141	35.9	93	104	104	97	25.7	107	70	11.4	1547	100.0

**Table 17**  
**Annual losses of health workers from the NHS 1995–2003**

Losses	1995	1996	1997	1998	1999	2000	2001	2002	2003
Expelled	0	32 (9%)	0	24 (5%)	17 (9%)	23 (10%)	15 (7%)	24 (9%)	2 (1%)
Demission	0	22 (6%)	0	12 (2%)	16 (8%)	13 (6%)	7 (3%)	10 (4%)	4 (2%)
Retirement	125 (45%)	119 (34%)	312 (66%)	384 (78%)	79 (41%)	68 (30%)	84 (37%)	120 (45%)	30 (13%)
Exonerations	0	9 (26%)	0	11 (2%)	12 (6%)	4 (2%)	2 (1%)	4 (1%)	6 (3%)
Death	24 (9%)	26 (8%)	57 (12%)	62 (13%)	70 (36%)	118 (52%)	121 (53%)	110 (41%)	194 (82%)
Other	126 (46%)	138 (40%)	102 (22%)	0					
Total	275	346	471	493	194	226	229	268	236

*Source:* Annual Reports –Directorate of Human Resources.

It is not clear what is the difference between being dismissed, expelled or exonerated. These categories should be treated as being similar.

The final say in the appointment process is centralized in Maputo. This is frequently delayed for bureaucratic reasons. In order to prevent the delay in the field placement of the recruited personnel, Mozambique has an agreement with donors to finance the salary of these personnel until their appointment comes through. This is positive, in that it prevents delays in field placements, but it is also a perverse incentive to keep the bureaucratic hurdles to the appointment process, as these are a source of extra funding.

The deployment of health workers, bred in an urban environment and with at least 10 years of schooling, to rural areas has been problematic, particularly in relation to mother and child care.

It is projected that the ability of the NHS absorb all new graduates will reach its limit as a result of financial constraints in the near future<sup>20</sup>.

## Retention and losses

The major staff losses are associated with leave to work in another area/department/service or leave to study or to work outside the public sector<sup>21</sup>. These are not quantified.

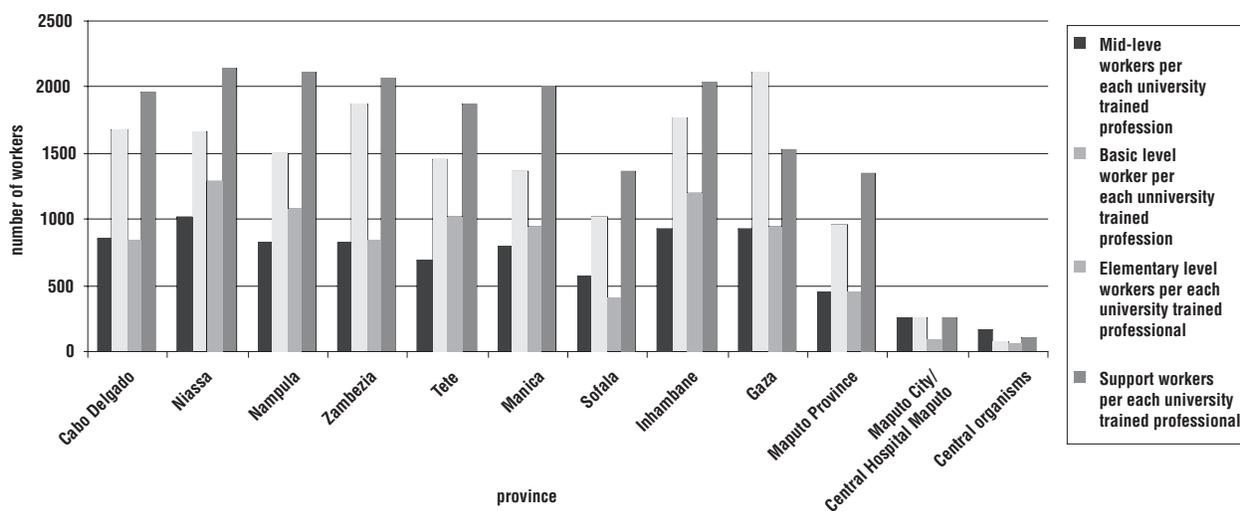
Loss by mortality of staff is starting to assume worrying proportions, particularly in regard to the youngest staff<sup>22</sup>. This is most worrisome in the context of the growing AIDS epidemic (Ministério da Saúde 2004 a). The percentage of the workforce retiring per year corresponds to about 1.3% between 1995 and 1999, which is in line with the observation that, on the basis of the age pyramid, 1,083 men and about 1,100 women will reach retirement age by 2010 (1.5% of the workforce every year). Nevertheless, as technicians with professional training will be just over one third of the total, their loss is estimated at about 500 until 2005 and 1000

<sup>20</sup> Interview with Isabel Viandro, Head of the Department of Planning and Management of the Directorate for Human Resources of the MOH, March 2004.

<sup>21</sup> Interview with Isabel Viandro, Head of the Department of Planning and Management of the Directorate for Human Resources of the MOH, March 2004.

<sup>22</sup> Interview with Isabel Viandro, Head of the Department of Planning and Management of the Directorate for Human Resources of the MOH, March 2004.

**Figure 15**  
**Mix of health professionals in the different provinces: number of different level of workers per each university trained health worker (2003)**



until 2010<sup>23, 24</sup> (table 17). The estimated loss of technicians is in the order 3.6% by 2010.

### Staffing patterns and personnel mix

Deployment and staffing patterns have improved over the years.

The mix of personnel achieved in the different provinces is far from standardised (figure 15). Basic and support workers have a particular relevance in all provinces except Maputo City.

In urban hospitals all the different occupations of the health workforce are present. However, the proportion of some is low, as is the case for auxiliary nurses and midwives, pharmacists, physiotherapists and even midwives (WHO 2004).

Rural hospitals are staffed by nurses, midwives and the “other” category. Nurses account for 50% and midwives for 6%. Hence, these rural hospitals are mainly offering services from associate-level staff. Access to highly skilled activities is not usually present in the rural hospitals (WHO 2004). In 1990, on average, only half

of the rural hospitals were staffed by a doctor; by 1997, the average number of doctors per rural hospital was 2 (Noormohamed 2000).

Urban health centres have almost all the different occupations in their staff, with the exception of physiotherapists. The proportion of auxiliary nurses, midwives, and pharmacists is bigger than in urban hospitals. Nurses and the “other” category are still the occupations with the largest share in the total HRH distribution, as in hospitals (WHO 2004).

Rural health centres have almost all occupations in their health staff, with the exception of physiotherapists. Still, the proportion of physicians and pharmacists is very low, 0.45%. Thus,

<sup>23</sup> Studies in Zambezia (2000) and Cabo Delgado (1999) show an older population among auxiliary personnel rather than among technicians. If this is true for the country, then no more than 800 technicians will retire by 2010.

<sup>24</sup> It is possible to retire after 35 years of duty independently of the worker’s age. Exceptionally, it is possible to allow a member of staff to continue in his or her post even after retirement age.

in rural areas access to highly skilled health services is difficult. In these rural health centres, the proportion of auxiliary nurses and midwives is the largest compared to the other facilities (hospital urban-rural and urban health centres). Also in these facilities, nurses and “other” have the highest share in the total health staff.

In all facilities the main activity for almost all occupations, pharmacists excepted, is direct patient care. Physicians and nurses have as second activities involving the administration of the health facility and teaching. Pharmacists’ main activity is “other activities”, which unfortunately were not explained, and secondly direct patient care (WHO 2004).

### **Supervision and personnel evaluation systems**

Supervision and personnel evaluation systems have been described as inadequate (Saide & Stewart 2001).

Supervision of health workers in more peripheral units is not systematic enough, and suffers from the lack of supervisors to cover the districts and from financial restrictions to pay them. Its effectiveness is limited by failure to give feedback to the workers supervised (Saide & Stewart 2001). A new system of evaluation was introduced during 2001. It is a self-evaluation to be debated with the direct supervisor. Nevertheless, supervisors still do not have the necessary training to formally evaluate the performance of their staff or to focus on the systemic determinants of performance, rather than solely focusing upon results. Because of this, the current results of the self-evaluation show a limited validity with most health workers being evaluated as “fair” or “good” (no authors reported, undated c).

