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No. 55: The Engagement of the Zimbabwean Medical Diaspora

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Executive Summary

Despite the well-documented negative impacts of the 'brain drain' of health professionals from Africa, there is an argument that their departure is not an absolute loss and that transnationally-oriented medical migrants (or diasporas) can act as development agents in their home countries. Financial remittances, in particular, are said to have significant transformative development potential. African countries are also expected to benefit from knowledge and skills transfer through the return of health professionals from abroad. Other diaspora engagement initiatives that do not require permanent return (such as short term work assignments, technological transfer to country of origin and 'virtual' participation of the diaspora involving the use of communication technologies) are seen as another positive feedback mechanism, mitigating the negative impact of out-migration.

Zimbabwe's economic and political crisis has led to the emigration of many physicians over the last twenty years as the skills and experience which they possess are valued in countries in the North as well as in South Africa. Previous studies have focused on the magnitude and damaging impact of this exodus on the Zimbabwean health system. This is the first study to focus exclusively on physicians in the diaspora. The study is based on a global email survey of physicians and in-depth interviews with Zimbabwean doctors living and working in South Africa. The results of the survey and interviews provide new insights into the nature of the Zimbabwean medical diaspora, their motivations for leaving the county, the links which they maintain with Zimbabwe, the prospects of them returning to Zimbabwe and their interest in making their skills, knowledge and resources available to the country in the future.

The conventional wisdom on the brain drain is that skilled professionals move directly from a country of origin to a country of destination. The impacts of this movement for both countries are then assessed. However, this fails to capture the complexity of the migration patterns of Zimbabwean physicians. Only 42% of those surveyed had moved directly from Zimbabwe to their current country of residence. Seventy one percent of the Zimbabwean doctors in South Africa came directly from Zimbabwe. The rest had first been to a variety of other destinations including the United Kingdom, Australia, Asia and elsewhere in Africa. This suggests that there has been "return migration" from overseas, but benefitting South Africa not Zimbabwe.

A common feature of studies on the causes of skills migration is to ask respondents to identify discrete "causes" of migration and then to rank them. In this study, respondents were presented with a set of possible reasons for leaving and then asked to rate the importance of each of them

to the decision-making process on a five point scale from 'strongly agree' to 'strongly disagree.' The three factors with the highest levels of concurrence were the bad political environment (74% in agreement), lack of opportunities for career advancement (73% agreed) and poor economic conditions in Zimbabwe (71% agreed). Other factors cited by the majority of respondents were unsatisfactory working conditions, inadequate remuneration and benefits, the collapse of the health care system and a better future for their children. The relative importance of each of these factors varied with race and the year when the physician left.

Another 30% of the respondents moved first from Zimbabwe to South Africa and then joined the "brain drain" from South Africa and migrated onwards to a variety of overseas destinations. Less than half of the doctors who had migrated to the UK did so directly from Zimbabwe. Only 5% of the Zimbabwean doctors in the USA, Australia, Canada and New Zealand came direct from Zimbabwe. South Africa and the UK are clearly the main transit countries for medical doctors from Zimbabwe. These two intermediary destinations seem to act as "stepping stones" to get to the ultimate destination. The intermediate point allows them to specialise in their chosen field which then increases their chances of gaining entry to their ultimate destination. Furthermore, it enables them to develop networks with similar professionals located elsewhere who can assist them in making an onward move. Eventually, a migration chain develops linking the emigrant Zimbabwean medical doctors in an intermediate country to their counterparts located in a more attractive destination.

Previous surveys have shown that migrant remittances play a major role in ensuring household survival in Zimbabwe. We do not know if physicians are distinctive in their remitting behaviour or whether they follow the general pattern. This study therefore focused on whether physicians, who are amongst the highest earning occupational category in the Zimbabwean diaspora, display different remitting practices than other Zimbabweans. The survey found the following:

- 60% of the diaspora physicians send money to Zimbabwe while 40% never do so. The propensity to remit was highest among medical doctors working in South Africa, with 79% sending money to Zimbabwe. Two thirds of doctors in the USA remit but only 42% in the UK and a third of those in Canada. To put these figures in context, various surveys of Zimbabweans in South Africa have found that 85-95% of migrants remit money home. Another study of Zimbabweans in the UK found that 80% remitted funds to Zimbabwe.
- the propensity of physicians to remit varies with the year of emigration (with 95% of those who left after 2000 remitting) and

race (only a third of white doctors remit compared to 100% of black doctors.)

- around 50% of those who remit do so at least once a month. Amongst the general Zimbabwean migrant population in the UK, around 41% remit at least once a month. Remitting frequencies from South Africa are higher; 60-75% at least once a month. There is thus nothing particularly unusual about the frequency with which physicians remit.
- the vast majority of Zimbabwean migrants (over 90%) use various informal channels when remitting to Zimbabwe. Highly-educated, middle-class migrants such as physicians might be expected to make more use of formal remitting channels such as banks and money transfer companies. In fact, at the time of the survey (2008), most physicians were also using informal channels and stayed away from the banks.
- the research on Zimbabwean remittances clearly shows that the bulk of it is spent on household survival needs with very little investment of the proceeds. The question is whether remittances from physicians are any different. The answer is no. Over 90% of the respondents who send cash remittances do so to meet the day to day expenses of family members in Zimbabwe including food purchase, rent and the cost of electricity and water.
- the only thing that really distinguishes the physicians' remitting behaviour is the volume sent (which is well above average). However, even if the average physician remittance figure of US$2,616 p.a. was sustained over a 30 year period, the total remittances from one individual would still not compensate for their training costs in the first place.

Considerable international enthusiasm surrounds the idea of "return migration." In the case of Zimbabwean physicians outside the country, the probability of permanent return migration is generally low but varies with race, age, year of emigration and location:

- 53% of black physicians said they are likely to return compared to only 11% of white physicians. Conversely, 70% of the whites said they would never return compared to only 16% of the blacks. In other words, the potential for return is higher amongst black physicians and only a small minority (16%) definitely ruled out the possibility.
- the possibility of return is highest amongst the younger doctors: 78% in the 31-40 age group said they are likely to return, compared to 23% in the 41-50 age group, 10% in the 51-60 age group and none over the age of 60.
- the year of emigration is positively correlated with the possibility of return: 12% of those who left in the 1980s said they might

return compared to 30% of those who left in the 1990s and 79% of those who left after 2000.

- possibility of return varies with a doctor's current country of residence. Return was more likely among those located in South Africa (40%) than amongst those in the UK (21%) or in the USA (13%).

Diaspora engagement has been increasingly advanced as a possible solution to the skills problems facing developing countries. In Zimbabwe, the diaspora option arguably offers the most sensible policy prescription since it entails the use of the skills of the diaspora without requiring them to return home permanently. Options proposed by the physicians and discussed in this report include: medical training, short-term medical visits, raising funds, sourcing supplies and telemedicine. In each case the opportunities and obstacles to the particular form of engagement are discussed.

INTRODUCTION

The migration of medical doctors from Africa has been linked to falling health standards and cited as a major impediment to the continent's quest to attain the Millennium Development Goals. The World Health Organisation (WHO) has even identified the emigration of physicians as the most critical problem facing health systems in African countries today. [1] In 2000, an estimated 36,653 medical doctors (or 28% of the total trained in Sub-Saharan Africa) were practising in nine major immigrant-destination countries.[2] The "global health care chain" has become one of the main mechanisms draining Africa of its physicians.[3] African nations are unable to retain their medical doctors and risk losing even more to developed countries which offer better conditions of service and remuneration. Pejoratives such as 'poaching,' 'looting,' 'stealing' and the 'new slave trade' have entered the discourse on health professional migration from Africa.[4]

Despite the losses which African countries suffer from the out-migration of skilled and experienced health professionals, there is an argument that their departure is not an absolute loss and that transnationally-oriented medical migrants (or diasporas) can act as development agents for their home countries. Financial remittances, in particular, are said to have significant transformative development potential.[5] African countries are also expected to benefit from knowledge and skills transfer through the return of health professionals from abroad.[6] Other diaspora engagement initiatives that do not require permanent return (such as short term work assignments, technological transfer to country of origin and 'virtual' participation of the diaspora involving the use of communication technologies) are seen as another positive feedback mechanism, mitigating the negative impact of out-migration.

Zimbabwe is a potentially important site in which to test these competing visions of the effects of health professional migration. The country has lost many of its medical doctors and nurses over the past two decades. The negative impacts of this brain drain have been extensively documented in previous studies.[7] This study set out to examine what kinds of linkages these health professionals maintain with the country, whether they mitigate the impact of the brain drain in any way and whether, and under what conditions, return migration is likely. Most literature on the brain drain of health professionals focuses on the migration of health professionals from Africa to Europe and North America (so-called South-North migration). Very little attention has been paid to the movement of physicians and nurses within the South (South-South migration). The Zimbabwean case provides an opportunity to rectify this omission since Zimbabwean health professionals engage in South-North and South-South migration (and in some cases both). Zimbabwean health professionals are to be found in various countries in Europe and North America but they also migrate to other countries within Africa (primarily South Africa). For instance, almost 80 per cent of doctors employed in South African rural hospitals in 1999 were reportedly non-South Africans.[8] Most were from Zimbabwe, Botswana, Malawi, and several other African countries.[9] This study therefore also set out to systematically compare the Zimbabwean medical diaspora within Africa with that outside the continent to see if there are any differences in their links with Zimbabwe and their return and diaspora engagement potential.

OVERVIEW OF PHYSICIAN MIGRATION FROM ZIMBABWE

The exact number of physicians who have left Zimbabwe is hard to determine from Zimbabwean sources. Zimbabwe's Central Statistics Office (CSO) used to publish data on the size of the medical workforce but stopped in 2000. Data is available from the Medical and Dental Practitioners Council of Zimbabwe (MDPCZ) but their numbers are completely inconsistent with destination country data.[10] For example, the MDPCZ claims that the number of medical doctors in Zimbabwe has actually risen by more than 50% since 2000 to 2,783 in 2008. Part of the explanation may be that doctors who leave Zimbabwe often maintain their professional registration and are counted as being in the country when they are, in fact, practising abroad.

Destination country data can be used to shed light on the volume of emigration of doctors. Clemens and Pettersson's 2000 database on the global distribution of African-trained physicians uses information from various OECD countries.[11] By definition, the database excludes Zimbabwean physicians in other African countries, a weakness that is

partially addressed by the inclusion of South Africa. It also excludes New Zealand which is an important destination for doctors from Zimbabwe. Dumont and Zurn's database also uses OECD data but includes New Zealand.[12] It also excludes some of the other important African destinations for Zimbabwean doctors such as Botswana and Namibia. By combining the two databases, it is possible to generate a picture of the global distribution of Zimbabwean physicians in 2000 (Table 1). At that time, South Africa was the most popular destination, accounting for 643 (or 39%) of the 1,662 Zimbabwean doctors in the diaspora. The UK was the second most popular destination with 553 (33%), while the USA had 235 (14%), Australia 97 (6%), New Zealand 60 (4%) and Canada 55 (3%).

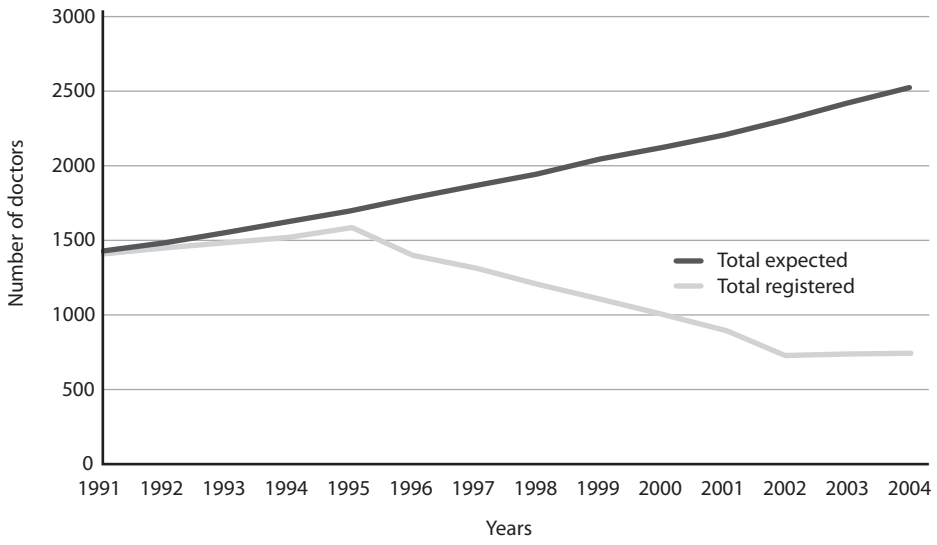
Another study for the World Bank by Docquier and Bhargava documents the size of the domestic and foreign medical labour force in several countries, including Zimbabwe.[13] This database shows that Zimbabwe lost 674 medical doctors between 1991 and 2004, with the number of registered medical doctors falling from 1,425 in 1991 to only 751 in 2004 (Figure 1). If the number of new medical doctors trained during this period is factored in, it means that Zimbabwe lost nearly 1,800 medical doctors through emigration (controlling for deaths and retirement). Anecdotal evidence that emerged in this study suggests that it would be worth undertaking a tracer study using physician networks to see where graduating Zimbabwean physicians are currently located. Dr Walter Choga, for example, who graduated in the early 1990s, noted that of the 55 students in his class, only 3 remained in Zimbabwe. Thirty moved to South Africa, 20 went either to the UK or US and 2 are in Australia.[14]

Table 1: Location of Zimbabwean Medical Doctors Worldwide, 2000

Country	No. of doctors	% emigrant Zimbabwean doctors
South Africa	643	38.7
UK	553	33.3
USA	235	14.1
Australia	97	5.8
New Zealand	60	3.6
Canada	55	3.3
Portugal	12	0.7
Belgium	6	0.4
Spain	1	0.1
Total abroad	1,662	100.0

Source: Clemens and Pettersson, 2006; Dumont and Zurn, 2007.

