

Management of Expatriate Medical Assistance in Mozambique

Ferruccio Vio

Italian Cooperation, Consultant at the Ministry of Health, Mozambique ([current address: Milan, piazza Santa Maria alla Fontana 1, 20159 Milan, Italy](#))

E-mail address: sociosanitario.drh@teledata.mz

Abstract

This paper discusses how Mozambique coped with the health system needs in terms of specialized doctors since independence, in a troubled context of war, lack of financial resources and modifying settings of foreign aid. The MOH managed to make up for its severe scarcity of specialist MDs especially through contracting expatriate technical assistance. Different scenarios, partnerships and contract schemes that have evolved since independence are briefly described, as well as self-reliance option possibility and implications. Lessons learned about donor initiatives aimed at contracting specialists from other developing countries are singled out. The issue of obtaining expertise and knowledge in the global market as cheap as possible is stressed, and realistic figures of cost planning are highlighted, as determined by the overall health system necessities and budget limitations.

Background

Shortly after independence (1975), the mass repatriation of the Portuguese cadres working in the Health System left the Ministry of Health (MOH) with the urgent need of finding specialized medical doctors (MD) for its referral hospitals. In 1972 there were 289 MDs in the country [1] in 1976, just about 60 MDs had remained [2]. The solution was found thanks to the assistance of the socialist countries, which promptly provided a contingent of mainly Russian and Cuban doctors. The political and economic collapse of the socialist block after 1990 caused a new crisis, threatening to leave hospitals without specialized MDs. After a rather chaotic period, the situation improved in 1996, through the activation of a pool funded by Switzerland, the Netherlands and Norway, which granted salaries for senior specialists, mainly from the former USSR republics, and kept the best of them in place. Under what was called the “pooling agreement”, the MOH identified the need for personnel and took care of selection, supervision and assessment, while UNDP administered the contracting and payment of salaries. Meanwhile, national specialists were slowly increasing in number, but they continued to be insufficient to satisfy the public system needs. Moreover, virtually all of them were working in Maputo. As a way to encourage the few national medical specialists to work outside the capital, the MOH and Switzerland agreed a salary scheme (known as “topping up”), which filled the gap between the public sector and expatriate salary scales working out of Maputo. In the meantime, bilateral cooperation still held a key role; in 1999, of a total of 406 MDs holding clinical posts, there were 204 foreigners abiding by different kinds of contract⁶, most of them through inter-governmental agreements with Cuba and, to a lesser extent, China and Nigeria. This state of affairs remained almost unchanged until 2004.

The current situation and contracting mechanisms

Table 1 and figure 1 show the strong concentration of specialist MDs in Maputo, most of them working at the capital Central Hospital (which employs 143 of them). Many of the national ones work part-time in the private sector. Table 2 shows that most of the posts outside the capital are occupied by foreign specialists. Nearly all 23 nationals, who work there as well benefit from the topping up scheme. It was shown that the scarcity of specialists is worsened still by the uneven distribution between

Provincial Hospitals of the same level, especially when compared to the work load of each hospital, as illustrated in table 3.[3]

Table 1. Distribution of specialists, per region, Mozambique, 2004

Provinces	Specialists	Population percentage
Town of Maputo	173	7,6
Other Southern Provinces	20	18,6
Central Provinces	54	20,8
Northern Provinces	51	53,6
Total	298	100

Figure 1. Inhabitants per doctor per province (2003)[4]

Insert here

Table 2. MDs in and outside the capital, Mozambique, 2004.

Provinces	Foreigners		Nationals		Total
	specialists	GP	Specialists	GP	
Maputo	96	5	77	136	314
Out of Maputo	102	19	23	181	325
<i>Total</i>	198	24	100	317	639

Table 3. Work load per MD- in 1998 and 2003 in the 10 Mozambique most important hospitals