### **Continuing professional development**

Most training is usually planned at provincial level, to be implemented by the districts. There

is central coordination, from a Bursary Office within the Directorate of Human Resources of the MOH, as well as from a Continuing Education Committee. At provincial level, Continuing Education Units have been emerging over the years. These units are usually poorly staffed with inadequately skilled personnel (no authors reported, undated c).

At district level training is poorly developed, without a systemic approach, particularly to the training of the most peripheral workers. This training lacks a link with the professional development demanded for career progression. Criteria for selection of the trainees are acknowledged as inadequate, and literature and other tools for ongoing learning are rarely present at these peripheral facilities (Saide & Stewart 2001). Therefore, the impact of the training programme on performance is constrained by the lack of appropriate working conditions at the periphery and by the non-linkage with the supervisory system.

NGO involvement with international funding in the Mozambican health sector has led to a proliferation of seminars and other training activities usually designed to upgrade skills for involvement in foreign agency projects, drawing health workers away from their routine duties and providing them with per diems almost equivalent to an entire month’s salary for mid-level health workers (Pfeiffer 2003). These impressions have been confirmed by a study on continuing education of health workers in the central provinces of the country<sup>25</sup>.

As a result of these findings, the current strategic plan proposes 3 main areas of focus in order to ensure the relevant and effective development of continuing education efforts: focus on performance, focus on the actual work

<sup>25</sup> Implementação do Programa de Formação Contínua nas Províncias de Inhambane, Niassa e Nampula. Uma revisão das Experiências e Principais Lições. MISAU/UNICEF/AMREE, 3 de Março 2000.

**Box 10****Salaries and other benefits reported by a sample of HRH in 2002**

From the point of view of remuneration, the nursing occupation is not attractive, given that auxiliaries can gain equal or better benefits and need less years of training. The salary gap between physicians and the rest of the health staff is remarkably large, and may discourage the training of new professional health staff other than physicians.

There are additional benefits offered to the health personnel as incentives. For the total categories of health workers, benefits most commonly provided are health care insurance and paid vacations. However, looking closer at each category, physicians garner the greatest benefits from allowances for housing, while pharmacists claim the highest proportional benefit to be from allowances for transportation. Physiotherapists, nurses and midwives (professional and associate) benefit most from health care insurance. Having a delay in the receipt of payment is a common factor for all HRH; on average 33% of them have experienced such a delay (WHO 2004)<sup>26</sup>

content and new developments associated with this work content, and focus on the inclusion of training needs specific to elementary and basic staff.

It is also important to link continuing education with the processes of supervision and quality assurance. The information system should provide enough information about each health worker to help managers and training centres to develop relevant continuing education programmes for the health workers and the health services. The structures to manage continuing education should be upgraded in status and resources.

**Incentives: financial and others**

Salaries of public servant health workers are defined by law (Reis et al 2004). Nevertheless, legislated income is not keeping up with the cost of living. From 1991 to 1996, nurses' monthly salaries dropped from \$110 USD to less than \$40 USD. Doctors' salaries dropped from \$350 to \$110 USD (Pfeiffer 2003).

A new remuneration system was introduced during 2001. This system contemplates different salary scales as a function of conditions of

isolation for the university trained personnel and, to a lesser extent, for mid-level workers. Even so, deploying a doctor at the periphery is only possible through external financial mechanisms of *pooling or topping up*. There are unresolved problems, for example, in terms of the remuneration of senior cadres, such as provincial directors, which have a lower remuneration than a central or provincial hospital director. The salary scales have been evaluated as complex, with too little range from the lowest to the highest salary, with no prospect of further salary increases if rapid progression to the highest salary occurs. This rapid progression is particularly possible for workers in rural areas who are entitled to a 50% bonus on the counting of their time for career promotions. These facts contribute to a demotivated workforce. The rapid career progression of rural staff may result in reaching the top of the career fast and, upon transfer to a more urban centre, being

<sup>26</sup> These delays were denied by the key-informers we interviewed and were not mentioned in the focal groups we conducted. It was also not acknowledged in a recent study of all district hospitals in the country (Conceição et al 2004).

**Box 11****There are few incentives for doctors**

The financial incentives for the graduating class of doctors to practice in Mozambique are weak. The discrepancy between the salary of national and expatriate doctors is a source of great unhappiness. A specialist's salary should be \$3,500 USD and a generalist should receive \$1500–2000 USD. The currently levied 20–30% income tax is not justifiable in this context. Career progression can be a source of increased income, but the budget to support the associated salary increases often does not materialize. This leads to career stagnation.

Our proposal is that, even in the absence of salary increments, doctors should be allowed to progress in their careers and the state's debt towards the doctor could be compensated in different ways: allocation of plots for construction, car subsidies, housing subsidies, or credits to buy things such as computers, professional equipment, furniture, etc.

Within the public servants' careers doctors are, among the differentiated staff, the only group expected to do some work at the periphery. This should be adequately compensated<sup>27</sup>.

placed in charge of health professionals who having progressed less slowly, having nevertheless benefited from more training opportunities (Pereira 2001).

The WHO (2004) reports findings from an analysis of health facilities and providers that demonstrate a differential use of incentives. It is not clear to what extent this reflects the beneficiaries' preferences (Box 10).

The Doctor's Association complains about low salaries and the lack of differentiated incentives for doctors (Box .11).

The type of benefits that health workers would like to have access to are listed in table 18. These include the expected financial benefits but also others.

For basic and elementary level workers based in rural areas, the few incentives that are propounded include: greater staff rotation and mobility, provision of adequate housing, improvement in access to career development and continuing education, and provision of more frequent and relevant supervision. Financial and non-financial incentives (bicycle, motorcycles, tea or coffee during working hours) are also being considered.

It is of paramount importance that the system of incentives should develop to link with reward systems for good performance (Saide & Stewart 2001).

**Table 18**  
**Wish list of benefits**

<b>Benefits</b>	<b>Doctors</b>	<b>Nurses</b>	<b>Orderlies</b>
Salary increase	X	X	X
Fees increase	X	X	X
Transport for health personnel	X	X	X
Promotions		X	
Credit for housing	X	X	
Greater access to the economic benefits of "special clinics"		X	X

*Source:* Schwalbach et al 2000

<sup>27</sup> Interview with the president of the Medical Association, Mohamed Rafik, March 2004.

**Table 19**  
**Distribution of the salary mass per different levels of health workers, 1999**

Management positions	4.2%
Higher level	18.1%
Mid-level	24.6%
Basic level	29.9%
Elementary and workers	8.7%
Auxiliaries (orderlies)	14.5%
Total	100.0%

Source: No author listed, undated c

### Salary mass, salary management and salary reform

The proportion of the salary mass in the running expenses of the MOH was 46% in 1997 (Beattie & Krauhaar 1999<sup>28</sup>). Between 1995 and 1997, the salary mass increased from \$8 to \$11.8 USD millions per annum and to \$14 USD millions in 1999, distributed mostly among basic and mid-level workers (table 19). This salary mass is highly subsidized by donors (Conceição et al 2004).

Of the 18,750 employees of the MOH, about 3% are contractuales (outside the *quadro*). In some cases, these contractuales are paid through donor funds because of domestic budget constraints.

The salary mass requirements grow as new staff is recruited: about 1,000–1,500 per year. This is necessary to improve the nurse to patient ratio, which now stands at about 1:60. In 2004, there may be problems to find places for trained graduates because Finance is limiting the MOH's budget increase. MOH requested 2,200 new staff posts for 2004, but Finance has agreed to only 1,039. This could leave some graduates without places. Retirement would help free some space. There are about 900 who should have retired but who have not due to bureau-

cratic issues. However, as already mentioned, the losses are estimated to at least 2–3% per year (Myers 2004).