Figure 1: Number of Doctors in Zimbabwe, 1991-2004



Source: Based on Docquier and Bhargava, 2006

THE STUDY SAMPLE

RESEARCH METHODOLOGY

There is no comprehensive list of Zimbabwean doctors working abroad which makes it impossible to use probability sampling techniques. Instead, the study utilised a public database from the Godfrey Huggins School of Medicine (GHSM) at the University of Zimbabwe which contained details of 435 emigrant medical graduates at the time it was accessed in 2008. The GHSM database provides details about the location of individual medical doctors and their email addresses. Registration on the site is voluntary. A letter was sent to all doctors on the site, inviting them to participate in the survey. A total of 115 completed questionnaires were returned, an overall response rate of 22%.

The mail-out survey was supplemented by open-ended face-to-face interviews with a smaller sample of physicians practising in South Africa. Contact details of Zimbabwean doctors in South Africa were obtained from the Health Professions Council of South Africa (HPCSA). A total of 21 in-depth interviews were conducted between July and October 2008. Six were in Johannesburg, two in Pretoria, six in Durban and seven in Cape Town. Cost constraints meant that no Zimbabwean physicians in small town and rural hospitals were interviewed. Audio-recorded information from the interviews was transcribed and a thematic content analysis was conducted using NVivo software.

PROFILE OF SURVEY RESPONDENTS

The majority of the 115 survey respondents are based in South Africa (37% of the sample), followed by the UK (21%), USA (13%) and Australia (10%) (Table 2). Most are male (83%), a reflection of the gendered nature of the medical profession in Zimbabwe (Table 3). While the representation of women in the medical profession has increased significantly over the past two decades, the number of emigrant female Zimbabwean medical doctors is still low. More than 64% of the respondents are under 50 although there is a marked racial difference. Over 90% of the black doctors but only 43% of the white doctors are under 50. A slight majority (53%) of the respondents are white, 43% are black and 4% are of Asian origin.

Table 2: Location of Survey Respondents	
	% of Total
South Africa	36.5
UK	20.9
USA	13.0
Australia	10.4
Canada	5.2
New Zealand	5.2
Other Europe	3.5
Other Africa	3.5
N = 115	

Table 3: Demographic Profile of Survey Respondents	
	% of Total
(a) Gender of Respondent	
Male	82.6
Female	17.4
(b) Age Profile	
31 – 40 years	20.0
41 – 50 years	44.3
51 – 60 years	27.0
More than 60 years	8.7
(c) Race of Respondents	
Black/ African	42.6
White/ European	53.0
Indian/ Asian	4.3
N = 115	

Almost three-quarters of the respondents had graduated from the country's only medical school after 1980 (Table 4). While none of the black doctors had graduated before independence in 1980, 60% of those who had graduated after 1980 were black, a shift that reflects the success of the government in making higher education opportunities available to the majority black population after independence.

Table 4: Employment History in Zimbabwe

	% of Total
(a) Year qualified as medical doctor	
Before 1980	27.8
1980-1990	49.6
1991-2000	19.1
After 2000	3.5
(b) No. of years worked in Zimbabwe before migrating	
Less than 5 years	68.7
5 – 10 years	22.6
10 – 15 years	5.2
More than 15 years	3.5
(c) Year Migrated	
Before 1980	16.5
1981-1990	29.6
1991-2000	37.4
2001-2008	16.5
N = 115	

Over two thirds of the respondents (69%) had worked in Zimbabwe for less than 5 years before migrating. This suggests that many doctors leave as soon as they have fulfilled their obligations to the government. New graduates are required to complete a two year housemanship (or internship) after which they are entitled to full medical registration. They are then required to serve a year of community service, frequently in a rural health centre, before they are eligible for a certificate of good standing. Many then leave.

The changing racial profile of the Zimbabwean medical profession is also reflected in the profile of respondents. About 95% of those who left before independence were white (the rest being Asian). The dominance of white doctors in the emigration stream continues throughout the 1980s as they make up 88% of those who left Zimbabwe during this period.[15] After 1990, however, black medical migration starts to predominate: 76% of the respondents who left Zimbabwe after 1990 are black.

Profile of Interview Respondents

Of the 21 in-depth interviewees, 16 were male and 5 female. The age distribution of the respondents was fairly even: 24% were aged between 31 and 40 years, 38% were between 41 and 50, and 38% were over 50. Twelve of the physicians were black and 9 were white (43%).

Eleven qualified as medical doctors in Zimbabwe between 1980 and 1990, while 7 qualified after 1991. Only three had graduated before independence in 1980. The work profile of the interview participants closely mirrors that of the survey respondents. Seventeen worked in Zimbabwe for less than five years before migrating. Three worked in Zimbabwe for 5-10 years, while only one had worked in Zimbabwe for 10-15 years before migrating. Eight left Zimbabwe before 1990, and thirteen after 1990.

Migration Patterns and Channels

Causes of Emigration

A common feature of studies on the causes of skills migration is to ask respondents to identify up to three "causes" and then to rank them. This study adopted a more nuanced approach. Each respondent was presented with set of possible reasons for leaving and then asked to rate the importance of each of them to the decision-making process on a five point scale from 'strongly agree' to 'strongly disagree.' The three factors with the highest levels of concurrence were the bad political environment (74% in agreement), lack of opportunities for career advancement (73% agreed) and poor economic conditions in Zimbabwe (71% agreed) (Table 5). Other factors cited by the majority of respondents were unsatisfactory working conditions, inadequate remuneration and benefits, the collapse of the health care system and a better future for their children.

Deteriorating Political Conditions

While deteriorating political factors were important to the greatest number of physicians, their relative importance varied with race and the year of migration. Overall, political conditions had a greater impact on white (84% in agreement) than black doctors (59% agreed). Interview data corroborated the findings of the survey. Some white doctors probably left the country after independence because they did not want to live under black majority rule. However, sometimes the reasons were more complex.

Table 5: Reasons for Leaving Zimbabwe			
	Strongly/ Somewhat Agree	Neither agree nor disagree	Disagree/ Strongly Disagree
	%	%	%
Deteriorating political conditions in the country	73.9	12.2	13.9
Lack of opportunities for career advancement	73.0	12.2	14.8
Deteriorating economic conditions in the country	71.3	13.9	14.8
Unsatisfactory working conditions	63.5	15.7	20.9
Inadequate remuneration and benefits	61.7	14.8	23.5
Collapse of healthcare system in Zimbabwe	52.2	23.5	24.3
Better education and future for children	52.2	19.1	28.7
Social factors (e.g. family in destination)	17.4	27.0	55.7
Other factors	13.9	-	-
N = 115			

One white doctor graduated from medical school at the height of the Zimbabwean liberation war. White males were being conscripted into the army irrespective of their professional background. Like some of his peers, he left Zimbabwe to avoid conscription.[16]

Another graduated from medical school just before independence.[17] He was working at a provincial hospital at the time of the Gukurahundi campaign (a campaign launched by the Mugabe government against ZAPU militants) in the 1980s. As a medical doctor he attended to people who had been victimised by the government's notorious North Korean-trained Fifth Brigade. Throughout the campaign, he would hear horror stories from the survivors. What made the situation worse for him was the fact that the Fifth Brigade was dispatched to 'protect' civilians at the hospital where he was based. Even though he did not suffer any abuse at the hands of the Fifth Brigade himself, meeting them on a daily basis made him feel uncomfortable and insecure. He began to fear for his safety because the soldiers were ruthless in their treatment of suspected insurgents and their supporters. Being white, he reasoned that there was a chance of being persecuted for the acts which had been committed during the war by the white regime. The sense of insecurity created by the presence of the army at the hospital was the main reason for his eventual departure from Zimbabwe.

While fewer medical doctors who left Zimbabwe in the 1990s identified the political situation as a major contributing factor in their decision to leave Zimbabwe, the numbers increase again after 2000. These physicians are referring to the political violence which began in the build up to the 2000 general elections and continued thereafter. Though none of the doctors who left after 2000 had personally been targets of political violence, they knew of colleagues who were, not for their own political involvement, but for treating the victims of political violence. In other words, doctors suffered simply for discharging their professional duties.

Lack of Opportunities for Career Advancement

The lack of opportunity for career advancement has often been cited as a major cause for the migration of newly qualified professionals from developing countries.[18] The survey showed that this has been a major factor in the emigration of medical doctors from Zimbabwe (with 73% in agreement). However, it becomes increasingly important over time. Some 53% of the doctors who graduated before 1980 left the country to pursue further studies abroad. In contrast, 79% who graduated in the 1990s left because of a lack of opportunity for career advancement. One of the reasons is that the opportunities for specialisation within Zimbabwe declined over time. Enrolment in the medical school in Zimbabwe has grown more than fourfold since the late 1980s. At the same time, the capacity of the medical school to train medical specialists has declined. In 2002, the medical school graduated 83 new doctors and had 30 students in specialised programs. By 2006, the number of graduates had increased to 156 but only 25 students were in specialised programs in a much narrower range of specialisations (Table 6).

A number of specialisations have not even been offered at the medical school over the past ten years as a direct result of the shortage of suitably qualified lecturers. Doctors have had to make hard choices between serving as general practitioners in Zimbabwe or moving to other countries where the prospects for specialising are better. Dr Walter Choga, for example, graduated from medical school in the early 1990s and wanted to specialise in Obstetrics and Gynaecology. Although the specialty was offered at the medical school, it was almost impossible to get into:

> The reason that made me leave personally was the prospects for advancement were actually getting to zero. At that time there was a move that doctors should go and serve in the rural areas and we were seeing that people who were going to work in the rural areas were not coming back to town to specialise. So the prospects for specialising were becoming less and less. So that is when I decided that it was time to leave.[19]

Table 6: Trends in Specialisation at Medical School in Zimbabwe			
	2000	2004	2006
Masters of Science Degree in Clinical Biochemistry	-	7	-
Masters of Science Degree in Medical Microbiology	2	5	7
Masters Degree in Medicine (Anaesthetics)	10	5	1
Masters Degree in Medicine (Histopathology)	-	1	1
Masters Degree in Medicine (Medicine)	4	4	3
Masters Degree in Medicine (Obstetrics & Gynaecology)	-	3	3
Masters Degree in Medicine (Paediatrics)	2	3	-
Masters Degree in Medicine (Psychiatry)	2	1	-
Masters Degree in Medicine (Radiotherapy & Oncology)	-	2	-
Masters Degree in Medicine (Surgery)	-	3	1
Masters Degree in Medicine (Urology)	-	2	-
Masters in Public Health	10	7	8
Doctor of Philosophy Degree	-	1	1
Master of Science Degree in Clinical Epidemiology	-	-	-
Master of Science Degree in Clinical Pharmacology	-	-	-
Masters Degree in Medicine (Neurosurgery)	-	-	-
Masters Degree in Medicine (Ophthalmology)	-	-	-
Total (all specialisations)	30	44	25
No. of new medical graduates	83	107	156
Source: UZ Graduation Yearbooks, 2000; 2004; 2006			

South Africa, in particular, became a popular destination because of the ease of registering in specialised training programmes. Nearly 90% of the Zimbabwean doctors surveyed in South Africa were attracted by the prospect of career advancement there. HPCSA data for 2008 shows that more than two thirds of Zimbabwean doctors in South Africa are specialists. Of the 230 physicians in the database, 62% are specialists, 6% are sub-specialists and 3% are undertaking postgraduate study. The remaining 30% are general practitioners.

Not all of those who wanted to specialise in South Africa have been able to do so. After 1994, immigrant doctors from countries such as Zimbabwe found themselves being excluded from training programmes in favour of black South Africans. Dr Tim Makombe, for instance, left Zimbabwe in the early 1990s soon after earning his medical degree.[20] He wrote the first part of the specialist exams soon after arriving in South Africa. After passing the exams, he got a post to specialise at the University of Cape Town (UCT). The offer was withdrawn in 1994 and for the next two years he could not get admission to the specialist training programme. Eventually, he left South Africa for the UK where he managed to pursue his chosen specialisation.