Hospital	Beds		Beds per MD		Occupied bed days per MD		Deliveries per gynaecologist	
	1998	2003	1998	2003	1999	2003	1999	2003
Lichinga	186	186	17	17	3.331	5.809	2.671	3.712
Pemba	224	224	22	19	5.170	4.472	1.046	1.793
Nampula	361	313	18	10	5.232	4.180	1.192	4.049
Quelimane	385	457	21	22	8.221	5.986	628	936
Tete	308	324	22	23	6.733	5.976	2.471	3.241
Chimoio	361	371	26	25	7.385	7.850	3.404	2.248
Beira	746	746	17	15	3.661	4.799	975	1.723
Inhambane	202	230	20	23	3.741	5.350	1.999	2.134
Xai-Xai	185	222	14	28	4.061	9.553	2.990	3.004
Maputo	1.518	1.499	8	6	2.214	1.740	1.431	829
<i>Total /average</i>	4.476	4.572	13	11	3.519	3.307	1.467	1.138

Pooling contract mechanism

Most specialists hired through the pooling mechanism are senior cadres with a long in-country experience, working out of the capital, which puts their cost relatively high, but rewards the health system with higher reliability. The number of doctors paid by this scheme oscillated between 50 and 60 annually, from 1996 to March 2000, the year in which donors withdrew their support from MD pooling [5] In 2000 a study found that the pooling for TA and topping up greatly improved the overall situation, especially in previously neglected hospitals in the Northern and Central regions. The programmes “enabled the NHS to select competent/productive cadres through transparent and competitive processes ... ensuring loyalty and discipline.”[6] It was also recognized that the new contractual environment improved productivity and

human relationships of the MDs coming from the ex-socialist countries. Afterwards, the entire financial burden fell on the State Budget. Pooling was unanimously considered a simple and successful initiative. Its dismissal was blamed, among others, “on strained communication between the MOH and financiers, lack of consensus between donors, poor coordination inside the MOH, unclear roles of involved parties and unrealistic expectations about the quick replacement of foreign physicians with national ones”.³

Due to general budget constraints, the MoH requested the donor community to re-establish its support to this contracting scheme through a recently created SWAp Common Fund. It should allocate about 80% of the funds required to keep the ex-pooling specialists in place during 2004. In this way, this expenditure is once again becoming a donors’ responsibility.

Topping up

The MOH and the Swiss Development Cooperation (SDC) have agreed a 'topping up' for national specialized MDs since 1997. It allows the MOH to have senior national cadres in all referral hospitals, with tasks of enforcing therapeutic and procedural national norms, coordination, supervision and teaching.

Between 11-15 national specialists were contracted under this scheme until 2002. Currently their number is increasing. By topping up, national specialists could gradually replace expatriate ones contracted by the previous pooling agreement. The SWAp also replaced the SDC as topping up financier in 2004; more posts are expected to be filled (25) by the gradually increasing number of newly trained specialists.

Government Bilateral Agreement (GBA)

Direct Government agreements offer the advantage of lower transactional costs compared to individual contracts. On the side of Mozambique the only duty is to identify the needed specialities and to map the vacancies nationwide. However, it implies a very centralized process, where the HQ makes a national plan and contracts the MD on behalf of every hospital involved. This approach seems at odds with the public sector reforms undertaken in Mozambique, directed to allow more autonomy in fund and resource management at lower levels of decision making. As elsewhere in health management, it is difficult to define a fair trade-off between efficiency gains and a sound management built on local capacity. Moreover, as in other African countries, [7] almost all MDs contracted through government agreements (74) are Cubans. This option is based on the traditional friendship between the two countries and offers the advantage of a fast adaptation of the MDs, because of similarities of language and climate. However, this situation also creates some degree of dependency on a single source of supply without the possibility of exercising much control. In order to counter-balance some of the possible shortcomings, the government has chosen to diversify the recruitment countries and thus assure itself of a maximum of control over the supply situation.

Individual contracts

Most doctors under this scheme come from developing countries, had been previously contracted under a GBA, and are continuing on an individual basis after their first

contract terms came to an end. A very small fraction is made up of Portuguese doctors who remained in Mozambique after independence, or by MD catholic priests willing to work within the NHS.

In sum, a kind of osmosis exists between the different categories of expatriate specialists. Part of those contracted through bilateral agreements, after fulfilling their terms manage to remain in Mozambique, shifting to “ex-pooling” mechanisms or other kinds of individual contracts and/or, in some cases, to private practice. Thus, through a process of selection between expatriate specialists, a group of long-lasting resident, culturally and socially integrated MDs emerged as a structural and considerable component of the medical workforce in Mozambique.