Salary management has been reported as deficient, resulting in delays in the payment of the monthly salaries, particularly of recently recruited staff. The directors of 31 rural or general hospitals reported that in 2001 this was an infrequent problem, affecting mostly the nursing and auxiliary categories (Conceição et al 2004).

### Salary reform

The Health Ministry would like to simplify the career system salary structure. They suggest eliminating some of the steps and enable people at lower levels to move through the initial salary steps more quickly so that they reach a reasonable salary level. Currently, people move slowly through the lower steps, and are not even able to fulfill the full range of their career before they hit retirement (i.e., there are too many steps for the length of a civil service career)<sup>29</sup> (Myers 2004).

MOH suggested a salary range from \$45 to \$1500 USD. This would include abolishing the major subsidies (e.g., special bonus). Much of the backbone of the health service is run by the Auxillary Technician and the Assistant Technician, and yet they do not benefit from the special bonus. Others do not like the special bonus because it does not figure into their pension. Even though the intent of the bonus is to attract people with higher qualification, the reality is that others are needed as well for the system to

<sup>28</sup> In countries with similat characteristics to Mozambique the proprotion is usually 60-80%.

<sup>29</sup> This is contrary to the perception of Pereira (2001), who considers that the possibility for fast career progression exists already, and also contrary to the position of the president of the Medical Association, who identifies budgetary limitations, rather than career structures, as the main obstacle for career progression.

**Box 12****Government's medium term salary reform strategy**

- To establish a clearly defined resource envelope for personnel costs, and one that is consistent with medium term macroeconomic targets.
- To decompress the salary structure so that positions that are traditionally hardest to fill with qualified staff, and that are critical to public sector reform, benefit from higher base salary increases over time.
- To continue to reward higher level academic qualifications and training as a way of retaining key skills in the public sector. Until an improved performance evaluation system can be implemented, academic qualifications could continue to serve as a proxy for performance.
- To increase the incentives for qualified staff to work in provincial posts and especially outside of major urban centers. Although monetary benefits are not the only factor influencing decisions to work in rural areas, the special bonus system can be used more aggressively to compensate for rural hardship.
- To enhance the composition of the public service by gradually reducing the number of unskilled posts and replacing them with skilled positions. This could be supported by facilitating retirement, and early retirement for select positions.
- To establish targets for controlling the growth in the public service so that resources for salary adjustment are not squeezed out by new recruitment.
- To encourage simplification of the current career system so that it can be more easily managed over time, and to reduce the rigidities in the system that may prevent adequate motivation of staff.
- To encourage a more transparent and integrated management of payroll information systems (Myers 2004).

function, especially in rural areas. MOH proposed an incentive system to donors, but their response was to ask that the Government first endorse it (Myers 2004).

The ministry sees housing as the biggest obstacle to getting qualified staff to move to rural areas. Rather than large cash payments, the officials believe that Government should provide housing (or a rental allowance), and other non-monetary benefits such as a TV, internet access, access to schooling, and a solar panel where there is no electricity (Myers 2004).

Most of these salary reform issues will have to be addressed in the context of a public administration-wide salary reform (Box 12).

The first step in implementing a medium-term pay reform strategy (MTPRS) will be for

Government to agree on the resource envelope that will be devoted to public service pay over the next five years. Without this essential step, the design of the strategy will be incomplete and critical decisions about trade-offs cannot be made effectively. The Ministry of Finance's medium-term budget framework provides a good basis for this (Myers 2004).

A key condition needed to be able to implement a MTPRS will be for Government to know how many people it employs and where they are. The current state of information systems is in drastic need of reform. Integration of the payroll needs to occur as soon as possible, and systems need to be designed so that a comprehensive download of payroll data can be obtained by relevant ministries at any point in time. While

some functions of payroll management may remain decentralized, it is important that there is a centralized leadership over the design, core functions, and outputs of the system. In addition, incentives must be put in place to assure that ministries keep the data updated (Myers 2004).

This MTPRS should include options for decompressing the salary ranges over time, increasing the incentive for deployment to rural areas, and introducing other forms of performance-based pay for critical positions. It is virtually impossible to increase the salaries to the extent that may be expected by many civil servants. To achieve substantial increases for some positions necessarily means restraining the increases for others. There are no technically correct answers, and rather a judgment must be made about how best to balance the perceptions of fairness and the need to develop competitive salaries in skilled posts. The core principle is that positions with higher levels of responsibility would receive higher rates of base salary increase. This stands in contrast to the strategy adopted by Government as recently as 2003 (Myers 2004).

## Working conditions and occupational safety

The poor working conditions of health workers may easily be captured on a superficial visit to any facility. Equipment is lacking, refrigerators are not working, consultation manuals are not readily available, overall lighting is poor, the buildings are dilapidated, dirty, and do not provide privacy (No authors listed, undated c). Nevertheless these have not been formally documented. Poor conditions contribute to the redundancy of many of the skills learned either in the initial training or in continuing education programmes, lead to the poor efficiency of existing laboratories, may contribute to poor patient outcomes, and raise significant doubts about the effective meaning of some of the productivity statistics (e.g. what is the meaning of a high vaccination coverage in a district where the refrigerator where the vaccines are kept is not working?)(No author listed, undated c).

There is a perception that AIDS is a significant problem among hospital personnel, with anecdotal evidence of many health workers dying

### Box 13

#### AIDS and the rights of health professionals

In all focus groups, the right of health professionals to have access to antiretroviral therapy was consensual independently of HIV infection being the result of an accident at work or not.

Many workers had already had accidents, but did not disclose this information because they were afraid of having to take the test and then learning that they are infected with no therapy available. Also, there is a significant lack of trust in the confidentiality of the tests.

Other demands expressed as “rights” of health workers included: (i) protection for the health personnel (which does not exist) (gloves, disposable materials, syringes, etc.); (ii) training and information with regard to the fact they are a “high-risk” group due to their working conditions; (iii) financial compensation for the professionals in the event of infection by accident; (iv) creation of conditions to avoid discrimination against infected colleagues; (v) minimization of the use of injectable treatment where oral treatment for patients is available; (vi) skills to talk to patients on HIV/AIDS.

Source: Ferrinho et al 2004 a

**Box 14****Impact of AIDS on health personnel and on performance**

Before the HIV epidemic, health workers worked freely. Now there is “fear”, above all, due to contact with the patient without the necessary protective materials and awareness that there is one more “risk”, one more “worry”. But, stress is somewhat controlled because they know the ways in which the infection is transmitted (it is easier to prevent than tuberculosis); there are more precautions in the work that they do because they know that this disease has no cure.

Other consequences for the performance of health workers are: increased amount of work, namely, in the number of patients with opportunistic diseases; higher ratio of patients to personnel; and the tendency for medical professionals to “over-investigate”.

The overall result is a certain “morale instability” - when the health professional faces all patients with HIV; work overload with a strong “emotional” impact; “frustration” felt because of the time wasted with a patient who cannot be cured, and reduced job satisfaction.

When patients are informed of their diagnosis, the reaction “is not always the best one”, and can cause a “degradation of the situation” in the interaction between the health professional and the patients and their family. This situation may affect the quality of the services themselves.

*Source: Ferrinho et al 2004 a*

from it. This is attributed to a greater risk than that for the general population, as a result of inadequate protective mechanisms and protocols for health workers.

Health workers are aware of this occupational risk, and consequently demand rights to safer working conditions (Boxes 13 & 14) (Ferrinho et al 2004 a).

**Working hours and absenteeism**

The management of the work schedules of health workers and of the day to day work also seems to reflect serious problems, but again is not well documented. Work shifts may be excessive or too lax. They do not seem to be properly coordinated with activities, availability of personnel, and patient attendance. Many times, workers are found sitting in the morning at peak hours of patient attendance doing administrative work, while only a minority is attending to the patients (Dal Poz & Machatine 1999).

Parallel projects by internationally funded NGO pull health service workers away from routine duties, paying them far more than what they could expect from their public sector salary (Pfeiffer 2003). The resulting absenteeism from this or other causes, such as illness, is not documented.