Deteriorating Economic Conditions

Declining economic conditions have been cited as a leading cause of migration from Zimbabwe over the last two decades.[21] The problems began with the introduction of the IMF/World Bank led Economic Structural Adjustment Programme (ESAP) in 1991. They worsened considerably with economic mismanagement, the chaotic land reform programme and the violence that marred the 2000, and subsequent, elections. The destruction of the productive agricultural sector reduced Zimbabwe from being a food exporter into a food importer and affected downstream industries dependent on agriculture. The economy went into freefall and inflation soared. Inflation officially peaked at 231 million percent in 2008, although independent estimates suggest that the inflation levels at that time were as high as 89.7 sextillion (10^{21}) percent.[22]

As might be expected, the relative importance of economic conditions as a primary reason for leaving varies over time. While 71% of the respondents agreed that this was a major factor in prompting them to leave, the figure rises to 95% of those who left after 2000. As Dr Mary Chikomo, who left Zimbabwe in 2003, noted:

> By the end of 2002 things were really tough. It was tough in the sense that the salary was not enough to buy what we needed. It was worsened by the fact that we could not get most of the basic commodities in the shops and to get them you had to spend a lot of time queuing up. So we had to queue up to get things like maize meal. That was a great inconvenience to me.[23]

Economic conditions continue to influence the departure of both skilled and unskilled people to this day. The 2009 power-sharing agreement between the ruling ZANU PF and the opposition MDC has gone a long way towards restoring economic stability. However, while the rate of inflation has dropped to single digit levels and the supply of goods on the formal market has improved, the salaries of most workers (including medical doctors) remain low. It will be a long time, however, before Zimbabwe's economy fully recovers from many years of mismanagement.

Unsatisfactory Working Conditions

A 2004 survey on health professionals in Zimbabwe showed that the lack of resources within the country's health care system was one of the factors pushing professionals out of Zimbabwe.[24] The factors identified in the survey include the shortage of medications, protective clothing, medical equipment and qualified medical professionals. This survey sought to investigate whether physicians outside the country attributed their emigration to these resource-related factors. Lack of medical equipment was

the most commonly cited deficiency in the health institutions where the physicians worked (50% said that equipment was seldom or never available). Around 45% noted that protective clothing was seldom or never available and 33% said that medicines were seldom or never available. Thirty eight percent said that their institutions lacked a sufficient number of qualified medical professionals.

Perceptions of the availability of medical equipment not surprisingly varied with when the physicians had left the country (Table 7). The problem of the supply of equipment in Zimbabwe's hospitals has always been there. What is unique in the current situation is the magnitude of the problem. Nearly 60% of those who left in the 1980s felt that medical equipment was always or mostly available at their health institutions. This number fell to 55% of those who left in the 1990s and only 16% of those who left after 2000. The latter spoke of their frustration at the unavailability and unreliability of medical equipment. They blamed the situation on the deterioration of the economy and the general decline in the country's health delivery system.

Table 7: Resource Availability at Health Institutions

	Year of Departure from Zimbabwe		
	1980s	1990s	Post 2000
	% Always/Mostly Available	% Always/Mostly Available	% Always/Mostly Available
Medical equipment	60.6	54.8	15.8
Protective clothing	51.5	59.5	36.8
Qualified medical professionals	72.7	58.1	26.3
Availability of medications	63.6	64.3	21.1
N = 115			

The survey also showed that the availability of medications in Zimbabwe deteriorated over the years. Over 64% of those who migrated in the 1990s said that medication was always or mostly available, a reflection of the new government's drive to make health care accessible to the previously-disadvantaged majority black population. Medical doctors leaving Zimbabwe after 2000 were overwhelmingly dissatisfied with the availability of medication in the country's health institutions (with an approval rating of only 21%). They described their frustration at the regular shortages of medications and cited this as one of the factors which created a stressful working environment and induced them to leave.

The human resource base of Zimbabwe's health sector has been decimated by international migration. The shortage of medical doctors in Zimbabwe is both a cause and effect of migration since migration results in a shortage of medical doctors which means heavier workloads

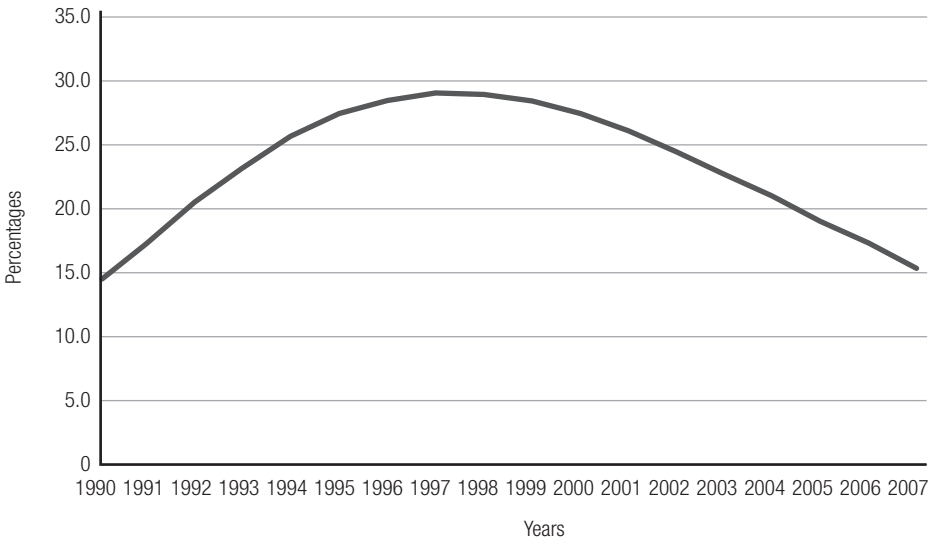
for those who remain, making it more likely that they will leave as well. More than 70% of the respondents who left Zimbabwe in the 1980s said that there were enough qualified health professionals where they worked, a number that drops to only 26% for those who left after 2000. The situation became so dire after 2000 that government health service delivery to rural and previously remote locations came to a standstill and were often deprived of qualified medical personnel altogether.

Zimbabwe's health care system has been severely burdened by the HIV and AIDS pandemic. An estimated 15.3% of the sexually active population is affected by the virus, a decline from the peak prevalence rate of 28.9% recorded in 1997 (Figure 2).[25] The Joint Learning Initiative (JLI) has identified three general impacts of HIV and AIDS on the health workforce of a country like Zimbabwe.[26] First, the health sector has lost some of its own workers to the disease. Health professionals who die are not being replaced. Secondly, health professionals are faced with extra workloads, as People Living with HIV (PLHIV) comprise a majority of their patients. Third, fear of exposure may be a source of attrition in the health sector especially when precautionary measures are not strictly adhered to and there is a shortage of protective clothing. A previous study showed that as many as 64% of health professionals in Zimbabwe were constantly worried that they would get infected through injury at work.[27] This was largely blamed on the shortage of protective clothing such as gloves.

Again, worries about the supply of protective clothing in Zimbabwe increased over time. Around half of the respondents who left Zimbabwe in the 1980s said they were satisfied with the supply of protective clothing at the health institutions where they once worked. The level of satisfaction actually rose to nearly 60% among those who left in the 1990s, which is a clear indication of the efforts at that time to prevent health workers from contracting diseases at the workplace. Only 38.6% of those who left Zimbabwe after 2000 were satisfied with the supply of preventive clothing.

The survey revealed that the direct impact of HIV and AIDS on emigration was relatively slight compared to other factors. Only 8% of the respondents reported that HIV and AIDS influenced their decision to migrate. However, the figure was 36% amongst those who left after 2000. Three factors were cited by the respondents. First, HIV and AIDS drastically increased their workload, increasing the number of hospital admissions and raising the patient to doctor ratio. The heavy workload becomes both a cause of ongoing migration (by increasing the load of remaining health professionals) as well as an effect (by reduction of available health professionals). Secondly, the doctors pointed to the stress of working in an environment with so many dying patients. Finally, some feared that they might contract the disease.

Figure 2: Adult (15-49) Prevalence of HIV and AIDS in Zimbabwe



Source: UNAIDS

INADEQUATE REMUNERATION AND BENEFITS

Poor remuneration was cited as a strong influencing factor by 62% of the medical doctors in the survey, although its importance varied over time and by race. Remuneration and poor benefits were cited as a cause of migration by 21% of those who left before 1980, 44% of those who left in the 1980s, 81% of those who left in the 1990s and nearly 90% of those who left after 2000. As many as 90% of the black medical doctors, most of whom left the country after 1991, agreed that poor salaries were a major factor in the decision to migrate. Dr John Mandaza graduated from medical school in the late 1980s and worked in a government hospital in Bulawayo:

> The only thing that would bother me was the money. The finances were usually a problem. For example, for a long time I didn't have a car and when I eventually managed to get one, I had to push it all the time because it did not have a starter. 'Hill start', as we call it in Zimbabwe. The real problem was the finances, the remuneration. It was not good and we struggled a lot.[28]

Inadequate remuneration was cited by only 41% of the white doctors, most of whom left Zimbabwe before 1991.

The issue of remuneration has long been highly topical amongst medical doctors in Zimbabwe. The first ever strike by medical doctors over

salaries was as early as 1988.[29] The government dealt with the striking workers in a heavy-handed manner and sent the leaders to prison. The doctors were left with a deep sense of injustice as they thought they had genuine grievances to which the government was turning a blind eye. Doctor strikes have become frequent since then, with doctors going on strike at least once a year. Most health professionals spent more than two thirds of the year on strike in 2008. The strikes of the early 1990s coincided with the fall of apartheid in South Africa. The apartheid government of South Africa had previously restricted the entry of black doctors into the country. In the early 1990s, the apartheid government relaxed these conditions to allow black doctors to find employment in the rural areas shunned by local doctors. The failure of the Zimbabwean government to resolve the issue of remuneration led many black doctors to leave Zimbabwe for South Africa between 1990 and 1994.

Collapse of Public Healthcare

After independence, the new Mugabe-led government made concerted efforts to ensure that health care institutions were established even in the most disadvantaged areas. The economic collapse after 2000 eroded most of these earlier gains. As many as 52% of those surveyed reported that the collapse of the health care system was a major factor in their decision to leave Zimbabwe. Not surprisingly, 95% of the physicians who departed after 2000 gave this as a reason for leaving.

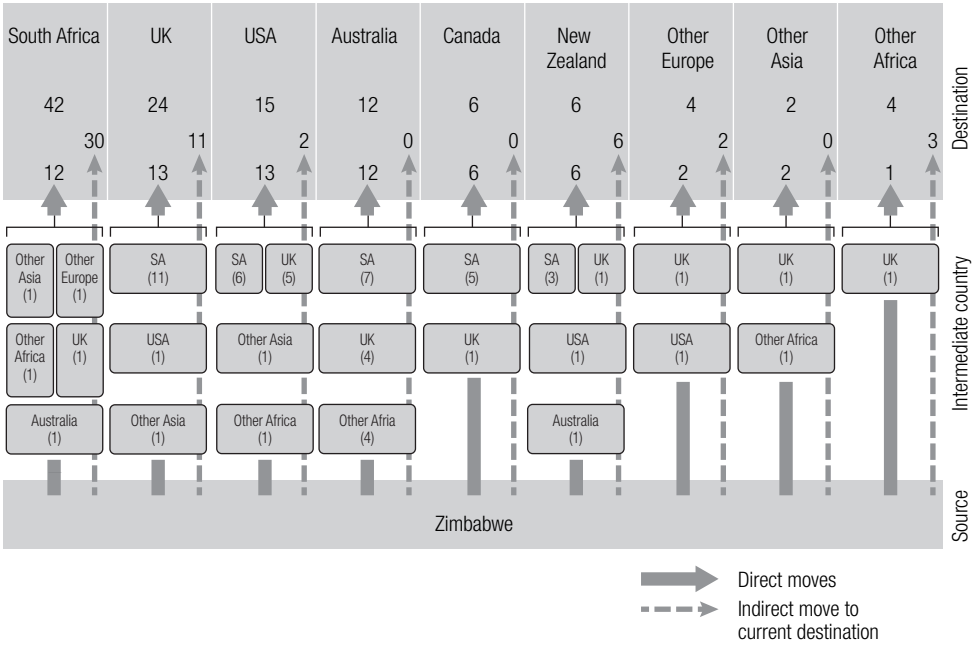
The collapse of the healthcare system is evidenced by the shortage of drugs, medical equipment and qualified medical personnel. This has been exacerbated by the growing HIV and AIDS crisis that has increased the demand for healthcare services. In 2008, drugs and medicines were scarce and a number of hospitals stopped functioning. Even the country's large central hospitals sent patients home, leaving only the emergency sections open. Some of the problems in the health care system were attributed by the doctors to poor managers without a medical background:

> There was a lot of interference from non-medical people who would just come and give you instructions on how to treat people. Sometimes, you would find someone being admitted just for social reasons in place of the deserving sick patients because there is no one to speak for them. So we had very little clinical and medical independence. So for me that was my biggest trigger to leave the country.[30]

STEP MIGRATION

The conventional wisdom on the brain drain is that skilled professionals move directly from a country of origin to a country of destination. The impacts of this movement for both countries are then assessed. However, this overly simplistic, unilinear picture fails to capture the complexity of the migration patterns of Zimbabwean physicians (Figure 3). Only 48 of the 115 doctors in the survey (42%) had moved directly from Zimbabwe to their current country of residence. Seventy one percent of the Zimbabwean doctors in South Africa came directly from Zimbabwe. The rest had first been to a variety of other destinations including the United Kingdom, Australia, Asia and elsewhere in Africa. This suggests that there has been "return migration" from overseas, but benefitting South Africa not Zimbabwe.

