

Wilfrid Laurier University

Scholars Commons @ Laurier

Southern African Migration Programme

Reports and Papers

2014

No. 65: Brain Drain and Regain: The Migration Behaviour of South African Medical Professionals

Jonathan Crush

Balsillie School of International Affairs/WLU, jcrush@wlu.ca

Abel Chikanda

University of Kansas

Ivy Bourgeault

Southern African Migration Programme

Ronald Labonté

Southern African Migration Programme

Gail Tomblin Murphy

Southern African Migration Programme

Follow this and additional works at: <https://scholars.wlu.ca/samp>



Part of the [African Studies Commons](#), [Economics Commons](#), and the [Migration Studies Commons](#)

Recommended Citation

Crush, J., Chikanda, A., Bourgeault, I., Labonté, R. & Murphy, G.T. (2014). Brain Drain and Regain: The Migration Behaviour of South African Medical Professionals (rep., pp. 1-56). Waterloo, ON: Southern African Migration Programme. SAMP Migration Policy Series No. 65.

This Migration Policy Series is brought to you for free and open access by the Reports and Papers at Scholars Commons @ Laurier. It has been accepted for inclusion in Southern African Migration Programme by an authorized administrator of Scholars Commons @ Laurier. For more information, please contact scholarscommons@wlu.ca.

BRAIN DRAIN AND REGAIN:
THE MIGRATION BEHAVIOUR
OF SOUTH AFRICAN
MEDICAL PROFESSIONALS

BRAIN DRAIN AND REGAIN:
THE MIGRATION BEHAVIOUR
OF SOUTH AFRICAN
MEDICAL PROFESSIONALS

JONATHAN CRUSH, ABEL CHIKANDA, IVY BOURGEAULT,
RONALD LABONTÉ AND GAIL TOMBLIN MURPHY

SERIES EDITOR:
PROF. JONATHAN CRUSH

SOUTHERN AFRICAN MIGRATION PROGRAMME (SAMP)
INTERNATIONAL MIGRATION RESEARCH CENTRE (IMRC)

2014

ACKNOWLEDGEMENTS

SAMP would like to acknowledge the support of the International Development Research Centre (IDRC) for its research programme on Migration, Poverty and Development in Southern Africa. The 2013 survey reported on in this publication was carried out with support from the Canadian Institutes of Health Research (CIHR), Grant No. 106493. The report does not necessarily reflect the opinions of the CIHR or IDRC. The authors wish to thank Bronwen Dachs and Mariella Salamone for their assistance with the preparation of this report. Vivienne Runnels and Adrian Mackenzie provided comments on an earlier draft. Benjamin Dadon and Ray-Ann Fisher of MEDpages were especially helpful.

Published by the Southern African Migration Programme (SAMP) at University of Cape Town, P/B Rondebosch, Cape Town, South Africa, and International Migration Research Centre (IMRC), Waterloo, Ontario, Canada

© Southern African Migration Programme (SAMP) 2014

ISBN 978-1-920596-07-1

First published 2014

Production by Bronwen Dachs Müller, Cape Town

All rights reserved. No part of this publication may be reproduced or transmitted, in any form or by any means, without prior permission from the publishers.

Printed by Megadigital, Cape Town

CONTENTS	PAGE
EXECUTIVE SUMMARY	1
INTRODUCTION	7
IS THERE A SHORTAGE?	11
A CHANGING HEALTH SYSTEM	15
SURVEY METHODOLOGY	20
PROFILE OF HEALTH PROFESSIONALS	21
PERSONAL CHARACTERISTICS	21
TRAINING PROFILE	23
PERCEPTIONS OF WORKING AND LIVING CONDITIONS	25
WILL EMIGRATION WANE?	28
REASONS FOR EMIGRATION	33
DIMENSIONS OF RETURN MIGRATION	36
WILL RETURN MIGRANTS LEAVE AGAIN?	41
CONCLUSION	45
ENDNOTES	47
MIGRATION POLICY SERIES	54