Table 4 compares the financial burden of each kind of contract. Administrative costs, such as those associated with contract writing are higher for individual contracts. However, housing and travel costs are greater for the MDs hired through bilateral agreement than for individually contracted MDs. Text for this section.

Table 4. Specialist MDs contracted by the MOH, February 2004.

Contract & Salary Schemes	N	average monthly salary. USD	Origin	Fund source	Total annual USD cost***
Bilateral agreement	86	1000	Mainly Cuban	State Budget	1.032.000
Topping up	19	1647**	Mozambican	SDC/CF	375.516
“Ex-Pooling”	32	2906	Mix	CF*	1.115.904
Standard individual contract	50	1300	Mix	State Budget	780.000
Individual, the same as NHS	14	597	Mix	State Budget	100.296
<i>Sub-Total</i>	201	1411	-	-	3,403,716
Nationals (NHS salary)	78	563	Mozambican	State Budget	655,332
<i>Grand total</i>	298	1135	-	-	4.059.048

* Common Fund ** just topping up by donors; these doctors receive also a monthly average of about USD 563 by the NHS, whose annual total cost is included in “NHS salary, Total annual cost”. *** = housing & travel allowances not included.

Specialized MD costs and availability

Local TA in Africa is becoming increasingly expensive.[8] At least in Mozambique, public salaries, after a long period of depreciation, are now improving, and outweighing gains in productivity.[9] The total annual average cost in 2003 for a NHS specialized MD was already about 7,000 USD at a moment when the debate to “decompress” salary scales in the public sector was gaining momentum.[10, 11] Besides salary, other personnel-related benefits include housing and fuel subsidies, use of service cars etc. These figures compare well with the salaries paid in more developed countries such as Cuba, Russia, Ukraine or India. As a matter of fact, emigration of Mozambican MDs to Europe until now has been limited, especially compared with that from the other Portuguese-speaking African countries.[12] In Mozambique, it is the limited availability of medical specialists which puts salaries relatively high. Moreover, their scarce number means a profitable market for the suppliers, because the demand for better, individual services is constantly increasing among the growing urban bourgeoisie.

As in many other countries,[13] most Mozambican specialists moonlight, while still keeping a foot in the NHS as a way of establishing their reputation for the private practice and to benefit from public sector securities and advantages. As a matter of fact, until 2002, the topping up scheme often failed to fill all its posts, showing that better salaries were not sufficient to move enough national specialists from their positions in Maputo.

At present, the availability of newly trained national specialists is increasing, notwithstanding the shortage of young MDs and the scarcity of training hospital capacity for all but the most basic specialities. The State Medical School (UEM) has trained MDs at a discouraging low pace. From 1975 to 2003, 22 MDs were trained annually on average in Mozambique (figure 2). Drop-out rates have been astonishingly high, as well as unit training costs. This was ascribed to many difficulties such as poor high school preparation, lack of books and bibliography, erratic follow-up by tutors in the teaching Maputo central hospital and insufficiency of financial support. Students are also unsatisfied with the burden of lecturing and quality of teaching.[14]

Figure 2. Medical doctors training in Mozambique since independence

Insert here

A curricular reform is now under way together with the hiring of new lecturers (mainly from Cuba), and in the next three years these figures are expected to rise to 50-60 MD/year. Figures will still grow to an average of 120 MD trained per annum after 2007, when a new, private University in the central town of Beira, a recent institution functioning since 2001, will begin to yield its first graduates. Between 1991 and 2002, the annual output of specialized Mozambican MD inside and outside the country has been only 7. In 2003, 21 new MDs completed their post-graduation, and 70 more are expected to be trained between 2004 and 2007.