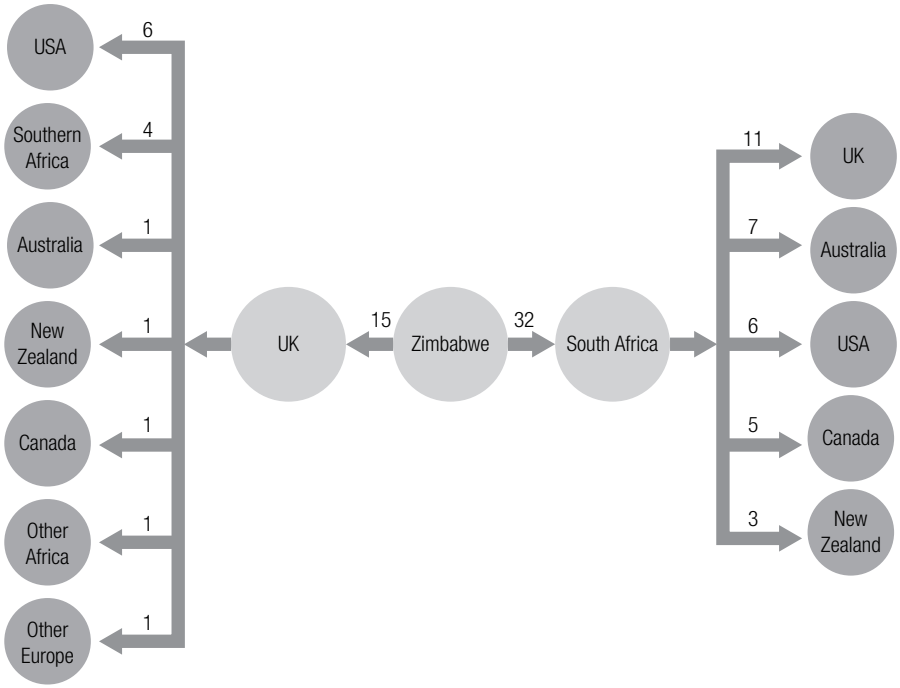
Figure 3: Migration History of Zimbabwean Physicians



Some 34 doctors (30% of the respondents) had moved first from Zimbabwe to South Africa and then joined the "brain drain" from South Africa and migrated onwards to a variety of overseas destinations. Less than half of the doctors who had migrated to the UK did so directly from Zimbabwe. Only 2 out of 39 Zimbabwean doctors in the USA, Australia, Canada and New Zealand came direct from Zimbabwe. South Africa and the UK are clearly the main transit countries for medical doctors from Zimbabwe (Figure 4). In some cases, these two intermediary destinations

likely act as "stepping stones" to get to the ultimate destination. The intermediate point allows them to specialise in their chosen field which then increases their chances of gaining entry to their ultimate destination. Furthermore, it enables them to develop networks with similar professionals located elsewhere who can assist them in making an onward move. Eventually, a migration chain develops linking the emigrant Zimbabwean medical doctors in an intermediate country to their counterparts located in a more attractive destination.

Figure 4: Intermediate Destinations of Zimbabwean Physicians



The in-depth interviews showed that Zimbabwean doctors usually took preparatory steps before leaving in order to position themselves with respect to various migration channels and destinations. For instance, in the 1980s some doctors would write both the Zimbabwean and British exams, a strategy which enabled them to then move directly to the UK to pursue their chosen field of specialisation. This practice declined in the mid-1980s when the Medical Royal Colleges in the UK stopped recognising the internship period served by the doctors in Zimbabwe. From the mid-1980s onwards, some doctors would write examinations which entitled them to registration with the Health Professionals Council of South Africa before moving to that country. While this is still possible, the movement of Zimbabwean doctors to South Africa has slowed over the past decade because of South Africa's policy not to employ health professionals from other developing countries affected by the medical brain drain.[31]

Recruiters and Networks

A strong and vigorous critique has been mounted by African governments and migration researchers of medical recruiting in Africa by governments and private companies in the North.[32] However, only 8% of the physicians in this survey noted that recruitment agencies had been an important or very important source of information about job opportunities outside the country (Table 8). There is some evidence that recruitment agencies have become more important over time. For example, they were used by only 6% of the physicians who left Zimbabwe between 1981 and 1990 but 16% of those who left Zimbabwe after 2000.

The migration literature shows how particular migration streams develop from migrant social networks.[33] Medical students are known to develop a strong sense of 'community' because of the length of time they spend together at medical school. The friendships formed and the sense of community that develops can evolve into networks which facilitate emigration. Those who leave are a reliable source of information about potential migration destinations for those who are still in the country. Doctors who do not migrate also begin to compare their living standards with those of friends working abroad. The comparisons can be very immediate and non-vicarious as their friends return home for visits and describe their work in other countries.

Dr Simon Chiremba, for example, graduated from medical school in Zimbabwe in the late 1980s and worked in Zimbabwe for four years before migrating to South Africa. Most of his friends had already left for South Africa. They were coming back and telling him how good it was:

> The hospitals are well-staffed and you don't have to walk to work. You can easily get a loan to buy a car. At that time cars were being rationed in Zimbabwe. Only senior people were getting the cars. You could not get even a simple miserable Mazda 323! On the other hand my friends were having fun in South Africa. Some had even started doing postgraduate training and they were evidently quite happy. So the information kept filtering through and it just became a matter of time before I moved across the border.[34]

Dr Enoch Togara's decision to leave Zimbabwe was also greatly influenced by his friends who had left for South Africa:

> I think another push factor is when you see others who have made it, maybe a close friend or someone like that, that's when you start considering the idea. But I would probably have stayed longer in Zimbabwe until such a time when it became more unbearable but it is important to point out that the people you associate with may expose you to

> different things. I knew of several people who had become successful because of migration. In that way, they must have done it for a reason and it had worked well for them. So I didn't see a reason why it wouldn't work out for me either.[35]

Friends and colleagues in the diaspora not only provide information about job opportunities but essentially become a mirror which enables them to see what their life will be like if they take up the emigration option.

Personal networks play a far more important role than recruiters in helping doctors to secure jobs outside the country. These networks were the main source of information about job opportunities abroad (important to 64% of the respondents.) Other sources that were rated as more important than recruiters included professional journals/newsletters (43%), professional associations (29%), the internet (21%) and newspapers (10%). This is consistent with trends noted in other developing countries which have experienced an upsurge in the number of medical professionals being recruited by agents working on behalf of employers in developed countries.[36]

Table 8: Sources of Information Used Prior to Migration

	Very Important / Important	Not Important
	% of Total	% of Total
Through family, friends/colleagues and relatives	63.5	36.5
Professional journals/ newsletters	42.6	57.4
Professional associations	28.7	71.3
Internet	20.9	79.1
Newspapers	10.4	89.6
Recruitment agencies	7.8	92.2
Other	4.3	95.7
N = 115		

What also needs to be emphasised is that Zimbabwean-trained medical doctors established a good reputation outside the country. Zimbabwe only has one medical school but competition for places was always intense, ensuring high entry standards. The British-inspired training which they received produced well-rounded doctors who could operate independently with little supervision. The medical school therefore produced quality doctors who were able to deliver high standards of care. Consequently, those who moved to South Africa developed a good reputation which in turn created a demand for more Zimbabwean doctors. As Dr Sam Mugadza (who left Zimbabwe in the early 1990s) noted, "I had friends who were working in the hospitals here (in South Africa). All you needed was a recommendation from them. You would come down and apply for a job and based on the performance of your colleague and his reputation, you could get a job quite easily."[37]

Informal Links with Zimbabwe

Cash Remittances

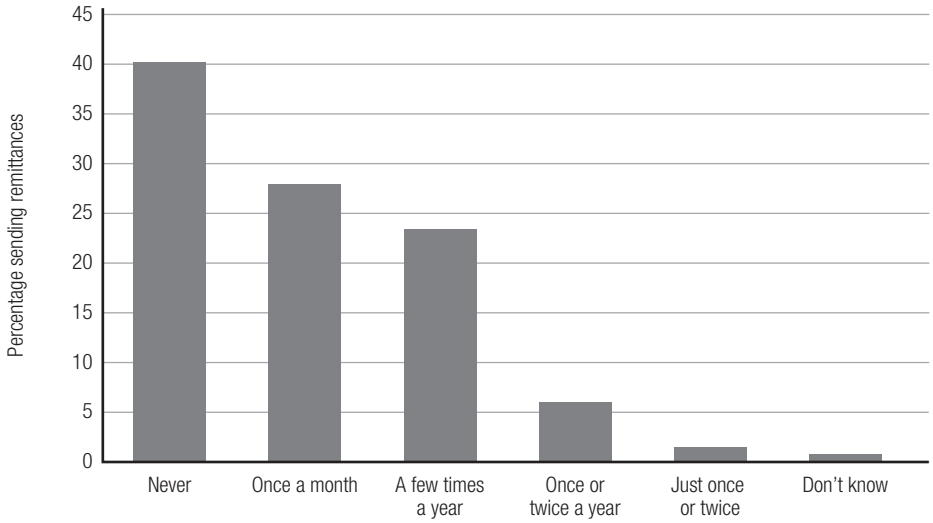
Previous SAMP surveys have shown that migrant remittances play a major role in ensuring household survival in Zimbabwe.[38] The importance of remittances to the Zimbabwean economy has also been re-affirmed in recent studies.[39] A notable feature of previous studies of remitting to Zimbabwe is that they do not ask whether remitting varies by specific occupation, although a previous SAMP study does indicate that professionals tend to remit more than other categories of migrant. In other words, we do not know if physicians are distinctive in their remitting behaviour or whether they follow the general pattern. This study therefore focused on whether physicians, who are amongst the highest earning occupational category in the Zimbabwean diaspora, display different remitting practices than other Zimbabweans.

The survey found that 60% of the physicians send money to Zimbabwe while 40% never do so. The propensity to remit was highest among medical doctors working in South Africa, with 79% sending money to Zimbabwe. Two thirds of doctors in the USA remit but only 42% in the UK and a third of those in Canada. The lowest propensity to remit is among doctors in New Zealand (only 17%). To put these figures in context, various surveys of Zimbabweans in South Africa have found that 85-95% of migrants remit money home.[40] Another study of Zimbabweans in the UK found that 80% remitted funds to Zimbabwe.[41] This would seem to suggest that physicians show a lower propensity to remit, irrespective of their location. However, the propensity of physicians to remit does vary with the year of emigration and with the racial composition of the migrant cohort. Only a third (29%) of the doctors who left Zimbabwe in the 1980s send remittances compared to 81% of those who left in the 1990s and 95% of those who left after 2000. The survey also found that only a third of white doctors remit compared to 100% of black doctors. The lack of familial ties in Zimbabwe is the strongest reason why many white doctors do not remit goods or money. As Dr Dan Matthews, who left Zimbabwe in the late 1990s, noted: "I do not have any more links with Zimbabwe; they are virtually non-existent. My family has left Zimbabwe, I am married to a South African and my children are all here."[42]

In sum, the proportion of Zimbabwe's black doctors (and especially the most recent group of emigrants) who remit is equivalent to or in excess of that of the more general Zimbabwean migrant population. The next question is whether physicians remit at the same levels and with the same frequency as other migrants. Around 30% of the physicians and 50% of those who remit are regular remitters (at least once a month)

(Figure 5). Another 24% of the doctors send money to Zimbabwe three or more times per year. Again, comparisons are instructive. Mupedziswa found that 64% of migrants in South Africa send remittances home at least once a month.[43] In the UK, Bloch reports that around 41% remit at least once a month.[44] On the receiving end, a national SAMP study found that 62% of migrant-sending households in Zimbabwe receive remittances at least monthly.[45] Bracking and Sachikonye's study of urban households in Harare and Bulawayo found that 76% receive remittances at least once a month.[46] In other words, while there are differences in remitting frequency by the location of the remitter (more frequent from South Africa than abroad) and where the household is in Zimbabwe (more frequent to urban than rural households), once again there is nothing particularly unusual or distinctive about the frequency with which physicians remit.