**Personnel management information system**

A personnel information system (PIS) was created in 1998. The capacity to use statistical data is limited due to the lack of trained personnel to use this information adequately in the decision-making process (Saide & Stewart 2001).

The PIS is the property of the Ministry of State Administration. It covers all hospitals, but does not yet cover all health centres and any of the health posts, and does not track any information on health workers outside the NHS. At central level, it is based in the MOH in a single computer.

After being nominated by the Administrative Court based in Maputo, the administrative process of the worker is sent to the Directorate of Human Resources of the MOH. There, an individual file is created that will be the data source for the PIS. Data on transfers, promotions, retirement, etc, for the staff file are sent from the Administrative Court. The PIS is not integrated into an intranet, and automatic upgrades of the back-ups in the provinces are not possible<sup>30</sup>.

## Quality assurance

The literature and information on quality assurance systems in the NHS are not easy to find. The only reference to a quality assurance mechanism in place refers to the system of auditing institutional maternal deaths (Zanconato et al 1994).

## Disciplinary procedures

“An interesting research project would be the investigation of why so many health workers are submitted to disciplinary proceedings”. This comment, from one of the focus group discus-

sions undertaken by the authors, illustrates the ineffectiveness of the utilization of disciplinary procedures to address problems that should be addressed at other levels of management. The lack of resources also favours the accused, and the solution often found, transferring the prevaricators from one district to another, is not always the most adequate. The public is also very passive about censoring health staff, for fear of not receiving adequate care when returning to the health facility.

Disciplinary procedures need a careful review and an approach that, *inter alia*:

- would support and protect the public,
- promotes a cultural change among health workers from the time they enter for professional training,
- addresses mechanisms to correct the systemic determinants of the poor performance that leads to disciplinary procedures,
- strengthens the health inspectorate system
- binds other state organisms to the disciplinary decision of the health institution (to avoid , for example, health workers expelled from the MOH finding a job with the Ministry of Education) (Dal Poz and Machatine 1999).

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<sup>30</sup> Interview with Isabel Viandro of the Directorate of Human Resources, MOH, March 2004.

# Performance and Coping

## Performance indicators

The quality of clinical work is reported as being weak in the peripheral health units: patients are not examined, prescriptions are done only on the basis of the symptoms reported, antibiotics are over prescribed and antimalarials are wrongly dosed (no authors listed, undated c). The work of doctors is disconnected from the work of other members of the health team such as medical technicians and agents (Dal Poz e Machatine 1999). Even when patient management flowcharts are available, they are hidden out of sight, behind the prescriber's door. Asepsis rules are not obeyed. Admission criteria are not respected.

Drawing from case studies, group interviews, focus group discussions and informal conversations with women in Mucessua, one of the factors that emerged as determining late booking for antenatal care was “Maternity Clinic staff turning people away and telling them to come back later in pregnancy”, despite national norms stating otherwise (Chapman 2003).

In rural Manica, among 361 people seen for acute care in a rural clinic, only 18% reported being questioned by their provider about prior care for the problem that brought them to the clinic, 23% received prognostic information

about their illness, and 45% received a physical examination. Of those who received medicine, 98% received an explanation as to how to take them. When asked if they had confidence in the health worker they had seen that day, only 61% replied yes (Newman et al 1998).

A similar perspective was obtained from the civil society survey conducted by the MOH in preparation of the strategic plan. Human resources related problems reported by civil society included: poor interaction with the health staff in the health units, illicit payments, lack of personnel, and lack of pharmaceuticals (No authors listed undated b).

## Coping strategies or corruption?

The context of high expectations and low income/benefit possibilities for doctors in Mozambique results in the high utilization of coping strategies to meet those expectations. A situation of unofficially acknowledged equilibrium then ensues, which many health workers, administrators and policy makers, and donors have little interest in changing (Van Lerberghe et al 2000). The current coping strategies are very similar to past coping strategies used by Mozambican health workers, since the early

1980s, preceding even the 1986 introduction of the structural adjustment Programme by the International Monetary Fund. It was then that “special clinics” within the public sector were introduced, originally to avoid long times in queues by special groups such as the party *nomenklatura*, expatriate workers, and resident diplomats (Schwalbach et al 2000).

Although public sector employment continues to be considered the principal employment, further clinical work in the private-for-profit

sector, a second job in the public sector, or additional employment completely outside the medical field are respectively the 2nd, 3rd and 4th main complementary economic activities (Ferrinho et al 1998). The principal reasons given to engage in these economic activities are to “meet the cost of living”, “to support the extended family”, and to “educate one’s children” (Ferrinho et al 1998). Besides dual employment, the steady reduction in health workers’ earnings stimulated the progressive diffusion of under the

### Box 15

#### Coping strategy or corruption?

We walk into a crowded waiting room with patients clutching their x-rays, and ask the first three people how much they paid. All three paid the right amount. Then we ask if they have a receipt; and only one does. That means hospital staff pocketed the 30,000 meticaïs (\$2.50) each from the other two.

It is a small mark of the corruption and poor care that patients now face in the Maputo Central Hospital, the largest and most modern in Mozambique.

I am accompanied by Dr João Alexandre, head of the x-ray section of the hospital’s emergency room. “Today we will have to stop all x-rays except the most urgent, because we have run out of the fixer used on the x-ray film after development” he admits. “And that creates the conditions for petty corruption—late at night, a small amount of money will convince a technician that your case is one of the most urgent”.

Wages are low. A senior nurse in the central hospital earns 700,000 meticaïs per month (under \$60 USD) which is not enough to provide basic food and clothing for her family. The United Nations estimate of the household poverty line for Mozambique is \$75 USD per month.

“But it is not just salaries; it is the lack of materials. There are no gloves, and nurses know that in a country with a high incidence of AIDS, they are risking the lives of their patients—and endangering their own. People become nurses because they want to help. But they become demoralized because they don’t have the conditions to do their job. They reach a level of despair where they lose all professional pride; corruption and an animal spirit takes over” explains Otilia Pacule, a 33-year-old economist and the co-ordinator of a national group campaigning for the cancellation of Mozambique’s debt.

Dr Alexandre agrees with her. “With no x-ray, it is harder to diagnose. But what is the point of diagnosing, when you know there are no medicines for treatment?”

Pacule gets angry about hospital staff demanding bribes: “It’s immoral. But people in hospital are sick and vulnerable; they are afraid to refuse and afraid to denounce corruption.”

Even Otilia can remember a time when the Central Hospital was not like this. After independence in 1975, the transformation of the health service to one providing better care for all was seen as a real triumph. The World Health Organization then cited Mozambique for special praise. (Hanlon 1999)

desk charging. Aware of the inadequacy of the salary levels, the MOH was unwilling to curb these schemes. The result was deregulation of health care provision, where each health worker pursues his /her own compensating strategy, no effective control is possible, patients pay significant sums, and health care for the poor is provided at the discretion of the health worker (Pfeiffer 2003) (Box 15).

### Dual employment

It is the perception of many that most doctors that work in the public sector also develop clinical activities in the private sector. The limited data suggests that there is no evidence for discrimination against public patients in terms of investigation or treatment but, there is a significant demand on the clinician's time that leaves little time for public sector duties (Damasceno et al 2000).

### Pilfering for survival

Misuse by health personnel of their privileged access to pharmaceuticals is a sensitive issue in the current context of scarce resources, promotion of generics, the HIV epidemic, and a growing demand for health care. Misappropriation is a widespread practice rarely acknowledged explicitly or documented, even in studies that have looked into the coping strategies of health professionals (Adam et al 1992, Backström et al 1997, Ferrinho et al 1998, Roenen et al 1997). It is common knowledge that the practice is widespread in many countries (Kloos et al 1998, Van der Geest 1982, Asiimwe et al 1993, McPake et al 2000, Di Tella & Savedoff 2001). This has also been described from Mozambique (Pfeiffer 2003).