Discussion

If economic growth in Mozambique keeps the pace recorded in the first ten years after the civil war (implying a real GDP growth of 41.1% for the years 2004-2008),[15] a considerable fraction of the new specialists will be absorbed by private practice, mainly in Maputo. Although medical students originate from all the country's provinces, once they are admitted by the State University, their expectation is to obtain a job in the capital city. This is the first of many "pull factors" which will maintain the high concentration of MDs in Maputo, where they will return to once their two-year term of mandatory rural employment as junior doctors is completed.[16] In fact, as in many other developing countries, extra-earning possibilities, living and working conditions, career perspectives and professional improvement opportunities are far better in the capital city, for the beginner as well as for the most capable and experienced physicians. The Maputo Central Hospital, by far the biggest health facility and the main centre for the clinical training of students from the State Medical School or in post-graduation training courses, is able to autonomously manage substantial funds (currently about USD 8.000.000 per year) obtained through the provision of semi-private services. This situation is unique in the NHS. Most of the money is used to pay incentives to the hospital workers and to hire new ones; in both instances, MDs are the main beneficiaries. Moreover, the majority of the country's few private for-profit medical services are located in Maputo. Others

national MDs could migrate to the developed world (Portugal) or to neighbouring countries, such as South Africa and Botswana, where AIDS is taking a heavy toll on Health Human Resources.[17] Eventually, the new AIDS program in Mozambique, aimed at rapidly expanding the access to ARV treatment for AIDS-patients will, by itself, create more demand for MDs, in a country where the estimated number of HIV-positive people presently amounts to 1,400,000. The plan is supported by the international community and will be managed with the intervention of international NGOs. Their enhanced role will open new posts and opportunities for the health professionals in Mozambique. Thus, the gap between the demand for, and the availability of, specialized MDs could increase in the next 5-10 years.

From a public sector perspective, however, a specialist MD increase outside the capital must take into account their current work load and the possibilities of growth and re-qualification of the referral health facilities. Currently, more than 90% of the health system is made up of a multitude of minuscule health centres and posts with very basic resources, and managed by elementary and basic level health personnel. In spite of figures of MD per capita in Mozambique being among the lowest in the world, work load for MDs and specialists working in the country's few sizeable hospitals does not look particularly high, at least not higher than what may be found in other sub-Saharan African Countries.[18, 19] Specialist MDs are just marginally involved in supervising the peripheral network, initial training and on-the-job-training of medical assistants, nurses and midwives, despite the fact that these lesser skilled cadres are the backbone of the clinical activities, especially at the periphery of the health system.

The salary gap between nationals and expatriates for vacancies outside the capital was already being closed by the topping-up scheme. Eventually, no substantial savings from the substitution of foreign with national MDs should be expected. The oversupply of MDs (a by-product of socialist regime health policy) floods the global market with a large supply of well-trained, disciplined and relatively cheap specialized cadres, who could be hired for reasonable salaries to work in countries where lack of MDs is still severe. It has been argued that "self-reliance is not the ultimate objective, in a world where all countries are competing for intellectual capital on a global basis, and when foreign aid is as much about knowledge as it is about money". [20]

The health sector is heavily dependent on external financial support (about 60% of the budget). Dependence can only increase with the expected worsening of the AIDS epidemic. The total national salary bill will increase because of the expected growth of the entire workforce (to cope with the increased demand brought by AIDS) and because of the reshuffling of the personnel pyramid, with a relatively higher increase at the top (graduated and middle level cadres).[21] It is likely, therefore, that the gap between needs and resources will remain or even expand in the future. The Common Fund, which grew out of the SWAp policy and is endorsed by some bilateral donors, is currently the main source of TA financing. The MOH estimates that the health system will need an additional hundred foreign medical specialists, to improve training and to allow national MDs to take care of the AIDS patients and AIDS programme management.

Conclusions

Without corrective interventions, inequity in distribution of MDs (particularly specialists), may worsen, reflecting the overall economic growth distortions favouring the capital city, where the social and cultural development is faster and most of the

affluent urban elite are dwelling. Salary incentives such as those funded by the topping up scheme and other individual contractual expedients will therefore continue to be needed as compensatory factors to keep specialist MDs in the referral hospitals all around the country.

However, a sustained increase of MDs in the public sector outside the capital district would be fully meaningful only if it were in line with an upgrading of the health system as a whole (especially of the small intermediate portion made up of rural and district hospitals), and if these cadres were more thoroughly employed in activities of training and supervision. In the first case, the critical health policy issue would be about how and where to direct major investments financed from the scarce resources available. In the second one, an efficient way of coordinating activities of systemic supervision, on-the-job training of the supervised cadres and initial training must be found, which means for the most differentiate referral units to take responsibility for the medical care provided in all the health facilities within their catchment area. Otherwise, it would be nonsensical to hire expensive, well-qualified health cadres without adequately using their skills. A more balanced distribution, based on work load comparisons between hospitals of the same level, could also be useful in improving efficiency. Finally, the option of improving high-quality health services must be weighed up against the needs of expanding a primary health network which, at the moment, barely gives access to 50% of the population.