LIST OF TABLES	PAGE
TABLE 1: GROWTH IN OTHER HEALTH PROFESSIONS, 2007-2013	11
TABLE 2: SPECIALIST AND GENERAL MEDICAL GRADUATES 1998–2006	12
TABLE 3: MEDICAL GRADUATES IN SOUTH AFRICA, 2000–2008	12
TABLE 4: VACANT MEDICAL TRAINING POSTS, 2009	13
TABLE 5: SECTORAL DISTRIBUTION OF MEDICAL DOCTORS, 2011–2013	13
TABLE 6: RATES OF ENTRY OF HEALTH PROFESSIONAL GRADUATES INTO PUBLIC SECTOR, 2002–2010	14

TABLE 7: VACANT POSTS IN THE PUBLIC HEALTH SECTOR, 2006-2010	14
TABLE 8: SCENARIO FOR SUPPLY OF DOCTORS IN SOUTH AFRICA, 2010-2020	15
TABLE 9: SAMPLING FRAME AND SURVEY RESPONSES	20
TABLE 10: SEX OF SURVEY RESPONDENTS BY PROFESSION	21
TABLE 11: STARTING DATE FOR WORKING AS HEALTH PROFESSIONAL	21
TABLE 12: MARITAL STATUS OF SURVEY RESPONDENTS	22
TABLE 13: EMPLOYMENT SECTOR OF SPOUSES	23
TABLE 14: MAIN REASON FOR ENTERING HEALTH PROFESSION	24
TABLE 15: TYPE OF TRAINING INSTITUTION ATTENDED BY HEALTH PROFESSIONALS	24
TABLE 16: SATISFACTION WITH WORKING CONDITIONS (% SATISFIED/VERY SATISFIED)	26
TABLE 17: MONTHLY HOUSEHOLD INCOME BEFORE TAX	26
TABLE 18: SATISFACTION WITH LIVING CONDITIONS (% SATISFIED/VERY SATISFIED)	27
TABLE 19: SATISFACTION WITH POLITICAL ENVIRONMENT IN SOUTH AFRICA, 2013 (% SATISFIED/VERY SATISFIED)	28
TABLE 20: AMOUNT OF CONSIDERATION GIVEN TO EMIGRATION BY SEX, RACE AND AGE	30
TABLE 21: LIKELIHOOD OF EMIGRATION (% VERY LIKELY)	30
TABLE 22: LIKELIHOOD OF EMIGRATION BY SEX, RACE AND AGE	31
TABLE 23: MOST LIKELY EMIGRATION DESTINATION OF HEALTH PROFESSIONALS	32
TABLE 24: LENGTH OF INTENDED STAY ABROAD	32
TABLE 25: IMPORTANCE OF WORKING CONDITIONS IN EMIGRATION DECISION (% VERY IMPORTANT)	34
TABLE 26: IMPORTANCE OF LIVING CONDITIONS IN EMIGRATION DECISION (% VERY IMPORTANT)	35

TABLE 27: OTHER COUNTRIES WORKED IN BY SOUTH AFRICAN-TRAINED DOCTORS	37
TABLE 28: REASONS FOR RETURN: FOREIGN COUNTRY FACTORS	38
TABLE 29: REASONS FOR RETURN: SOUTH AFRICAN FACTORS	38
TABLE 30: COMPARISON OF SATISFACTION WITH WORK CONDITIONS (% SATISFIED/VERY SATISFIED)	40
TABLE 31: COMPARISON OF SATISFACTION WITH LIVING CONDITIONS (% SATISFIED/VERY SATISFIED)	40
TABLE 32: COMPARISON OF SATISFACTION WITH GOVERNMENT POLICIES (% SATISFIED/VERY SATISFIED)	41
TABLE 33: LIKELIHOOD OF EMIGRATION BY MIGRATION STATUS (% VERY LIKELY)	42
TABLE 34: IMPORTANCE OF WORKING CONDITIONS IN DECISION TO EMIGRATE (% VERY IMPORTANT)	43
TABLE 35: IMPORTANCE OF LIVING CONDITIONS IN DECISION TO EMIGRATE (% VERY IMPORTANT)	44