A study using a mix of open-ended and closed questions through a self-administered questionnaire was conducted with a sample of individuals working at various levels in the Mozambican health sector. All respondents claimed personal knowledge of instances of misappropriation of

pharmaceuticals by health personnel for personal financial gain. This took various forms—from outright stealing, to requesting under-the-counter payments, to overcharging, and to the promotion of undesirable prescribing patterns by representatives of the pharmaceutical industry. According to the respondents, the range of unorthodox practices related to the handling of drugs in health facilities is widest among doctors, and particularly those active in private practice. Respondents mainly pointed at doctors and pharmacists; less at nurses—except to say that nurses in private practice or orderlies in private pharmacies over prescribe. Respondents said they had the impression that the phenomenon was generalised. Actual theft of drugs was said to be highly organized. Most of the respondents had the impression that such incidents were on the increase (Ferrinho et al 2004 b).

All this represents a financial loss to the health care system, and affects health outcomes negatively. It also contributes to the growing sense of mistrust and disrespect for the health professions and their institutions (Ferrinho et al 2004 b).

### Job satisfaction

Although job satisfaction was never formally studied as such, there is some evidence on factors reported as sources of “unhappiness” at work (table 20). This evidence suggests that job satisfaction is lower among nurses than among doctors.

### Patient satisfaction

Patient satisfaction studies in Mozambique are limited. In rural Manica, exit interviews were conducted at 34 health clinics. Overall, 55% of the 879 adult interviewees believed that the service they received was good or very good, and only 13% rated it as poor. Satisfaction was positively associated with increased training level of the provider. Provider training and

**Table 20**  
**Sources of job dissatisfaction among health care providers**

Source of dissatisfaction	For doctors	For nurses	For orderlies
Social pressure to get special treatment or other favours		X	X
Barriers for professional upward mobility/promotion		X	
Lack of continuing professional education		X	
Limited access to private work within the public sector ("special clinics")		X	
Delay in payment for work done in the "special clinics"		X	
Lack of transparency in the economic results of special clinics"		X	
Lack of respect by orderlies		X	
Lack of interaction among personnel	X	X	
Lack of basic supplies (syringes, gloves, etc)		X	
Bad hospital food for providers and patients		X	
Lack of transport	X	X	X
Low salaries	X	X	X

*Source:* Schwalbach et al 2000

provider availability were areas identified by respondents as needing improvement (Newman et al 1998).

Schwalbach also listed as sources of patient dissatisfaction the following factors: illegal fee charging, lack of motivation of health personnel, and NGO strategies (Schwalbach et al 2000).

## Violence in the workplace

Violence in the workplace against health workers has been documented in a recent study of

31 rural and general hospitals. The forms of acknowledged violence are, in decreasing order of frequency: sexual, physical, against property, verbal, or bullying. It is the hospital directors' perception that this violence is most frequently directed against administrative personnel, technicians, nurses and managers, in order of decreasing frequency. The aggressor is most frequently a patient, but can also be a colleague (Conceição et al 2004)

# Conclusions and Recommendations

The amount of research work and strategic thinking around HRH in the Mozambican health system is considerable. The Mozambican recent experience is one of innovation, steady improvement, meeting targets and adaptability. In the current context of extreme poverty, of unequal economic growth among provinces, of exponential growth of the HIV epidemic, and of

rapid expansion of health services after a long civil war, much has been achieved but much remains to be done. The review of the literature, the analysis of available data, interviews, and focus group discussions enabled us to identify the general challenges with health implications, which the country faces (table 21). These challenges will unlikely be met, if the HRH issues which they raise are not addressed.

**Table 21**  
**General challenges for the future with health consequences**

<p><b>Social challenges</b></p> <ul style="list-style-type: none"> <li>• Rapid population growth</li> <li>• Rapid urbanization</li> <li>• Widespread poverty</li> <li>• Emergent democracy</li> <li>• Weak public sector institutions</li> <li>• Weak civil society</li> <li>• Inequality</li> <li>• Widespread corruption</li> <li>• HIV epidemic</li> </ul>	<p><b>Economic challenges</b></p> <ul style="list-style-type: none"> <li>• Rapid economic growth</li> <li>• Chaotic economic context</li> <li>• Dependency of external donors</li> </ul> <p><b>Globalization challenges</b></p> <ul style="list-style-type: none"> <li>• To absorb fashions in global policy making while ensuring a steady strategic approach</li> </ul> <p><b>Health coverage challenges</b></p> <ul style="list-style-type: none"> <li>• To expand coverage</li> </ul>
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**Table 22**  
**Key HRH issues**

<p><b>Social challenges</b></p> <ul style="list-style-type: none"> <li>• Widespread HRH corruption</li> <li>• HIV impact on HRH</li> <li>• To adapt to a heavy presence of expatriate doctors</li> </ul> <p><b>Economic challenges</b></p> <ul style="list-style-type: none"> <li>• To keep remuneration with expectations</li> </ul> <p><b>Coverage challenges</b></p> <ul style="list-style-type: none"> <li>• To expand the staff establishment (to consider expanding network of community health workers)</li> </ul> <p><b>Professional policy challenges</b></p> <ul style="list-style-type: none"> <li>• To review existing career structures</li> <li>• To rethink role and relevance of community health workers</li> <li>• To adapt training to new career structures</li> </ul>	<ul style="list-style-type: none"> <li>• To improve quality of both basic and lifelong training</li> <li>• To define skill mix needs</li> </ul> <p><b>HRH management challenges</b></p> <ul style="list-style-type: none"> <li>• Salary reform</li> <li>• To strengthen the PIS</li> <li>• To expedite recruitment procedures</li> <li>• Criteria for deployment of personnel to be guided also by explicit criteria of equity</li> <li>• To link incentives, continuing professional development, performance assessment, quality assurance, disciplinary procedures</li> <li>• To address micromanagement issues, such as time management and absenteeism</li> </ul>
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The current HRH situation in Mozambique seriously hampers the functioning of public health services, even where staff has been deployed. The inadequacy of remuneration has led many public sector health professionals to adopt individual coping strategies to make ends meet. This affects productivity and the quality of the care provided, compromises the relationship of trust between users and providers, decreases the dependability of the public health sector, and increases dissatisfaction among health workers and patients.

To move towards universal access to quality health care, Mozambique must establish and implement comprehensive action plans to address the HRH issues listed above. Some are already being addressed, but others, like corruption, are not even openly acknowledged, which is an essential step towards the development of appropriate interventions, within the health sector and beyond.

Well-intended initiatives in the health sector may contribute to further distortions in the Mozambican health labour market. Such effects must be anticipated through systematic impact assessments, and through improved information systems on human resources, so that the policies are based on evidence and reliable intelligence. Routine data gathering through the PIS needs strengthening at all levels, particularly at the peripheral levels. The development of skills to use PIS information for decision making at all levels should accompany the development of the PIS. Box 16 lists data which should be predictably made available to policymakers and managers responsible for HRH development. Before these become routine, it is probably appropriate that much of the data gathering be done on a project basis, before integrating them into the PIS. The greatest priority should be given to data gathering on micro management issues, working conditions, patient perceptions of health workers performance and HRH equity indicators.

**Box 16****Data for HRH management****Context**

- actors involved, interested groups (parliament, government departments and agencies, political parties, professional unions, associations, training institutions, students/teachers associations, unions, research agencies, consumers representatives); what are their views and objectives? their relative influence?
- These can be collected through the analysis of policy statements, recommendations of official reports and other relevant reports (research, NGOs, donor agencies, professional associations, etc.) and through surveys.
- legal framework; all laws and regulations related to health and population manpower;
- administrative/institutional framework of public services;
- economic trends;
- resources available for training and employing health personnel;
- epidemiological profile and impact on HRH profile;

**Stock of providers**

- distribution by occupation (breaking down for specialties, when applicable, and including traditional practitioners);
- distribution by sector (public, quasi-public, private for profit, private not for profit)
- distribution by level of care (primary, secondary, tertiary);
- distribution by category of establishments; different hospital levels, health centres, health posts;
- distribution by type of activities (clinical, administrative, teaching);
- time devoted to each type of activity;
- distribution by level of training;
- distribution by level of activity: in training, at work, not employed;
- geographical distribution; by province; urban/rural; by district ;
- distribution by age, sex, other available socio-demographic variables;
- ratios: population/provider, provider/provider (e.g.: nurse/doctor); provider/resource (doctors/hospital beds); provider/output (doctor/hospital discharges);
- manpower dynamics: retirement, deaths, migration, attrition;
- training, including continuing education and in-service training: number and type of schools, intake capacity, real intake, attrition, number of graduates, duration of programmes, contents, quality, training abroad, teaching staff, curricula, teaching methods, admission procedures) and development ;
- recruitment, deployment, transfer, promotion, career plans (mobility of personnel);
- definition of duties and responsibilities (job description, workload, under/over-utilization);
- working conditions;
- system of incentives (financial and others);

**Performance of providers**

- job satisfaction;
- patient satisfaction;

*(continued on next page)*

**Box 16** (continued)

- workplace violence;
- coping strategies;
- absenteeism by cause;
- provider related outcomes;

**Services and facilities (actual and projected)**

- staff establishments by category of facilities and vacancies;

**System performance**

- develop a package of PIS derived indicators to monitor progress towards equity in HRH developments.