Two different kinds of contracts for specialized MDs (one through a bilateral government agreement and the other on individual basis), proved to be equally useful in Mozambique, offering balancing advantages to the health system. The national political option to carry out a public sector decentralization policy could give rise to more individual contracts but, as it has been observed, decentralization has often remained a discourse with civil service reform having been announced several times, but never really materialized.[22] It should be central to an improvement in management capacity (a rather intricate issue to implement, as it proved in practice) [23] and to transferring substantial financial responsibility from the HQ to the provincial health directorate and hospitals. At present, only the Maputo Central Hospital has enough money and competence to act autonomously. Private recruiting agencies acting worldwide could more efficiently provide value for money and the role of comprehensive bilateral agreements could be reduced. However, individual contracts managed directly by hospitals will increase transaction costs, particularly in the beginning. Eventually, (or at least in the medium-term), the two mechanisms will be kept in place, mainly by the MOH Human Resource Directorate.

In the Mozambican case, the way a pooling mechanism supported by the donor community funded the salaries of high level expatriate medical cadres directly chosen by the recipient country, has been a positive, noteworthy experience. Allopathic medicine speaks the same language everywhere. Universally, medical universities offer remarkably homogeneous curricula; doctors update their knowledge through the same basket of international medical literature. In the global market the medical profession is rather easy to sell and purchase. When expatriate doctors learn the immigration country's language and health system rules, their integration is quickly achieved. For ordinary referral hospitals posts, lack of sophisticated diagnostic devices and expensive drugs make specialists from other developing countries more suitable to the local situation than their first-world counterparts, used to work in a professional environment, with technical support and at a cost too distant from what they could find in Mozambique. In global terms, a redistribution of the medical workforce, from countries where it is excessive to countries where it is scarce, makes

sense and should be encouraged, acting on economical incentives. Eventually, at least in Mozambique, expatriate specialists will not cost more than national ones. Finally, the gradual strengthening of SWAp or other pooling mechanisms, should enable governments to recruit TA from countries where expertise is cheaper, such as Cuba, the former Soviet Union, China and India, rather than from the high-cost suppliers in Europe or North America.[24] Thus, as a little contribution to alleviate the enormous health problems of Africa, a pattern of “poor”-to-“poor” cooperation, may be encouraged, supported financially by the wealthy North - a system that proved to have been cost-effective and relatively cheap in Mozambique.

Competing interests

The author worked [as a consultant](#) in the Human Resource Directorate of the Ministry of Health of Mozambique from 1983 to 2004.

Authors' contributions

F. Vio made the design, data collection, analysis and discussion and drafted and revised the paper.

Acknowledgements

The author acknowledges [Dr Ricardo Trindade](#), who made available much of the information discussed in this paper, [Dr. Enrico Pavignani](#), [Xavier Modol](#) and [Mário Dal Poz](#) for their advise and support.

References

1. Anuário Estatístico, quoted in “Gulube L, Organização da Rede Sanitária Colonial no Sul do Save (1960-1974), Promédia, Maputo, Mozambique, 2003.
2. Anuário Estatístico, MOH, Maputo, Mozambique, 1976
3. Vio F. O pessoal médico em Moçambique. Situação e perspectivas. Análise preliminar com base nos dados existentes. Ministry of Health, Maputo, Mozambique, May 2004. Unpublished Report.
4. Ferrinho P, Omar C., The Human Resources for Health Situation in Mozambique Final Report May Maputo, Mozambique, 2004.
5. Pavignani E, Volker H, Pooling of Technical Assistance in the Context of AID Management Reform. The Mozambique Case Study, Maputo, Mozambique, ECDPM European Centre for Development Policy Management, Maastricht, October 2001.
6. Mecanismo de gestão da Assistência Técnica no Sector Saúde (Pooling Agreement for Technical Assistance – PATA) Relatório de Consultoria. Unpublished Report MOH. Maputo, June 2000.
7. Dolea C, Mercer H, Cuban health cooperation with countries in crisis, Health in Emergencies, Issue No 18, WHO, Geneve, December 2003.
8. Baser, H. and Morgan P.. The Pooling of Technical Assistance: An overview based on Field Experience in Six African Countries. (ECDPM