LIST OF FIGURES	PAGE
FIGURE 1: REGISTERED MEDICAL PRACTITIONERS IN SOUTH AFRICA (INCLUDING SPECIALISTS), 2002-2013	11
FIGURE 2: NUMBER OF PATIENTS ON ART IN SOUTH AFRICA, 2004–2013	16
FIGURE 3: NUMBER OF FACILITIES OFFERING ART BY PROVINCE, 2005-2009	17
FIGURE 4: AGE PROFILE OF SURVEY RESPONDENTS	22
FIGURE 5: CONSIDERATION GIVEN TO EMIGRATION	29
FIGURE 6: CHANGE IN CONSIDERATION GIVEN TO EMIGRATION (IN PREVIOUS 5 YEARS)	29
FIGURE 7: APPLICATIONS FOR WORK AND RESIDENCE PERMITS AND REGISTRATION ABROAD	32
FIGURE 8: PROPORTION WHO WOULD SEND REMITTANCES AFTER DEPARTURE	33

FIGURE 9: CONSIDERATION GIVEN TO EMIGRATION (% A GREAT DEAL)	41
FIGURE 10: APPLICATIONS FOR WORK AND RESIDENCE PERMITS AND REGISTRATION ABROAD (RETURN MIGRANTS)	42
FIGURE 11: APPLICATIONS FOR WORK AND RESIDENCE PERMITS AND REGISTRATION ABROAD (NON-MIGRANTS)	42

EXECUTIVE SUMMARY

Since the end of apartheid, South Africa has experienced a significant outflow of health professionals. The out-migration of health professionals from the country is part of a broader global trend of health professional migration from the Global South to the Global North. In the health sector, this “brain drain” has led to a significant decline in the quality of care in affected countries. The costs of health professional migration for countries of origin are usually measured in terms of lost investment in training and the gaps in medical care left by their departure. One recent study, for example, estimated that the cost to South Africa in lost investment in training from the emigration of health physicians to Australia, Canada, the United States and the United Kingdom amounts to USD1.4 billion.

Previous studies have predicted that medical migration from South Africa is unlikely to subside in the short and medium term as health professionals and trainees exhibit very high emigration potential. This report provides an updated (2013) picture of the state of mind of South African health professionals. It also allows an assessment of whether professional attitudes and perceptions have changed between 2007 and 2013 including (a) whether levels of satisfaction with work and life in South Africa have improved or worsened; (b) whether emigration potential has declined or intensified amongst health professionals and (c) whether the “brain drain” from South Africa is likely to continue. These questions are of particular relevance given various changes in the health sector since 2007.

Return migration has been advocated internationally as an antidote to the brain drain and an important downstream benefit for countries of origin in the South. This report therefore provides important new information about the implications of health professional return migration to South Africa. Another strategy adopted by some countries is to use immigration policy as a means of dealing with health professional shortages. South Africa is a destination country for health professionals from some countries although, with the exception of official schemes to temporarily import Cuban and Tunisian doctors, this is not official policy. Significantly, the medical professions have only just appeared on the government scarce-skills lists that have been published for nearly a decade. This survey provided an opportunity to profile a sub-group of non-South African doctors to assess whether they are more inclined to remain in the country than their South African counterparts.

The current survey was developed in collaboration with the Institute of Population Health at the University of Ottawa as part of a CIHR-funded global project on health professional migration from India, Jamaica, the Philippines and South Africa. The questionnaire was hosted on the MED-pages website and potential respondents were invited by email to complete the survey. A total of 1,383 completed questionnaires were received from

physicians, dentists and pharmacists – a response rate of 7%.

The 2007 and 2013 surveys showed extremely high levels of dissatisfaction amongst health professionals with working and living conditions in South Africa. In terms of working conditions, in 2007 there are only two measures on which more than half of health professionals were satisfied: their relationship with colleagues and the quality of their training. Not only had satisfaction with these two facets increased further by 2013, the number of indicators on which more than half of the respondents were satisfied increased from 2 to 7. These included the ability to find a desirable job, job security, prospects for professional advancement, workplace infrastructure and workplace morale. On 11 indicators, however, more than half remained dissatisfied in 2013, including personal safety in the workplace and workload (though both had improved since 2007). On a small number of indicators there was a decline in satisfaction between 2007 and 2013, including relations with management and the risk of contracting Hepatitis B and multidrug-resistant tuberculosis (MDR-TB). The majority of health professionals remain dissatisfied with the economic rewards of their jobs. Only a third were satisfied with their level of remuneration (up from 20% in 2007). Less than 20% were satisfied with their fringe benefits and levels of taxation (down from 13% to 9%). Dentists are particularly unhappy with their earnings.