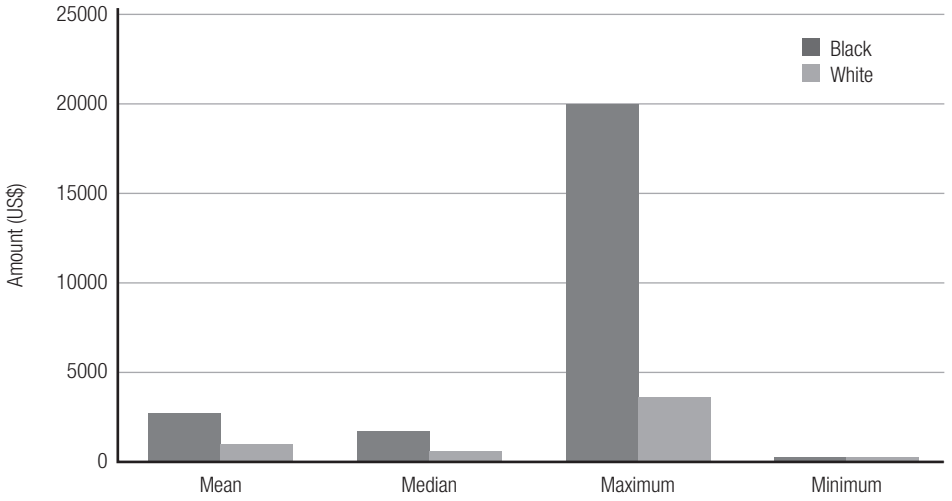
Figure 5: Frequency of Sending Remittances to Zimbabwe



Comparisons between physicians and other migrants are more difficult when it comes to the volume of remitting. In theory, we might expect to see physicians remitting more simply on the basis of their greater earning power. Previous studies have also shown that professionals tend to remit more than individuals in other occupational categories.[47] What the survey did show is that there is considerable variation in the amounts remitted by physicians. In 2008, the remitting doctors were sending US$2,083.10 per annum on average to Zimbabwe (Figure 6). The amount ranged from a low of US$100 to a high of US$20,000 per year. If data for the two highest remitting black medical doctors is removed, average remittances by black doctors falls sharply to US$1,919.68 (a

difference of more than US$600). There were considerable racial differences in the amount remitted. The average amount of money sent by black doctors was US$2,597.00, compared to only US$838.95 by their white counterparts.

Figure 6: Annual Volume of Financial Remittances by Race



Around 60% of the physicians remitting money to Zimbabwe send less than $2,000 annually (Table 9). Some of the amounts being sent annually are small; for instance, 43% send less than US$1,000 to Zimbabwe annually. How do these figures compare with previous surveys? In his 2003 study, Mupedziswa calculated that the average migrant in South Africa remitted R9,120 (US$1403) per annum.[48] More recent studies show a considerable fall in the average amount remitted, ranging from the R2,723 (US$486) per annum received by migrant-sending households in Zimbabwe in 2005 to the R3,480 (US$550) (in cash and kind) reported for Johannesburg in 2006.[49] The average amount remitted has undoubtedly fallen because the number of poorer, unskilled migrants in South Africa has increased considerably in recent years. This is confirmed by SAMP's finding that professionals remitted an average of R6,043 (US$1,079), compared to R2,472 (US$441) by unskilled workers.[50] Physicians may well be sending more than they used to. As Dr John Mandaza noted, the demand for financial assistance from people in Zimbabwe has increased in recent years: "We are probably sending more than what we used to send before the current economic crisis set in. Back then it was only the close family members who would need financial assistance. But now the economic situation is so bad that the extended family also call asking for help."[51] This only makes the gap between the average remittances of physicians and the migrant population as a whole even larger.

Table 9: Distribution of Physician Remittances	
Annual Amount	%
<$500	15.9
$501-999	27.5
$1,000-1,999	18.8
$2,000-2,999	11.6
$3,000-3,999	8.7
>$4,000	11.6
Not specified	5.8
N=69	

The vast majority of Zimbabwean migrants use informal channels when remitting to Zimbabwe.[52] In 2003, Mupedziswa found that 59% of migrants in South Africa used family networks (including personal transfers) to remit, 31% used informal money changers and 22% used trader networks.[53] Only 8% used money transfer companies and 3% used the Post Office. Use of banks was virtually non-existent. In 2005, SAMP found that 74% of migrants preferred to use hand to hand transfers, 12% used the mail, 8% used public transport carriers and only 5% preferred other, formal, channels.[54]

Another popular informal money transfer channel between South Africa and Zimbabwe is hand-to-hand money transfer agents who operate between Zimbabwe and South Africa (called *Omalayisha*). The word *Omalayisha* means someone who loads and transports items in bulk.[55] The *Omalayisha* travel frequently between Zimbabwe and South Africa and maintain a well-developed distribution system in Zimbabwe. Their role is to physically transport financial remittances from the senders located in South Africa to the recipients located in Zimbabwe.

With close connections among the border security staff, the *Omalayisha* easily pass through the border with large quantities of cash. A sender in South Africa is required to pay a handling fee equivalent to 20% of the total amount sent. The *Omalayisha* ensure that the money is personally delivered to the recipient anywhere in Zimbabwe. Some *Omalayisha* limit their operations to a few major urban areas in Zimbabwe and the recipient has to travel to these cities to pick up their cash. The system is complex and based on honesty since cases of fraud would result in the *Omalayisha* losing their client base. The *Omalayisha* show that the informal remittance transfer system can certainly provide a reliable service.

More recently, Zimbabweans overseas have been able to use an informal internet remitting service called Mukuru.com. The company is based in the UK and offers online remittance transfer services of cash and goods to Zimbabweans worldwide. While Mukuru.com operates as a registered money transfer company in the UK, it operates informally in Zimbabwe through its agents. Essentially, customers of Mukuru.com

complete the remittance transfer transaction online and the company, through its informal operating agents in Zimbabwe, ensures that the equivalent is deposited into the beneficiary's account. At the time of the fieldwork in 2008, Zimbabwe was in the midst of a major economic crisis.[56] In November 2008, Harare banks quoted an exchange rate of US$1 to Z$944 while the thriving black market the rate was as high as US$1 to Z$1,200,000. Internet channels such as Mukuru.com allowed Zimbabweans abroad to send money home at rates comparable to the black market exchange rates.

In the latter half of 2008, the financial crisis in Zimbabwe deepened to the extent that it became almost impossible to withdraw cash from a commercial bank. The Zimbabwean dollar became scarce in the formal banks as inflation in the country worsened. Long queues became a permanent scene at most commercial banks as the Zimbabwean dollar was being diverted into the country's growing informal economy. Withdrawing money from the bank became a real struggle and remittance companies such as Mukuru.com were forced to temporarily suspend their money remittance functions. The company only resumed service in 2009 when a new unity government was formed and adopted the US$ as the new legal tender in the financial system, thereby getting rid of the troubled Zimbabwean dollar.

Highly-educated, middle-class migrants such as physicians might be expected to make more use of formal remitting channels such as banks and money transfer companies. However, the survey found that their most common method of sending money to Zimbabwe (cited by 86% of the remitters), is hand to hand transfer (Figure 7). This involves either the doctors taking the money personally to Zimbabwe or sending it through friends or relatives visiting Zimbabwe. The second most popular method, cited by 46%, is the use of informal transfer channels such as Mukuru.com and the *Omalayisha*. Formal money transfer companies (such as Western Union and Money Gram) are used by 25%, but only 14% use banks. Commercial banks are thus the least popular method of sending financial remittances to Zimbabwe.

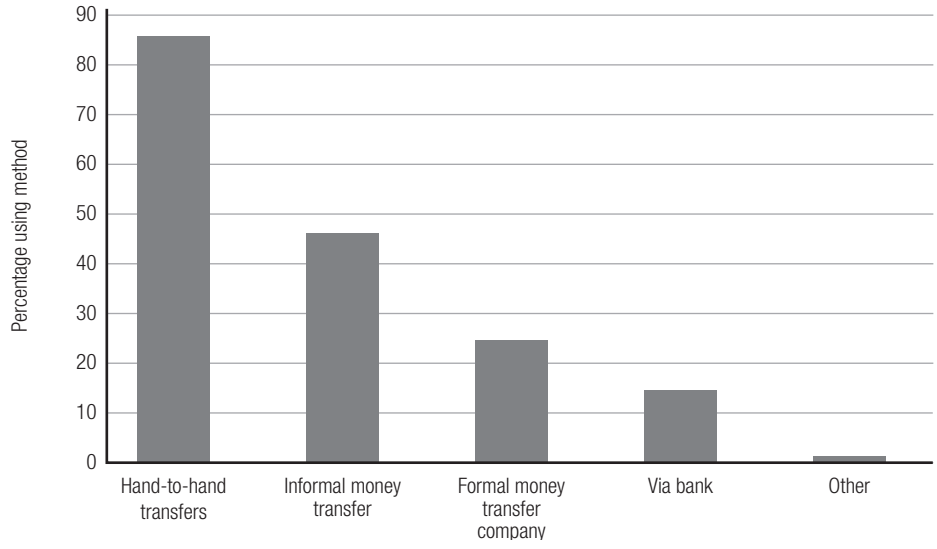
Most doctors avoid using banks because of the high transaction costs involved, which are more than double the rates charged by informal remittance transfer companies. Furthermore, before the liberation of the financial system, money sent to Zimbabwe via banks would be converted into Zimdollars at the government exchange rate. To make matters worse, international bank transfers normally take about seven working days to process which is a long time in a hyper-inflationary environment. In comparison, formal remittance channels like Money Gram and Western Union transfer money in real-time. Race and geography play a major role in determining the choice of remittance-sending method. Around 80% of black doctors use hand to hand transfers, compared

to only 18% of white doctors. Furthermore, 85% of the doctors using the hand to hand method are located in South Africa. This is primarily because physicians based in South Africa are more likely to travel, or find friends travelling, to Zimbabwe.

Informal money transfer channels, even those involving the *Omalayisha*, were rated as 100% reliable by the physicians. This is an important finding from a policy perspective. Any policies targeting migrant remittance channels should facilitate rather than discourage the use of informal channels. This is especially relevant in the Zimbabwe case where informal remittances channels are often criminalised in spite of the role they play in transmitting much needed foreign currency to the country. Furthermore, informal channels involving the *Omalayisha* are able to extend their services to remote locations which are not covered by formal channels such as banks.

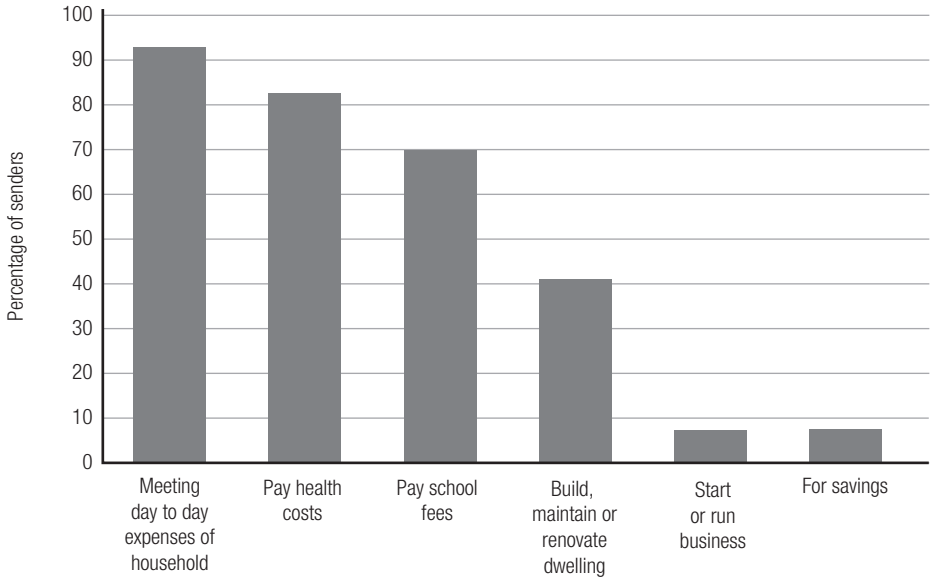
The research on Zimbabwean remittances to date clearly shows that the bulk of it is spent on household survival needs with very little investment of the proceeds.[57] The question is whether remittances from physicians are any different. The simple answer is no. Over 90% of the respondents who send cash remittances do so to meet the day to day expenses of family members in Zimbabwe including food purchase, rent and the cost of electricity and water (Figure 8). Health and educational expenses are another major use of remittances as the costs of education and health have skyrocketed over the past decade and are now beyond the reach of most people in Zimbabwe. Dr Simon Chiremba summed up the situation: "I don't know how they could have survived up to now if I wasn't here."[58]

Figure 7: Methods of Sending Money to Zimbabwe



Note: Question allowed multiple responses

Figure 8: Use of Migrant Remittances Sent to Zimbabwe



Note: Question allowed multiple responses

At the same time, the doctors noted that there was an expectation in Zimbabwe that they could meet all the needs of those who remained behind. As Dr Tim Makombe cynically noted: "Zimbabwe is like a bottomless pit: it keeps on swallowing money."[59] Dr Mavis Makoni observed that people in Zimbabwe believe that "if one goes outside the country they (are) sitting on a silver sea and have an endless supply of resources."[60] In her view, there was a much too romanticised view of the diaspora. Those in the diaspora with good jobs are seen as well-endowed with resources which can be shared with those in Zimbabwe. In practice, the constant requests for cash place a burden on their own family budgets. As Dr Enoch Togara observed:

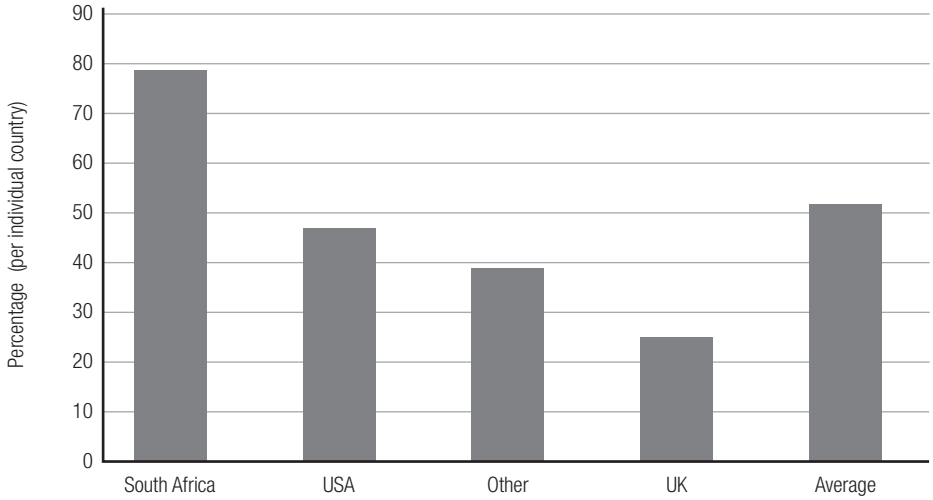
> Previously, if my parents were to come here it would be for leisure or holiday. They were working and everything was okay for them. They would just come here just to sight-see. We could buy things such as clothes and maybe some electronic appliances to take back home to Zimbabwe. But now instead of leaving with a suit we have to give some sugar, some flour and things like that. For now people have to get by…The other thing is that we have been here for a long time and the family has been growing. When I came here I was a bachelor but now I have my own kids and so I have to factor in all those things.[61]

Hyper-inflationary conditions in Zimbabwe were given as a major impediment to investment of remittances by the physicians. Some had tried to establish business ventures but quickly ran into difficulties. Dr John Mandaza, for example, once ran an insurance business but it collapsed when the economic crisis began. Dr Paul Pande had operated a chicken raising project but he abandoned it when he encountered problems in securing chicken feed. It is also particularly difficult for someone based outside Zimbabwe to run a project successfully because of the high level of informalisation of the economy. An informal economy requires a dedicated person on site so that decisions can be made quickly to match rapidly shifting demands and opportunities.

REMITTANCES OF GOODS

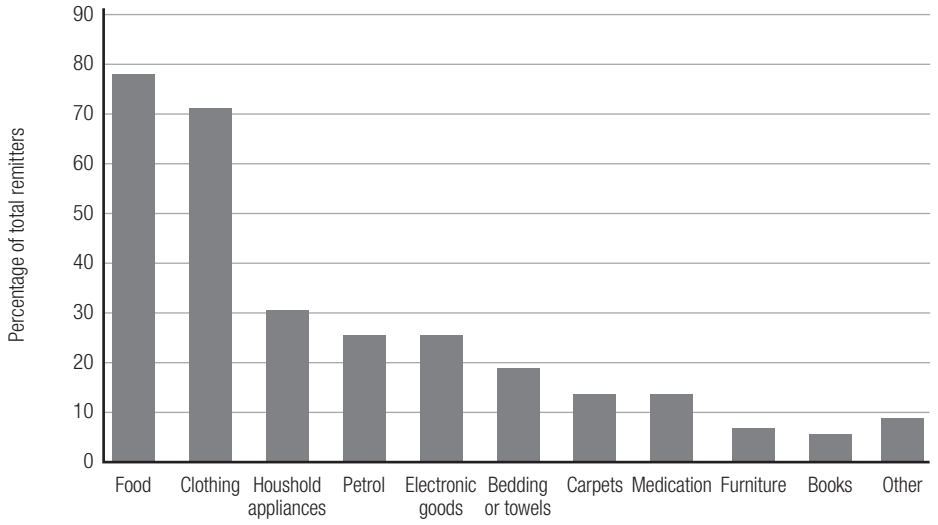
Slightly over half of the respondents also remit goods to Zimbabwe, especially food and clothing. As with cash remittances, the likelihood of sending goods varies with the age, race and year of emigration of the physician. For instance, 61% of those below 50 send goods compared to only 39% of those over 50. Or again, 88% of black doctors send goods compared to only 26% of the white doctors. Finally, 71% of those who left after 1990 remit goods compared to only 28% of those who left before 1990. Doctors who live in South Africa are far more likely to send goods than those located elsewhere: as many as 79% of the respondents in South Africa send goods to Zimbabwe, compared to 47% of those in the USA and only 25% of those in the UK (Figure 9). Goods are not sent as frequently as cash remittances with only 17% of respondents sending goods every month. The majority send goods home a few times a year.

Figure 9: Proportion Remitting Goods by Country of Residence



The physicians send a wide array of goods to Zimbabwe (Figure 10). The most important items are food products. Foodstuffs have become very expensive in Zimbabwe and the diaspora has played a major role in meeting the food needs of their families. Two thirds of those sending food products are located in South Africa. Clothing is the other major item remitted, sent by 71% of doctors. Again, the proximity of South Africa is a factor: 57% of those sending clothes are based in South Africa.

Figure 10: Type of Goods Remitted to Zimbabwe



They use various channels to send goods to Zimbabwe. As in the case of financial remittances, most transfers are made by hand. Bus companies and the *Omalayisha* also transport goods to Zimbabwe for a fee. They avoid having to pay duties by bribing customs officials. Most have a limited number of collection points, while others claim to be able to transport goods to any location in Zimbabwe. The doctors who have used these services agreed that the agents are very reliable and are able to deliver the goods timeously. Another channel for sending goods are companies involved in the selling and distribution of goods in Zimbabwe. These 'companies' operate from South Africa and supply retailers in Zimbabwe with goods. They also enable migrants based in South Africa to send food and household items to Zimbabwe (known as food hampers or food packs). The packs are purchased and paid for over the phone. Individuals located overseas use online shops such as Mukuru.com. Most online shops have agents in South Africa (for the procurement of goods) and Zimbabwe (for their distribution). The online shops typically sell food items, fuel, cell phones, as well as satellite television subscriptions.

VALUE OF REMITTANCES

Extrapolating from the survey findings on average remittances and data on the number of Zimbabwean abroad, it is possible to arrive at estimates of total annual remittances by geographical location and race. Zimbabwe receives about US$2.5 million annually in cash remittances from medical doctors working abroad (Table 10).[62] Nearly 40% of this comes from physicians in South Africa and 33% from those in the UK. Black doctors remit over 90% of the total amount sent.

Table 10: Estimated Value of Cash Remittances

Country	Black (x = $2,597)	White (x = $838.95)	Total Remittances
South Africa	918,429.05	71,305.98	989,735.03
UK	789,877.55	61,325.36	851,202.91
USA	335,662.25	26,060.51	361,722.76
Australia	138,549.95	10,756.89	149,306.84
New Zealand	85,701.00	6,653.75	92,354.75
Canada	78,559.25	6,099.27	84,658.52
Portugal	17,140.20	1,330.75	18,470.95
Belgium	8,570.10	665.37	9,235.47
Spain	1,428.35	110.90	1,539.25
Total Remittances	2,373,917.70	184,308.76	2,558,226.46

The same methodology can be used to calculate the total value of goods which the doctors send to Zimbabwe annually. Black doctors remit an average of $2,061 worth of goods per annum while white doctors send about $776 worth per annum. Table 11 extrapolates from these figures to provide a racial and geographical breakdown of the value of the goods sent. The total value of the goods amounts to an estimated US$1.79 million per annum. Summing cash remittances and the value of remittances in kind, Zimbabwe's medical diaspora remits almost US$4.3 million worth of cash and goods each year (Table 12).

Even if the average individual remittance figure of US$2,616 per annum was sustained over a 30 year period, the total remittances from one individual would still be significantly less than the estimated US$97,000 needed to train a medical doctor in Africa.[63] Thus, the remittances sent by the emigrant doctors certainly do not compensate for their training costs. As discussed below, the diaspora option offers Zimbabwe better hope in terms of securing reasonable returns from emigrant professionals.

Table 11: Estimated Value of Remitted Goods			
Country	Black (x = $2,061.30)	White (x = $776)	Total Value of Goods
South Africa	641,048.75	52,742.84	693,791.59
UK	550,353.75	44,986.54	595,340.29
USA	232,921.25	19,390.75	252,312.00
Australia	96,878.75	7,756.30	104,635.05
New Zealand	59,776.25	4,653.78	64,430.03
Canada	53,592.50	4,653.78	58,246.28
Portugal	12,367.50	775.63	13,143.13
Belgium	6,183.75	775.63	6,959.38
Spain	2,061.25	0.00	2,061.25
Total Value of Goods	1,654,317.61	136,110.60	1,790,428.21

Table 12: Estimated Total Value of Remittances			
Country	Black (x = $4,658.30)	White (x = $1,614.60)	Total Remittances (= $2,616.5)
South Africa	1,560,386.75	124,053.59	1,684,440.34
UK	1,339,841.75	106,229.89	1,446,071.64
USA	567,934.25	45,398.20	613,332.45
Australia	234,519.75	18,662.65	253,182.40
New Zealand	145,477.25	11,365.38	156,842.63
Canada	131,502.50	10,526.43	142,028.93
Portugal	30,546.50	2,453.53	33,000.03
Belgium	13,974.75	1,614.58	15,589.33
Spain	4,658.25	0.00	4,658.25
Total Remittances	4,028,235.31	320,419.37	4,348,654.68

INFORMAL SERVICES

The skills and training of emigrant doctors are usually viewed in the 'brain drain' literature as an absolute loss to the country of origin. However, this study found that emigrant doctors still attend to the medical needs of family and friends in Zimbabwe. They frequently provide long-distance medical and some 'practice' informally when they visit Zimbabwe. Dr Mary Chikomo, for example, travels to Zimbabwe at least once a year: "When I go home, my neighbours come to me with all sorts of problems – ringworms, migraines, whatever. If I have basic medication, I give them. However, most of the time I refer them to a medical facility because I would not have all the necessary tools to perform a proper diagnosis on them."[64] Sometimes the doctors feel helpless because their connections in Zimbabwe have weakened over time. For instance, Dr Mavis

Makoni used to know a lot of doctors at Masvingo General Hospital when she was still in Zimbabwe, but most of them have since left the country.[65] Now when she visits Zimbabwe she does not have many contacts to refer her sick relatives to for medical attention. Some relatives come to her with clear cases of HIV and AIDS but her ability to help is limited because she does not know whether there are any antiretroviral (ARV) programmes in the area.

In South Africa, medical doctors are sometimes asked to attend to Zimbabwean patients on an informal basis. Dr Chikomo works for a research organisation in South Africa and is not involved in clinical practice.[66] However, the people within her social network (mostly Zimbabweans) know that she is a medical doctor and consult her about minor ailments. They also consult her on the medical conditions of relatives in Zimbabwe and want to find out what medication they can get for their sick relative. Medical services provided to family by colleagues in Zimbabwe are sometimes paid for by the emigrant doctors in the form of goods in South Africa. According to Dr Walter Choga, if any of his relatives in Zimbabwe require medical attention they visit one of his medical friends in Zimbabwe and are not required to pay for the service.[67] However, the doctors are paid by Dr Choga in kind when they visit South Africa, who buys goods and medicines for them to take back to Zimbabwe.

The knowledge which emigrant Zimbabwean doctors have gained over the years also places them in a position to provide medical advice to their professional colleagues in Zimbabwe. Professional advice (which ranges from consultation to mentorship) is most pronounced amongst recent migrants who are largely black and have contact with other professionals working in Zimbabwe. A number of the doctors who have been outside the country for a long time also maintain a fair amount of contact with their counterparts in Zimbabwe. Dr Leonard Jordan, for example, is sometimes consulted by his medical friends in Zimbabwe when they encounter difficult plastic surgery cases, which is his specialty. Effectively, he acts as a specialist referral base for his medical friends in Zimbabwe.[68] Zimbabwean-based doctors sometimes phone or send emails to Dr Ben Carter, a shoulder surgeon, when they need medical advice.[69] Some doctors even send patients down to him, especially those with shoulder problems.