- European Centre for Development Policy Management Synthesis Paper). Maastricht. 2001.
9. A Despesa Pública com a Saúde em Moçambique, MPF-MISAU, Príncipeia, Maputo, Mozambique, January 2004
 10. Myers B, Recommendations for a Medium Term Salary Reform Strategy in Mozambique Draft Prepared for UTRESP Unpublished Report, MPF, Maputo, Mozambique, 30 January 2004
 11. Pesquisa Salarial: Comparação entre a função pública e o sector empresarial nas cidades de Maputo, Beira e Quelimane, Ministry of Planning and Financing, December 2002.
 12. 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
 13. Kimmel J, Smith Conway K, Who moonlights and Why? Evidence from the SIPP, Upjohn Institute Staff Working Paper 95-40
 14. Sousa Jr F, Schwalbach J, Adam Y, Gonçalves L, Ferrinho P 2004. The training and expectations of medical students in Mozambique. In preparation for publication. Quoted in Ferrinho P, Omar C 2004.
 15. Cenário Fiscal de Médio Prazo, Pressupostos Macroeconómicos Básicos. Ministério de Planos e Finanças, Maputo, 2004.
 16. Sousa Jr. F. Contributos para o Estudo da Formação de Médicos em Moçambique no Pós-Independência: Estudo de Caso. Masters Dissertation, ISEG – UTL, Lisbon, 2001 (quoted in Ferrinho P., Omar C., 2004).
 17. Schneider H, HIV: coping strategies of health workers in South Africa, Health in Emergencies, Issue No 18, December 2003, WHO, Geneva.
 18. Admission Trends in a Rural South African Hospital during the Early Years of the HIV Epidemic. Floyd K, Reid RA, Wilkinson D, Gilks CF, JAMA 1999; 282:1087-1091.
 19. Accorsi S, Fabiani M., Lukwiya M, Onok P, Di Mattei P, Declich S, The increasing burden of infectious diseases on Hospital Services at St.Mary'S Hospital Lacor, Gulu, Uganda.
 20. World Bank, Assessing Aid: What Works, What Doesn't, and Why. Washington, 1998.
 21. Plano De Desenvolvimento de Recursos Humanos 2001-2010, unpublished document, MOH, Maputo, Mozambique, 2000.
 22. Pavignani E, Durao JR 1999. Managing external resources in Mozambique: building new aid relationships on shifting sands? Health Policy Plan; 14(3):243-53
 23. Pavignani E, Sjölander S, Aarnes D Moving On-Budget in the Health Sector of Mozambique: Requirements, Features and Implications of Future Aid Management and Financing Mechanisms. 2002
 24. Baser, H. and P. Morgan.. The Pooling of Technical Assistance: An overview based on Field Experience in Six African Countries. (ECDPM Synthesis Paper). Maastricht: ECDPM. 2001

Figures

Figure 1 - Inhabitants per doctor per province (2003)[4]

Figure legend text

Figure 2 - Medical doctors training in Mozambique since independence

Figure legend text.

...

Tables

Table 1 - table title

Table legend text.

Table 2 - table title

Table legend text.

Table 3 - table title

Table legend text.

Table 4 - table title

Table legend text.