Addressing the absolute shortage of skilled health professionals is a long term enterprise, already recognized as such in a number of strategic documents. Choices regarding professional profiles, skills mix and proposals for pre- and in-service training have consequences for many years afterwards. This makes it indispensable to ensure a clearer long term and structural commitment to HRH development initiatives. It must also be more openly recognized that planning the increase of the HRH cannot be conducted by the Ministry of Health on its own. It requires the commitment of a broad constituency that includes other ministries (Education, Finance, Transportation, Justice, and Public Administration), professional councils and associations, civil society and the donor community. This is critical in order to protect these efforts from political instability and from the pressure to show immediate results. It is also necessary because, without a broad political consensus, it is difficult to change the working environment and the structure of the labour market, for recruiting, deploying and retaining new professionals and curtailing the brain drain.

The workforce crisis is so profound that no piecemeal approach will solve it. The Government is already drawing on a battery of short term measures to restore productivity

and morale. First by focusing on the incentive packages, aimed at improving productivity, deployment and retention of staff (for example, performance-linked incentives, possibilities for training or career mobility, housing benefits), and measures to discourage migration or facilitate return of expatriate staff. A second group of measures focuses on recruitment policies. SWAp mechanisms, bilateral agreements or the introduction of codes of conduct are already being used to harmonise the human resource policies of donor and technical agencies, as well as other employers of health personnel. More should be done regarding the reinstatement of regulatory oversight mechanisms, strengthening civil society supervision mechanisms and processes of peer pressure and control. None of these measures will be enough, on its own, to put right the consequences of years of neglect, but together they may pave the way for bringing productivity and dedication back to the levels the population expects and to which most health workers aspire.

In the absence of a correction of inadequate remuneration and of improvement of benefits, and with persistently inadequate working conditions, the prospects for recruiting, deploying and retaining HRH remain bleak. The government has to continue its salary reform as a matter of

ongoing urgency. This has political and macro-economic implications, and it cannot be done for public sector health professionals in isolation. It has to be part of an overall national strategy for civil servants, which also requires a combined effort from domestic and international funding sources.

The human resource crisis is now well recognised internationally. This international recognition meets with the same level of concern within Mozambique. The time is ripe in Mozambique to put the workforce crisis on the agenda as a matter of national, and not merely sectoral, importance.

## Bibliography

- [No authors listed undated a]. O Compromisso de Kaya Kwanga: Um Código de Conduta para Orientar a Parceria para o Desenvolvimento da Saúde em Moçambique.
- [No authors listed undated b]. Auscultação à sociedade civil.
- [No authors listed undated b]. Recursos humanos. Esboço das propostas para o Plano Estratégico 2000–2010. Namaacha.
- [No authors listed] 2004. *Centro Regional de Desenvolvimento Sanitário de Maputo. Situação Actual e Perspectivas*. Maputo.
- Adam Y, Gomes A, Cossa A, Naftal A, Conzo S, Coimbra H, Silva B 1997: Estratégias de sobrevivência do pessoal de saúde num hospital público em Maputo. *Revista Médica de Moçambique*; Suppl 1: S62.
- Alí F, Mucache D, Scuccato R 1994. *Avaliação do Programa dos APEs*. MISAU, Cooperação Suíça.
- 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-0098-00054-00. Beginning date: September 30, 2002. Ending date: September 30, 2007 Submitted October 30, 2003 by Health Alliance International, Seattle, Published documents.
- Asiimwe D, McPake B, Mwesigye F, Ofoumbi M, Ørtenblad L, Streefland P, Turinde A 1993: The private sector activities of public-sector health workers in Uganda. In *Private Health Providers in Developing Countries. Serving the Public Interest?* Edited by Bennet S, McPake B and Mills A. London and New Jersey: Zed: Books.
- Backström B, Gomes ADC, Fresta E, Dias F, Gonçalves A, Lerberghe WV, Ferrinho P 1997: The coping strategies of rural doctors in Portuguese speaking African countries [abstract]. *Revista Médica de Moçambique*; Suppl 1: S13.
- Backström B, Gomes da Cruz A., Adam Y, Fresta E, Dias F, Goncalves A, et al, Ferrinho P 1998. The coping strategies of rural doctors in Portuguese speaking African countries (PSAC) pp 14–15 em *European Commission Contract Holders' Meeting*. Downing College. Cambridge, UK, 29 March-1 April.
- Backström B, Gomes A, Adam Y, Gonçalves A, Fresta E, Dias F, et al, Ferrinho P 1999. As estratégias de sobrevivência do pessoal de saúde nos PALOP. Comparação entre o meio urbano e o meio rural. *Revista Médica de Moçambique*; 7(3 e 4):28–31.
- Backström B, Gomes da Cruz A., Adam Y, Fresta E, Dias F, Goncalves A, et al, Ferrinho

- P 1998. The coping strategies of rural doctors in Portuguese speaking African countries. *S Afr Fam Practice*; 19(1):27–29.
- Beattie A & Krauhaar D 1999. *Health Expenditure in Mozambique. An Analysis of the Major Policy Issues*. Volume 2. Mozambique Health Studies. MISAU MSH: Maputo.
- Benagiano G & Thoma B 2003. Safe motherhood: the FIGO initiative. *International Journal of Gynecology and Obstetrics*; 82: 263–274.
- Black JF, de Giacomi G, Barreto I 1996. Priorities in Mostar and Manica. *Lancet*; 347(9005):906.
- Cliff J & Noormahomed AR 1988. Health as a target: South Africa's destabilization of Mozambique *Soc Sci Med*; 27: 717–722.
- Conceição C, Omar MC, Schwalbach J, Bugalho M, Antunes AR, Fumane J, Van Lerberghe W, Ferrinho P (2004). *Caracterização dos Hospitais de Primeira Referência em Moçambique*. Relatório final do Projecto, Lisboa e Maputo, Março de 2004
- Coninx R, Dupuy C, Hermann C, Cruz Pires Ribeiro C, Margot M, Lucic K 1998. Vaccination of the civilian population in a country at war: it can be done; it can also be evaluated. The ICRC experience in Mozambique. *Journal of Tropical Pediatrics*; 44: 186–188.
- Dal Poz M.R &, Machatine G 1999. *Avaliação do Plano de Desenvolvimento de Recursos Humanos (PDRH 1992–2002)*. MISAU, OMS, UNDP.
- Damasceno A, Van Lerberghe W, Ferrinho P 2000. Coping through private practice: a cardiologist in Maputo, Mozambique pp 157–161 in Ferrinho P, Van Lerberghe W (editors). *Providing health care under adverse conditions: Health personnel performance & individual coping strategies*. Studies in HSO&P, 16. ITG Press, Antwerp.
- Di Tella R, Savedoff WD (Ed) 2001. *Diagnosis corruption. Fraud in Latin America's Public Hospitals*. Washington DC: Inter-American Development Bank.
- Eben Moussi E 2001. CRDS-Maputo: Perspectivas de Revitalização: Maputo.
- Fernandes A 1994. What are the positive and negative aspects of existing conditions of employment. Personnel drain from public to private sector. In: Ferrinho P, Abreu A, Van Lerberghe W (editors) 1994. *Health Manpower Policies in Southern Africa. The contribution of research*. Maputo: DG XII-INCO DC, European Community, 14-18 November.
- Ferrinho P, Van Lerberghe W, Abreu A 1994. Health personnel in southern Africa: towards a research agenda, a regional seminar, pp 7–24 em Ferrinho P, Abreu A, Van Lerberghe W (editors) 1994. *Health Manpower Policies in Southern Africa. The contribution of research*. Maputo: DG XII-INCO DC, European Community, 14-18 November, p 108–109.
- Ferrinho P, Abreu A, Van Lerberghe W (editors) 1994. *Health Manpower Policies in Southern Africa. The contribution of research*. Maputo: DG XII-INCO DC, European Community, 14-18 November.
- Ferrinho P, Van Lerberghe W, Julien MR, Fresta E, Gomes A, Dias F, Goncalves A, Backstrom B 1998. How and why public sector doctors engage in private practice in Portuguese-speaking African countries. *Health Policy Plan*; 13(3):332-8.
- Ferrinho P & Backström B 1998. Educação médica além-mar. *Revista da Ordem dos Médicos*; 14 (6): 24-25.
- Ferrinho P, Van Lerberghe W, da Cruz Gomes A 1999. Public and private practice: a balancing act for health staff. *Bulletin of the World Health Organization*; 77 (3): 209.
- Ferrinho P, Van Lerberghe W (editors) 2000. *Providing health care under adverse conditions: Health personnel performance & individual coping strategies*. Studies in HSO&P, 16. ITG Press, Antwerp, p 254.
- Ferrinho P & Van Lerberghe W 2002. Managing health professionals in the context of limited resources: a fine line between corruption and the need for moonlighting. Background paper prepared in support of the World Development Report.