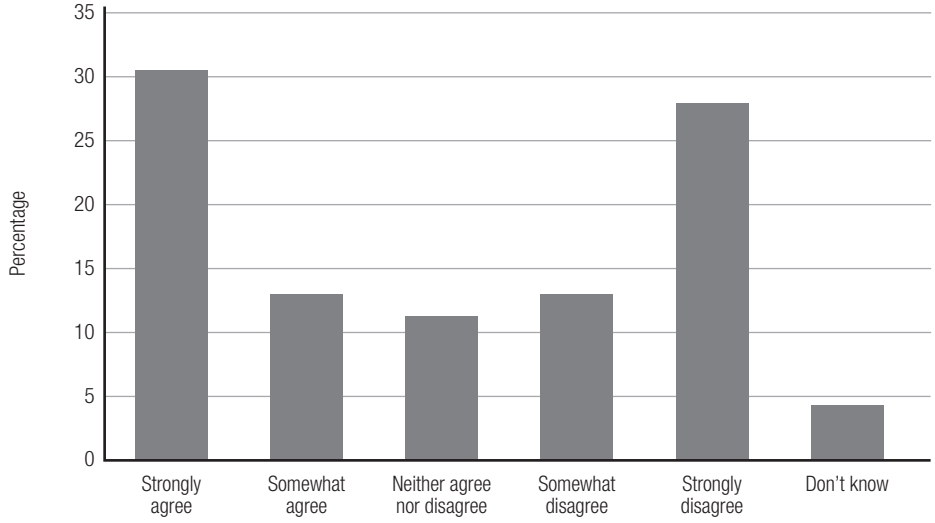
ENGAGING THE DIASPORA

RETURN MIGRATION

Return migration is increasingly seen as an important feature of contemporary migration dynamics with positive development impacts.[70] Diaspora engagement has been increasingly advanced as a possible solution to the skills problems facing developing countries.[71] In Zimbabwe, the diaspora option arguably offers the most sensible policy prescription since it entails the use of the skills of the diaspora without requiring them to return home permanently. However, while the use of the diaspora resources is seen by policy-makers as a viable way of ensuring that a sending country benefits from its citizens abroad, the reality is that it is dependent on the goodwill of the emigrant professionals. This section of the report therefore explores the extent of current diaspora engagement by emigrant physicians and their thoughts about the future.

The doctors in the survey divided almost equally between those who agreed that they had an important role to play in the future of Zimbabwe (43%) and those that did not (41%) (Figure 11).

Figure 11: Have Important Role to Play in the Future of Zimbabwe



Age, race, period of absence and current location all had an influence on their thinking. Nearly 60% of those under 50 years agreed with the proposition compared to only 19% of those over 50. As many as 73% of the black doctors were in agreement compared to only 21% of white and Asian doctors. Sixty one percent who left the country after 1990 agreed

they had an important role to play compared to only 23% of those who left before 1990. Finally, 65% of the doctors in South Africa agreed concurred compared to 33% of those in New Zealand, 25% in Australia, 25% in the UK, 17% in the USA and 17% in Canada.

From a policy-making point of view it would make most sense to intensify diaspora initiative strategies amongst more recent black doctors in South Africa where the level of interest in future engagement is greatest. The doctors interviewed in South Africa identified a number of areas in which they could see emigrant doctors engaging without the need to physically return to Zimbabwe or simply by returning for short periods of time (Figure 11). These included short term teaching contracts at the medical school and short-term hospital placements, exchange and scholarship programmes, fundraising and sourcing medical equipment.

Likelihood of return is strongly related to four main variables: race, age, year of migration and current country of residence:

- 53% of black physicians said they are likely to return to Zimbabwe compared to only 11% of white physicians. Conversely, 70% of the whites said they would never return compared to only 16% of the blacks. In other words, the potential for return is higher amongst black physicians and only a small minority (16%) definitely ruled out the possibility.
- the possibility of return is highest amongst the younger doctors: 78% in the 31-40 age group said they are likely to return, compared to 23% in the 41-50 age group, 10% in the 51-60 age group and none over the age of 60.
- the year of emigration is positively correlated with the possibility of return. The likelihood of return is higher amongst more recent graduates (dominated by black doctors) than amongst earlier migrants (dominated by white doctors). Only 5% of the doctors who emigrated before 1980 are likely to return, compared with 12% of those who left in the 1980s, 30% of those who left in the 1990s and 79% of those who left after 2000.
- possibility of return varies with a doctor's current country of residence. Return was more likely among those located in South Africa (40%) than those in the UK (21%) or in the USA (13%).

Perhaps surprisingly, specialisation does not have a significant impact on likelihood of return. More than two-thirds of the emigrant doctors have managed to specialise since leaving Zimbabwe. However, the proportion of specialists and general practitioners who said return was likely was almost the same (29% versus 30%). At the same time, returning specialists are more likely to establish their own private practices in urban areas which would reduce the impact of return migration on the public health system in Zimbabwe.

The wariness of many doctors about returning permanently to Zimbabwe can be attributed to several factors. Some doctors reported that they knew of individuals who had unsuccessfully tried to return to Zimbabwe. They fear that premature return would also end in failure because the factors which drove them out in the first place have not been addressed.

Integration in destination countries is probably the strongest factor hindering return, particularly amongst older physicians. As Dr John Mandaza noted:

> There are a lot of things that would make it difficult for me to simply uproot and go. Coming here (to South Africa) is not like a visit. You come here and you have to settle as much as possible. And if you are settled you cannot just leave, it's not that easy. I mean, the banks will be interested in knowing where I am going – we have got car loans, houses on mortgages, bank overdrafts, contracts that are running and so forth. So even if things were to be okay today and I really want to go back home it would take me a bit of time to clear up all my obligations.[72]

Closely related to the issue of integration is that of lifestyle. Generally, the standard of living which the respondents enjoy outside Zimbabwe would not be duplicated if they moved back. Some doctors also feel that in their absence they have lost the ability to cope with the rapidly changing economic situation in Zimbabwe:

> The biggest problem about going back to Zimbabwe is that when you leave you lose your street skills. You lose the skills you need to live there because it's not easy to live in a country like Zimbabwe. You have to know where you can buy petrol, groceries and so forth. In Zimbabwe, you can't just walk into any shop and buy what you want. And when you are out of the country for a long period of time and the place changes so rapidly you lose those abilities. You can't go from a place like this and live there easily.[73]

Registration in Zimbabwe is another factor that inhibits return. A number of doctors left without fulfilling the mandatory requirements from the health ministry, including internship and community service. On return, they would be required to work in government hospitals under supervision before they could register for independent practice. Specialists, in particular, are unlikely to want to work in government hospitals and under the supervision of less qualified individuals.

Some physicians felt they would inevitably face hostility from resentful colleagues who would see them as 'traitors' who left at the height of a

major crisis in Zimbabwe and returned when stability was restored:

> Some guys tried to go back but they found the environment so hostile in several ways. Any professional returning to Zimbabwe is bound to face open hostility from fellow professional colleagues who will look at you and say 'you are a traitor why don't you stay at your overseas bases.'[74]

This resentment would be exacerbated if returning physicians had superior qualifications and were viewed as a 'threat' by those who did not migrate.

Zimbabwe does not recognise dual citizenship. The Citizenship of Zimbabwe Amendment Act No. 12 of 2001 requires Zimbabweans who were once citizens of other countries or whose parents were once foreigners to formally renounce that foreign citizenship in order to qualify for Zimbabwean citizenship. Political commentators observed that the law was meant to strip the citizenship of Zimbabweans of European origin and blacks on white owned farms whose parents originated from neighbouring countries.[75] These groups were identified as being supporters of the opposition MDC party. Crucially, many white medical doctors lost their citizenship by default as their parents were born outside Zimbabwe. It became extremely difficult for white Zimbabweans to obtain a Zimbabwean passport and many were forced to adopt the citizenship of their host countries. There is therefore little chance of the white Zimbabwean doctors who lost their citizenship ever returning to Zimbabwe because they feel disenfranchised and unwanted.

Closely connected to the foregoing is the legacy of the chaotic fast track land reform programme. The farms targeted for violent occupation during the land reform exercise were owned by white commercial farmers. Some of the doctors were affected directly as their families were forced out of the country. Others, like Dr Dan Matthews, had originally harboured thoughts of returning to Zimbabwe but found themselves without any familial links because their families had left the country. In the absence of familial links, a number of white Zimbabwean doctors are likely to stay permanently abroad.

In sum, a wide range of factors militate against the return of Zimbabwean medical doctors from abroad. Even with political and economic stability, there is no guarantee that the emigrant professionals would return as they have become socially and economically entrenched in various other countries. In fact, the longer the political and economic upheavals persist, the more the doctors are likely never to return. Given that return migration is highly unlikely for many Zimbabwean physicians and strictly conditional for the rest, the question is whether there are other forms of engagement through which the physicians might assist the reconstruction and development of Zimbabwe.

MEDICAL TRAINING AND CAPACITY-BUILDING

One of the ways in which the Zimbabwean medical diaspora noted that they could contribute to the development of Zimbabwe's health delivery system would be to teach students at the medical school. The country's only medical school has suffered a massive loss of professors as a result of the current economic and political crisis. This has negatively affected the quality of training programmes and increased the workload of the remaining professionals. The emigrant doctors believe that training help is the best way towards solving the human resource crisis facing Zimbabwe's health delivery system. Dr Cathy Marriot, for example, noted:

> The doctors who are outside Zimbabwe can definitely offer intellectual help. If they could spend time lecturing and if you could get doctors to go to Zimbabwe and help with the training of doctors there, even if it's short-term... If you could go for a week and lecture, I would certainly be willing to go back and do something like that.[76]

Five of the medical doctors interviewed in South Africa had already made contact with the medical school. Three had offered to teach certain course modules free of charge.

Dr Tim Makombe plans to organise the doctors based in South Africa so that they could help with the teaching load at the medical school.[77] Though his plans have not yet been put into practice, they represent an innovative idea that could significantly improve the quality of training at the medical school. Such short term working visits could have several beneficial impacts on the country. The emigrant doctors are based in more sophisticated health systems and are likely to pass on the skills and knowledge which they have acquired abroad to Zimbabwean medical students. Furthermore, since the emigrant doctors are knowledgeable about the conditions in Zimbabwe, they are likely to pass on more useful knowledge compared to professionals trained elsewhere.

Efforts are already under way in Zimbabwe to tap into the professional skills of emigrant doctors. The IOM's Sequenced Short Term Return of Health Personnel Programme targets medical professionals such as doctors, nurses, medical laboratory technologists and pharmacists. The programme has two main components.[78] The first focuses on bringing back lecturers for short periods of time (2-4 weeks) to teach at the medical school. In future, the programme will incorporate virtual learning (or e-learning) in which the lecturers teach students at the medical school in Zimbabwe from their bases abroad. IOM does not pay the participating doctors a salary for their services but offers them a basic living allowance and pays their travel costs. At the time of the study, the programme had

just started and they had managed to bring back temporarily three lecturers to teach at the medical school. Health institutions had not benefitted because they were still awaiting permission from the government. To facilitate the learning process, IOM intends to provide material support to the medical school in the form of medical equipment and educational books. The other component focuses on health institutions such as hospitals and clinics in rural areas. This component aims to bring medical doctors back to Zimbabwe to work in medical institutions for short periods. IOM works with diaspora associations to contact the emigrant health professionals. In the UK, the Zimbabwe Health Training Support Trust is helping the IOM recruit doctors to participate in the programme.

Short term returns provide a number of important potential benefits. First, they provide much needed professional expertise in institutions, such as the medical school, that have been hard hit by the brain drain. Secondly, they utilise the professional expertise of the medical doctors who are knowledgeable about conditions in Zimbabwe and who are willing to be part of the solution to the country's brain drain problem. Thirdly, (re)introducing medical doctors to Zimbabwe's health system little by little may eventually turn into a permanent solution to the brain drain since it allows the medical doctors to form their own impressions of the country, which might lead to an eventual decision to return permanently.

A significant number of emigrant Zimbabwean doctors are employed in academic institutions abroad. These individuals can facilitate exchange programmes which would mutually benefit medical students from both sides. Promising medical students from Zimbabwe could enter into exchange programmes with overseas universities which would expose them to medical technology not yet available in Zimbabwe. In addition, they would learn the latest techniques in the field of medicine from these countries to pass on to their colleagues on their return to Zimbabwe. On the other hand, students from developed countries can be exposed to new disease profiles prevalent in tropical countries and gain surgical experience in the process. As Dr Webster Jacobs, who is based in Durban, suggested:

> What you would do is you go to the professor of the department and say, in Zimbabwe we have a lot of patients who need surgery but there are a few doctors. Give us some of your senior students or graduated doctors who are now training in specialisation... You pick them up and put them in Zimbabwe where they will get lots of surgical experience. But then you get a Zimbabwean doctor who has got lots of surgery experience but not enough academic training and send him to Canada or whichever country so that you have reciprocity.[79]

Thus, a programme could be put in place to ensure that senior medical students from developed countries come to Zimbabwe to obtain surgical experience under the supervision of Zimbabwean medical doctors. They would be operating on real people with real problems and would also help in alleviating the human resource crisis in the country's health sector.

Two of the medical doctors interviewed in South Africa are heads of department at medical schools. They are world-renowned academics who once headed the colleges of their various specialties in South Africa. Such individuals can offer technical assistance in the revamping of the medical school and may help create new training programmes. One of them is already working with an overseas college in trying to set up a specialist training programme in Malawi. Being Zimbabwean, he hopes to extend the programme to Zambia and Zimbabwe, linking up the three countries in one integrated training programme.