While perceptions of the working environment improved between 2007 and 2013, health professionals' views about living conditions in the country did not. Indeed, on most indicators there was a decline in levels of satisfaction. The overall picture remains very negative, however, with satisfaction levels greater than 50% on only two indicators (medical services and housing). Only 8% were satisfied with levels of personal safety and their children's future prospects in South Africa, while a mere 7% were satisfied with the safety of their families. Another possible driver of emigration relates to dissatisfaction with the political environment in the country and with policies in the health sector in particular. Questions on this issue were not posed in 2007 so there is no baseline for comparison with the 2013 findings. Levels of satisfaction with government and government policies are currently extremely low. Only 4% of the respondents were satisfied with government economic policies and 7% with government policy in the health sector.

Interest in emigration remains very high amongst health professionals in South Africa. For example:

- 40% of those surveyed in 2013 had given emigration a great deal of consideration and 45% had given it some consideration. Only 14% had never considered it. Dentists were most likely to have given most consideration to emigration (at 49%), followed by doctors (40%) and then pharmacists (39%).

- 42% said they had given emigration more consideration over the last five years and only 18% said they had given it less. Dentists had been giving emigration much more thought than before (53% more and only 11% less).
- The amount of consideration given to leaving South Africa clearly varies by sex, race and age. For example, male health professionals give more consideration to the possibility than their female counterparts. In terms of racial breakdown, Indian health professionals give most consideration to leaving, followed by Coloured, Black and finally White professionals. As age increases, the proportion giving emigration a great deal of consideration falls (from 48% amongst those in the 22-34 age group to 35% amongst those aged 50 and over).
- In total, 51% said it was likely they would leave within five years, 30% within two years and 11% within six months. Dentists, again, were most likely to leave (63% in five years, 41% in two years and 9% within six months). There are no major differences with answers given in 2007 about the likelihood of leaving, suggesting that emigration potential has not changed a great deal in the intervening years and remains extremely high.
- In total, 25% had a permit to work in another country or had applied for one and 11% had applied for or had permanent residence elsewhere. Almost half (47%) had taken an examination or applied for registration with their professional body in another country.
- The most likely emigration destinations for South African health professionals remain Australia, the United Kingdom, Canada, the United States and New Zealand. Doctors are most likely to emigrate to the UK, followed by Australia and Canada, whereas dentists and pharmacists are far more likely to emigrate to Australia.

This survey focused on understanding, from the perspective of health professionals themselves, which are the main factors and which are less important in weighing up the decision to emigrate. "Lack of respect from government" rates as the single most important factor (with 62% viewing it as a very important part of the decision to leave). Professionals in all three groups rated this as the single most important factor. Other factors that more than half the respondents agreed were very important included poor workplace facilities and personal security. Higher earning potential was important for 60% of dentists but only 41% of doctors. Factors that were less important for all professionals than one might have predicted included workload, inadequate work benefits, and workplace morale. While the vast majority of health professionals were dissatisfied with management, only 42% thought this was a good reason to leave. The two most important living conditions cited by health professionals as reasons for emigrating were the level of corruption in the country (mentioned by 83%) and personal

and family safety (mentioned by 81%). Other factors mentioned by more than half of the professionals included the future of their children, the quality and upkeep of public infrastructure, affirmative action and Black Economic Empowerment (BEE), government economic policies, levels of poverty and inequality in the country, the adequacy of medical services for family, taxation and finding a good school for their children.

In sum, three types of factors seem to be most important: first, there is a great deal of antipathy towards government economic and affirmative action policies and to perceptions of official corruption. Second, issues of personal and family safety (in turn related to the country's high rates of violent crime) are clearly a major concern. Third, the future prospects for their children in South Africa weigh heavily on their minds. Dentists and pharmacists have stronger views on almost every factor than doctors.