- Ferrinho P & Dalpoz M (editors) 2003. *Towards a Global Health Workforce Strategy*. Studies in HSO&P. ITG Press, Antwerp. Em publicação.
- Ferrinho P, Omar C, Carvalho I, Schwalbach J, Silva AP, Carreira M, Bugalho M, Conceição C, Varandas L, Sousa Jr FV, Fresta E 2003. *Post-graduate training of public health personnel: resources available in Portuguese speaking African countries and Portugal*. AGO: Lisbon, Unpublished report.
- Ferrinho P, Craveiro I, Omar MC, Schwalbach J, Fumane J, Antunes AR, Buch E, Kolsteren P, Van Lerberghe W 2004 a. *Paediatric HIV/AIDS in Mozambique. Health workers perceptions of the situation*. Lisboa: Associação para o Desenvolvimento e Cooperação Garcia de Orta (AGO).
- Ferrinho P, Omar MC, Fernandes MDJ, Blaise P, Bugalho AM, van Lerberghe W 2004 b. Pilfering for survival. *Human Resources for Health*; 2: 4. <http://www.human-resources-health.com>
- Garenne M, Coninx R, Dupuy C 1997. Effects of civil war in central Mozambique and evaluation of the intervention of the International Committee of the Red Cross. *Journal of Tropical Pediatrics*; 43: 318–323.
- Garrido PI 1997. Training of medical assistants in Mozambique for surgery in a rural setting. *S Afr J S*; 35(3):144–5.
- Gish O, Pavignani E 1992. *Plano de Desenvolvimento de Recursos Humanos 1992–2002*. MISAU: Maputo.
- Gloyd S, Floriano F, Seunda M, Chadreque MA, Nyangezi JM, Platas 2001. A. Impact of traditional birth attendant training in Mozambique: a controlled study. *J Midwifery Womens Health*; 46(4):210–6.
- Green RH 2000. Rehabilitation: strategic, proactive, flexible, risky? *Disasters*; 24(4): 343–62.
- Hanlon J 1999. A pound of flesh. *New Internationalist*; issue 310: March 1999 .
- Hanlon J 2002. *Are donors to Mozambique promoting corruption?* Paper submitted to the conference “Towards a New Political Economy of Development”, Sheffield 3–4 July 2002.
- IMF & IDA 2001. *Mozambique. Joint Staff Assessment of the Poverty Reduction Strategy Paper*. Prepared by the Staffs of the International Monetary Fund and the International Development Association. Approved by Jürgen Reitmaier and Michael Hadjimichael (IMF) and Callisto E. Madavo and John Page (IDA).
- Jeter J 2001. In Mozambique, a less than helpful hand. *Int J Health Serv*; 31(2):441–4.
- Kloos H, Getahun B, Tefari A, Tsadik K, Belay S 1998. Buying drugs in Adis Ababa: a quantitative analysis. In *The Context of Medicines in Developing Countries*. Edited by van der Geest S and Whyte RS. Utrecht, London and Boston: Kluwer Academic Publishers.
- Logie D 1998. Mozambique: investing in peace. *The Lancet*; 351. Downloaded on the 1st of March 2004 from <http://www.thelancet.com/journal/vol351/iss9107/full/lan.351.9107.ne>.
- Logie D, Bergstrom S, Cliff J 1999. Debt relief and health charges in Mozambique. *The Lancet* ; 353 : 2077–2078.
- Lucas AP, Alves Pereira F, Pascoal J, Leal MJ 1998. Transferência sanitária de crianças dos países africanos de língua oficial portuguesa. *Acta Médica Portuguesa*; 11: 893–900.
- Luck M, Fernandes MJ, Ferrinho P 2000. At the other end of the brain-drain: African nurses living in Lisbon pp 163-175 in Ferrinho P, Van Lerberghe W (editors). *Providing health care under adverse conditions: Health personnel performance & individual coping strategies* Studies in HSO&P, 16. ITG Press, Antwerp.
- Macassa G, Ghilagaber G, Bernhardt E, Burström 2003. Trends in infant and child mortality in Mozambique during and after a period of conflict. *Public Health*; 117: 221–227.
- Martins H 1995. *Estudo Preliminar para a Criação do Instituto Superior de Ciências da Saúde*. Centro Regional de Saúde Pública: Maputo.