The activities of Professor Jacobs, an ex-Zimbabwean doctor at another South African medical school, are of relevance. According to a colleague, Professor Jacobs would "go out of his way to publish a paper in the Central African Medical Journal and he would go out of his way to employ ex-Zimbabweans as registrars. So he had lots of Zimbabwean registrars that he took on board to specialise. He would go out of his way to go and present at conferences and to teach in Harare."[80]

The emigrant doctors said they could also help students at the medical school by sourcing and donating books. A number of the emigrant Zimbabwean doctors are employed in the academic field and have accumulated a lot of books which the students at the medical school might find useful. They can also source medical textbooks from their colleagues at their academic institutions. Even those not in the academic field reported having a number of useful texts which they would be willing to donate to the medical school's library.

SHORT-TERM VISITS

All of the doctors identified short-term hospital visits as one way in which they could give something back to Zimbabwe. Dr Mbiri, a black Zimbabwean medical doctor based in Tasmania, returns to Zimbabwe for varying periods of time and volunteers in the public hospitals. At one point he spent nearly six months working at a public hospital in Zimbabwe. Many more would be willing to consider this option. As Dr Simon Chiremba noted, "most of us would be happy to go, say when I am on leave, to help for a week or two with difficult cases or even easy ones, just to clear up some of the operations that need to be done."[81] Some of the doctors expressed interest in spending part of their annual vacation

providing essential medical help to Zimbabwean patients. They could either work in selected hospitals or be organised into medical teams that go around the country conducting specialised medical procedures. Currently, the Zimbabwean government does not have the capacity to support such a mission. To make this arrangement work, resources would need to be mobilised from the international community to ensure that the volunteer doctors do not bear the full burden of the cost of their stay in Zimbabwe.

Raising Funds and Sourcing Supplies

Fundraising was identified as another possible area of involvement by the emigrant medical doctors. A concerted effort would be required to help kick-start the health system in Zimbabwe and the emigrant doctors are well placed to play an important role in this respect. They can help raise funds by either contributing directly or by participating in the drive to raise funds to equip hospitals in Zimbabwe with medical equipment and medicines. Some of the medical doctors interviewed were worried that medical education was getting beyond the reach of the poor due to the ever-increasing tuition fees. Emigrant professionals might initiate programmes that would fund the education of students from poor backgrounds at the medical school. Dr Cathy Marriot suggested that "some doctors can get together and raise funds to support a certain student – they could sponsor a student through the medical school. They can also sponsor a clinic and some doctors here have done that."[82]

Another area in which the emigrant medical doctors said they could help develop Zimbabwe's health delivery system is through the sourcing of drugs and equipment. Many of the emigrant Zimbabwean doctors work in developed countries where technology is constantly changing thereby making redundant equipment that might still be in a good and usable state. The hospitals in such countries are willing to give away such equipment if it is going to be put to good use. As Dr Henry Porter observed: "The doctors can also help by sourcing equipment from their hospitals which is not being used. Most of the equipment is still usable but is lying idle in some hospitals. These could be utilised in the hospitals in Zimbabwe."[83]

Technical expertise is another area in which the emigrant doctors might help re-develop Zimbabwe's health system. Knowledgeable individuals are needed to set up specialised units. This would cost a lot of money if private contractors are hired but some emigrant doctors are prepared to offer their services for free. Dr Leonard Jordan, for instance, said he is willing to help set up a plastic surgery unit in the public health institutions in the country: "Setting up a plastic surgery unit is a huge amount of work. But I know how to do it. I know what theatre tables to get, what

lights, instruments, machines, what post-operative care the patient needs and what kind of anaesthesia they need… if they hired a consultant from the US to do that kind of work it would cost them millions of rands."[84]

'VIRTUAL RETURN': TELEMEDICINE

The growth of telecommunication technology is revolutionising the way in which medicine is practiced. One of the products of the information age, telemedicine, involves the "use of electronic information and communication technologies to provide and support healthcare when distance separates the participants."[85] In the developed world, it has been used to provide healthcare in rural areas, online continuing education for physicians in these areas, and special medical services for the elderly, the handicapped and terminally ill patients at home. In most cases, the participants communicate in real time through a network that allows for two-way or multiple face-to-face video and interactive communication.

In the developed world, telemedicine has been advocated as a way for medical doctors to reduce their carbon footprint. In the period 2001-2006, over 1,000 consultations were held with patients in Queensland, Australia, which eliminated about 1.4 million kilometres of patient travel, reducing carbon emissions by 39 tonnes per year.[86] The use of virtual systems in medical practice is evidenced by the growth of technology supported disciplines such as teleneurology, teleradiology, telecardiology, telenursing, and telematics, used to monitor patients with heart conditions or diabetes remotely.

One of the interviewees noted that telemedicine represents a way in which emigrant doctors could contribute to Zimbabwe's health delivery system:

> You can explore some new ways of using the skills of medical doctors who are based overseas; I mean ways that do not require them to be physically present in Zimbabwe. I think telemedicine offers an exciting option as it allows the doctors who are in Zimbabwe to connect with the overseas based specialists. I think it is quite an interesting option.[87]

Doctors in Zimbabwe would be able to consult Zimbabwean specialists abroad via video-link in the presence of the patient. The specialists would offer useful advice to both the general practitioner and the patient on the best way to address the medical condition.

Even though this option might seem attractive, there are several obstacles to its adoption in Zimbabwe. First, telecommunication technologies are poorly developed, particularly in rural areas which have the greatest need for telemedicine. However, if a policy to develop telemedicine is put in place, this could provide an impetus to make telecommuni-

cation technologies available in the country's rural areas. The use of telemedicine could have a positive impact on the supply of doctors in rural areas, who avoid such locations because of fears of professional isolation. Telemedicine ensures that the medical doctors posted in such areas have back-up staff to contact either via phone/email or via video-conferencing so that they could obtain real-time information on certain medical procedures. The move towards telemedicine should be supported not only for professionals based in remote locations but also for those located in major cities as it encourages the sharing of ideas with the professionals overseas.

Secondly, some emigrant doctors based in Southern African nations face the same problem of poor internet connectivity. Thirdly, the system supporting telemedicine is expensive to set up. Governments of poor countries are not likely to be able to afford such expensive systems. The involvement of international donor organisations in setting up telemedicine infrastructure is therefore crucial. Fourthly, internet-based technologies are prone to 'electronic snooping' and specialised information technology personnel would need to monitor and protect the system. Finally, there have been concerns about the ethics of telemedicine on issues such as confidentiality and access to medical records of patients.[88]

Obstacles to Engagement

A number of obstacles could hinder the success of diaspora initiatives in Zimbabwe. For a start, medical doctors would need to be registered by the MDPCZ before they could legally practice, even for a short period of time. A number of emigrant Zimbabwean medical doctors left the country before completing either their housemanship or community service. They have since acquired additional qualifications abroad and have become specialists in their respective fields. The MDPCZ insists that such individuals need to complete a year of working in government service first before they could be fully licensed to practice. Still others left Zimbabwe after earning their professional qualification but their registration with the MDPCZ has lapsed. All these doctors would need to renew their registration before they could practice. Under current conditions, they would need to work under supervision in Zimbabwe for a period of up to a year before they can be allowed to re-register. This is likely to be the major hindrance in recruiting emigrant doctors to work temporarily in the country. As Dr Mavis Makoni indicated:

> I have friends who were in my class at the medical school who went back to Zimbabwe. They were so disappointed. They had to come back because they couldn't register...I think if Zimbabwe is going to realise benefits from the doctors abroad, things have to change. They have to realise that

> in order to get something out of these people they have to be reasonable about professionals who are coming back and planning to be registered and work in Zimbabwe.[89]

Changes would need to be made to the current regulations so that medical doctors who are practising in reputable health systems can register to work in Zimbabwe with minimal effort. Even though the registrar of the MDPCZ maintained that all the cases are dealt with differently, new guidelines clearly need to be put in place so that the qualifications earned abroad can be verified and easily credited to the professionals wishing to re-register in Zimbabwe. The MDPCZ could even take a lead by registering unconditionally all known Zimbabwean medical doctors abroad who are working in the medical field after verifying their qualifications with their respective boards. Such a measure would make it easy for the emigrant doctors to pursue short term contracts without having to go through the trouble of securing registration.

Another potential obstacle to diaspora engagement is the attitude of medical doctors who are in Zimbabwe. The interview respondents indicated that those taking part in these programmes are likely to face hostility from their counterparts in Zimbabwe. First, some see those in the diaspora as 'sell-outs' who left when the conditions in the country were difficult and now want to come back when there are signs that the economy is recovering. Secondly, they have charted their own path in trying circumstances and do not want someone coming to tell them that they need to make certain changes at the health institutions which they run. This element of protectiveness may lead in-country professionals to resent the short-term returnees:

> You get resistance from your colleagues; they don't want you there. I know of somebody who has offered to run a clinic but no one is interested. So it's quite a difficult one. There are a lot of problems that need to be sorted out first, a lot of egos that need to be straightened out before you get things to run properly. Everyone is always scared of what are your ulterior motives; there is a lot of suspicion on both sides.[90]

A further issue concerns the impact of the reinvigoration of Zimbabwe's health system on the livelihood of the doctors that are in Zimbabwe. Almost all the senior doctors that remain in Zimbabwe serve in private hospitals in addition to their public service jobs. It is common practice for the doctors to use public hospitals as a source of patients for their private surgeries. If a patient needs specialised treatment that cannot be offered in public hospitals they refer them to their surgery or to a surgery run by one of their close friends. In this way, the doctors generate business for their private practices as well as surgeries run by their close

connections. Assuming that the emigrant doctors were to come back and probably mobilise equipment from their overseas bases, the capacity of the public hospitals to cater for difficult cases will be increased. This would mean that the cases that the doctors would have referred to their private practices will be reduced and this will affect their income. Dr Mary Chikomo observed that senior medical doctors in Zimbabwe "have had their territories charted and they wouldn't want to be destabilised by returning people. Say you go back to Zimbabwe and set a state of the art surgery near to someone's surgery that will surely create unnecessary chaos."[91]

Conclusion: Brain Drain or Brain Gain?

Zimbabwe has lost at least 50 percent of its medical doctors over the past two decades. Their departure has left the country's health institutions severely understaffed and severely affected the quality of service delivery. Most of them are unlikely to ever return permanently to Zimbabwe even with economic and political stability in the country. At the same time, few have cut their ties with the country. The clearest sign of this is their remitting behaviour.

The majority of physicians outside the country continue to remit cash and goods to their families at home. However, the direct developmental impact of the remittances is questionable since they are used mostly for poverty alleviation and not productive investment. Some have made the argument in other contexts that the development impact of remittances is always more indirect, as they are used to buy goods which promotes growth and stimulates demand.[92] This argument is problematic in the Zimbabwe case for a number of reasons. Zimbabwean industry has ground to a halt and most of the goods being sold are from South Africa. Middlemen, retailers and South African-based manufacturers are the main beneficiaries. Recent literature suggests that migrant remittances compensate for the loss of skilled professionals such as medical doctors.[93] However, doctors are expensive to train and the volume of remittance flows certainly does not match the cost of training a physician in the first place.[94]

Given the low likelihood of permanent return, diaspora engagement offers the best policy alternative for Zimbabwe. The study has shown that there is a large amount of goodwill amongst the medical diaspora. There are a lot of emigrant doctors willing to contribute in various ways to the re-development of Zimbabwe's health delivery system. This does not mean that they necessarily want to come back to Zimbabwe permanently but they are willing to contribute for short periods of time and go back to their bases abroad. Specifically, Zimbabwe can benefit through the

provision of professional expertise at the medical school and professional expertise in the country's health institutions. In addition, the professionals could offer technical help in setting up various units that are not presently available in Zimbabwe. Telemedicine is also likely to yield considerable results provided the relevant support structures are available.

The diaspora option could potentially yield positive results for Zimbabwe. However, there is a need to address the obstacles to greater engagement and to disaggregate diaspora initiatives according to the expected participation levels of the emigrants. Diaspora initiatives need to appeal to those who are interested in returning to the home country temporarily and also those who would want to participate from their bases outside the country. If the professionals are made aware of the range of options available to them, there is likely to be great interest in diaspora engagement. However, these benefits will only be fully realised in a stable economic and political environment.

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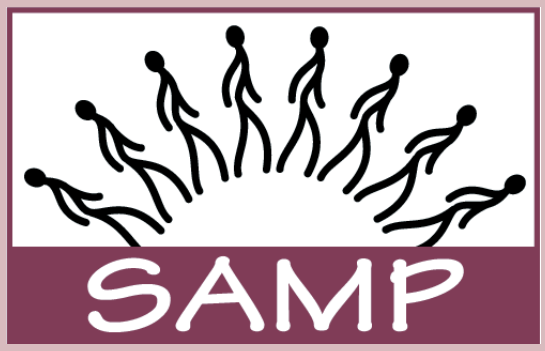

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