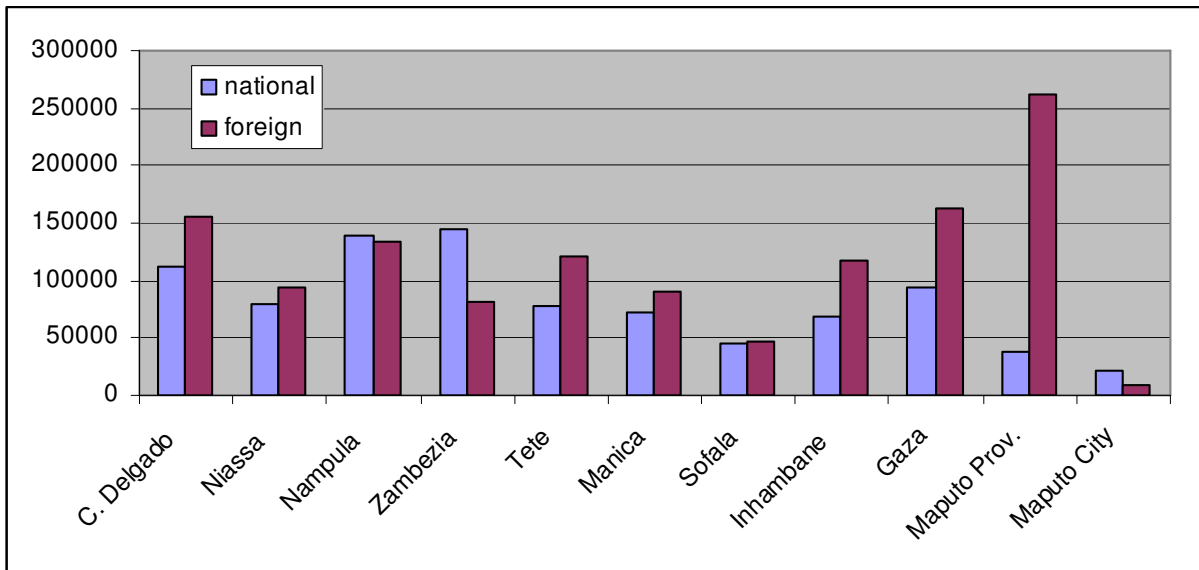


Figure 1

Medical Doctors Training in Mozambique since independence

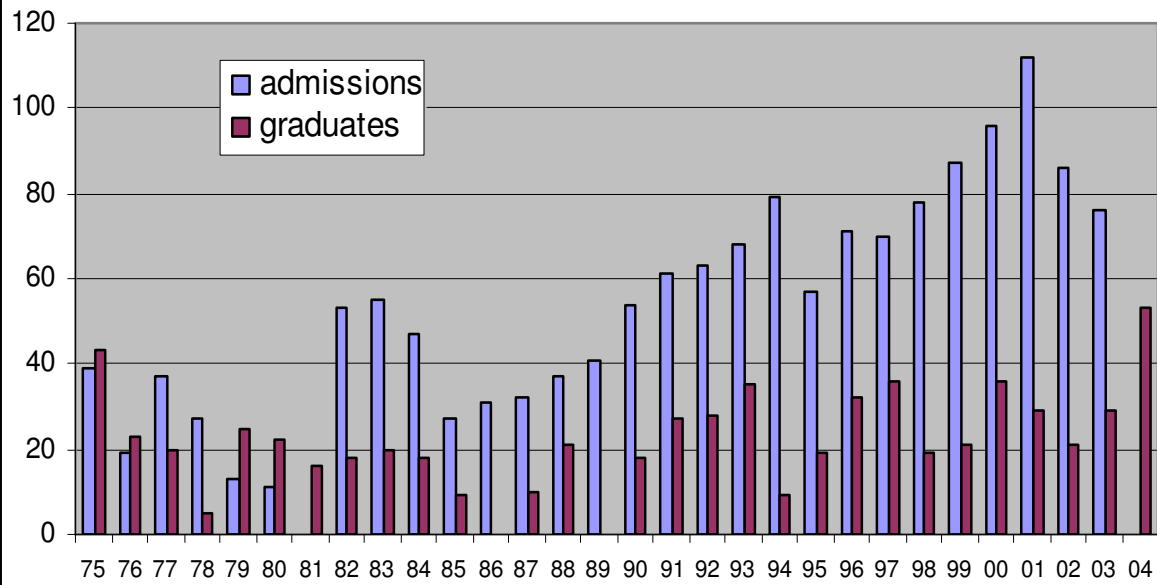


Figure 2

Additional files provided with this submission:

Additional file 1: references2.doc : 33KB

<http://www.human-resources-health.com/imedia/1693028239599015/sup1.doc>

Additional file 2: figure1.ppt : 40KB

<http://www.human-resources-health.com/imedia/1144967932599015/sup2.ppt>

Additional file 3: figure2.ppt : 36KB

<http://www.human-resources-health.com/imedia/2071449145599015/sup3.ppt>