- McPake B, Asimwe D, Mwesigye F, Ofumbi M, Streefland P, Turinde A 2000: Coping strategies of health workers in Uganda. In *Personnel Performance & Providing Health Care under Adverse Conditions. Individual Coping Strategies. Studies in Health Services Organisation & Policy*. Edited by Ferrinho P and Van Lerberghe W. Antwerp: ITG Press: 157–162.
- Ministério do Plano e Finanças 2000. *Plano de Acção para Redução da Pobreza Absoluta (2000-2004)*. Promédia: Maputo.
- Ministério da Saúde 1978. *Cuidados de Saúde Primários*. Maputo.
- Ministério da Saúde 1995. *Avaliação do Programa das Parteiras Tradicionais em Moçambique*. MISAU e Cooperação Suíça, Maputo.
- Ministério da Saúde 1999. *Avaliação das Necessidades para uma Maternidade Segura em Moçambique*. 1999 Resumo. Departamento de Saúde da Comunidade, MISAU. Maputo.
- Ministério da Saúde 2000. *Necessary Conditions for Health SWAP success*. Maputo.
- Ministério da Saúde. *Plano Estratégico do sector da Saúde 2001-2005 (2010)*. Maputo.
- Ministério da Saúde. *Plano de Desenvolvimento de Recursos Humanos PDRH+ (2001-2010)*. Maputo.
- Ministério da Saúde 2000. *Sistema de Informação de Pessoal (SIP)*. Maputo.
- Ministério da Saúde 2001. *Terms of reference for the MISAU-Partners SWAP Working Group*. Maputo.
- Ministério da Saúde 2002. *Caracterização técnica, enuciado de funções específicas e mecanismos para a classificação das instituições do SNS*. Imprensa Nacional de Moçambique: Maputo.
- Ministério da Saúde 2003. *Direcção de Direcção de Recursos Humanos, Relatório Anual 2003*. Maputo.
- Ministério da Saúde 2004 (a). Impacto Demográfico da Epidemia do HIV/SIDA nos Recursos Humanos do Sistema Nacional de Saúde em Moçambique. Maputo, Programa Nacional de Controlo das DTS/SIDA.
- Ministério da Saúde 2004 (b). *Plano Operacional do Misau, 2004*. Maputo.
- Moore S, Eng E, Daniel M 2003. International NGOs and the role of network centrality in humanitarian aid operations: a case study of coordination during the 2000 Mozambique floods. *Disasters*; 27: 305–318.
- Myers B 2004. Recommendations for a Medium Term Salary Reform Strategy in Mozambique. UTRESP.
- Newman RD, Gloyd S, Nyangezi JM, Machobo F, Muiser J 1998. Satisfaction with outpatient health care services in Manica Province, Mozambique. *Health Policy Plan*; 13(2):174-80.
- Noormohamed AR 2000. Coping with the consequences of reform: challenges for policy makers in Mozambique. pp 189-202 in Ferrinho P, Van Lerberghe W (editors). *Providing health care under adverse conditions: Health personnel performance & individual coping strategies* Studies in HSO&P, 16. ITG Press, Antwerp.
- Pavignani E 2000. Can the World Bank be an effective leader in international health? *Soc Sci Med*; 50(2):181–2.
- Pavignani E, Durao JR 1999. Managing external resources in Mozambique: building new aid relationships on shifting sands? *Health Policy Plan*; 14(3):243–53.
- Pavignani E, Sjölander S, Aarnes D 2002 *Moving On-Budget in the Health Sector of Mozambique: Requirements, Features and Implications of Future Aid Management and Financing Mechanisms*.
- Pereira C, Bugalho A, Bergström S, Vaz F, Cotiro M 1996. A comparative study of caesarean deliveries by assistant medical officers and obstetricians in Mozambique. *British Journal of Obstetrics and Gynaecology*; 103: 508–512.
- Pereira RA 2001. *Consultoria para Revisão das Normas Regulamentares sobre Carreiras Profissionais Específicas da Saúde. Documentos Preliminares*. Maputo.

- Pfeiffer J 2003. International NGOs and primary health care in Mozambique: the need for a new model of collaboration. *Soc Sci Med.*; 56(4): 725–38.
- Reis AMD, Matos A, Costa ASDG 2004. *Estatuto Geral dos Funcionários do Estado (anotado)*. Ministério da Administração Estatal: Maputo.
- Roenen C, Ferrinho P, Van Dormael M, Conceição MC, Van Lerberghe W 1997. How African doctors make ends meet: an exploration. *Tropical Medicine and International Health* 1997; 2(2):127–135.
- Saide MA, Stewart DE 2001. Decentralization and human resource management in the health sector: a case study (1996–1998) from Nampula province, Mozambique. *Int J Health Plann Manage*;16(2):155–68.
- Schwabach J, Abdual M, Adam Y, Khan Z 2000. Good Samaritan or exploiter of illness? Coping strategies of Mozambican health care providers. pp 111-134 in Ferrinho P, Van Lerberghe W (editors). *Providing health care under adverse conditions: Health personnel performance & individual coping strategies* Studies in HSO&P, 16. ITG Press, Antwerp.
- Sousa Jr. F 2001. *Contributos para o Estudo da Formação de Médicos em Moçambique no Pós-Independência: Estudo de Caso*. Masters Dissertation, ISEG – UTL, Lisbon.
- Sousa Jr F, Schwabach J, Adam Y, Gonçalves L, Ferrinho P 2004. The training and expectations of medical students in Mozambique. In preparation for publication.
- Thomas WW 2002. Impact of traditional birth attendant training in Mozambique: a controlled study. *J Midwifery Womens Health*;47(1):65-6.
- Universidade Eduardo Mondlane 2003. *Plano Trienal para o Período 2003–2005*. Maputo: Faculdade de Medicina.
- Van der Geest S 1982 The efficiency of inefficiency. Medicine distribution in South Cameroon. *Soc Sci Med*; 16(24): 2145–2153.
- Van Lerberghe, Luck M, De Browere V, Kegels G, Ferrinho P 2000. Performance, working conditions and coping strategies: an introduction pp 1-5 in Ferrinho P, Van Lerberghe W (editors). *Providing health care under adverse conditions: Health personnel performance & individual coping strategies*. Studies in HSO&P, 16. ITG Press, Antwerp.
- Van Lerberghe W & Ferrinho P 2003. *Civil society organisations and the poor: the unfulfilled expectations*. Background paper prepared in support of the World Development Report.
- Van Lerberghe W & Ferrinho P (rapporteurs) 1994. District health management teams, pp 108-109 em Ferrinho P, Abreu A, Van Lerberghe W (editors) 1994. *Health Manpower Policies in Southern Africa. The contribution of research*. Maputo: DG XII-INCO DC, European Community, 14–18 November, p 108-109.
- Van Lerberghe, Luck M, De Browere V, Kegels G, Ferrinho P 2000. Performance, working conditions and coping strategies: an introduction pp 1–5 in Ferrinho P, Van Lerberghe W (editors). *Providing health care under adverse conditions: Health personnel performance & individual coping strategies*. Studies in HSO&P, 16. ITG Press, Antwerp.
- Vaz F, Bergstrom S, Vaz Mda L, Langa J, Bugalho A 1999. Training medical assistants for surgery. *Bull World Health Organ*; 77(8): 688–91.
- Verkuyl DA 1995. Practising obstetrics and gynaecology in areas with a high prevalence of HIV infection. *Lancet* ;346 (8970):293–6.
- Walt G & Melamed A (1983). *Mozambique: Towards a People's Health Service*. Zed Books: London.
- Walt G, Pavignani E, Gilson L, Buse K 1999. Managing external resources in the health sector: are there lessons for SWAs (sector-wide approaches)? *Health Policy Plan*;14(3):273–84.
- Walt G, Pavignani E, Gilson L, Buse K 1999. Health sector development: from aid coordination to resource management. *Health Policy Plan*; 14(3):207–18.
- World Health Organization 2004. *Country Profiles Report. Health Facilities and Providers*

*Analysis. Mozambique.* Draft Version of 16th January 2004. Geneva.

Yates R, Zorzi N 1999. *Health Expenditure Review Mozambique*. Technical Assistance Provided by Family Planning Management Development Project Management Sciences for Health. Funding provided by The

US Agency for International Development (USAID) Under Cooperative Agreement CCP-3055-A-00-5000-00.

Zanconato G, Machungo F, Soler A, Bergstrom S 1994. Audit of uterine rupture in Maputo: a tool for assessment of obstetric care. *Gynecol Obstet Invest*;38(3):151-6.

# Annex

## **ANNEX –I** **Selected interviews and focus group discussions with HRH Stakeholders**

<b>Institution</b>	<b>Service</b>	<b>Interviewee</b>
Ministry of Health	Human Resources Director	Dr. Jorge Tomo
	Human Resource Deputy for Training	Dr. Ferrucio Vio
	Human Resource Planning and Management Manager	Dr. Isabel Viandro Ms. Brigitte Christensen Mr. Manuel Mario António
Provincial health Directorate	Human Resource manager	Mr. Omar Fernando
Academic	Medicine Faculty, Eduardo Mondlane University	Dr. Emilia Noormohamed Dr. Rui Alves Pereira
Training Institutions	CRDS	Dr. Fátima Simão
	Chimoio Health Training centre	Ms. Olivia Semende
Professionals Associations	Medical Doctors	Dr. Mohamed Rafik
	Nurses	Ms. Matilde Basilio
Hospitals	Maputo Central Hospital	Mr. Luciano Nguambe
	Beira Central Hospital	Mr. Carimo Hage
	Chimoio Provincial Hospital	Mr. Maiba Wache

### **Health workers Focus Group Discussion**

**Civil-Service** – in Quelimane, with 10 people (doctor, basic and specialised nurses, social worker, administrative staff, specialised higher level technician)

**Private for profit and not for profit** – with 8 people (doctors, nurses, psychologist, administrative NGO assistant, health visitor)