Studies of the South African health brain drain have tended to assume that locally-trained professionals either leave for good after graduation or after working for a period in the country. However, 42% of the South African-trained health professionals captured in this survey had experience working in other countries, which suggests that there is considerable return migration. The proportion was highest amongst doctors (at 48%) and lowest amongst pharmacists (at 9%) with dentists at 36%. Within the physician group, more specialists had worked outside the country (52%) than general practitioners (42%). Two-thirds of the doctors who had worked outside South Africa did so in the UK, with smaller numbers in Canada, Australia, New Zealand and the US. The vast majority (85%) had worked abroad for less than three years (with 38% working for less than one year). This suggests that most South African doctors with overseas experience went with the express purpose of working temporarily. This is confirmed by the reasons given for returning to South Africa, where 62% said they had returned because their job was of a temporary nature. Only 15% had been away for longer than four years and could more accurately be described as classic return migrants. Amongst the other findings were the following:

- The most important return factors included family pressures (the family's desire to return to South Africa and/or because the family was unhappy overseas). Other important drivers of return migration were the weather and poor social life overseas. Work-related factors, as well as general economic and political conditions in the foreign country, were far less important in the decision to return;
- Important pull factors were the offer of a permanent job in South Africa and the prospect of greater job satisfaction. However, the most important pull factors were not job-related or economic, but social and environmental and included the South African physical environment, family ties and social life in South Africa;
- Returnees have higher satisfaction levels on 12 of the 18 workplace

indicators but the differences are very small and do not fit a discernible pattern that could be related to their experience abroad;

- Return migrants are also more satisfied than non-migrants with living conditions in South Africa but, again, the differences are not statistically significant. However, levels of satisfaction amongst return migrants are low across a range of work and living measures. Less than half of the return migrants were satisfied with 10 of the 17 workplace indicators and 10 of the 13 living conditions indicators. Return migrants are consistently less enamoured with South African government policies than non-migrants;
- Immigrant doctors are significantly less satisfied with working conditions in South Africa than either South African returnees or non-migrants. In contrast, immigrant doctors have a generally more positive attitude to living conditions in South Africa. However, this does not mean that immigrant doctors exhibit high levels of satisfaction overall. On the contrary, the actual proportion who were satisfied was less than 50% on all indicators.

Does return to South Africa mean that the returnees will stay permanently or are less likely to leave the country than those who have never been away? Only 50% of the returnees said that their return was permanent, which suggests that re-emigration is a strong possibility for many. Indeed, the survey found that those who have experience working in other countries are generally more likely to emigrate than those who have not:

- 45% of return migrants said they had given a great deal of consideration to emigration compared with only 34% of non-migrants. Similarly, only 10% of return migrants said they had given no consideration to leaving, compared to 17% of non-migrants;
- Return migrants also indicated that they were more likely to leave than non-migrants. At each of three different time periods (within six months, two years and five years) the proportion of return migrants likely to leave was slightly higher.
- Immigrant doctors had given more consideration to emigration than non-migrants but less than return migrants. Their likelihood of leaving was similar in the short and long term, though fewer said it was likely they would leave within two years. Within five years, half expected to have left South Africa.

Given that approximately half of all three groups of doctors think it very likely that they will have left South Africa in five years time, it is important to ascertain if the same things are likely to drive them away. First, with regard to the relative importance of workplace factors, there are few significant differences between the three groups. The “lack of respect from government” is the major push factor for both groups of South African doctors but is less important for immigrants. Second, for all three groups,

living conditions in the country are stronger drivers of emigration than working conditions. Immigrant doctors are less concerned than the other two groups about corruption, affirmative action and government economic policies, but they are equally concerned about issues such as personal security and their children's future.

Since 2007, the South African government has continued its rhetorical campaign against the brain drain abroad and largely lived up to its commitment not to "poach" replacement health professionals from other countries in the South. Government has also begun to think about various retention strategies. Between 2007 and early 2013, when the surveys discussed in this report were implemented, there were a number of important changes in the South African health-care system. These are certainly not all directed at health professional retention but they have all had an actual or potential impact on health professionals. These changes, and their implications for the health professions, are discussed in detail in this paper. The major finding is that these changes have had very little impact on the attitudes of health professionals towards their working conditions and to their emigration potential. The majority of professionals remain extremely dissatisfied with their working conditions, across a wide range of indicators. At the same time, it is not primarily working conditions that are driving health professionals out of the country. In other words, amelioration and improvement of work conditions will not, in themselves, reduce the brain drain and the high emigration potential of those who remain.

Emigration is being driven primarily by factors beyond the health sector. Addressing health sector problems alone is therefore unlikely to stop the exodus. Certainly, there is a great deal of dissatisfaction with government in general, and health sector policies in particular. But it is not clear that the almost universal animosity towards government is sufficient to induce people to leave. Rather it is combined with the feeling that government does not offer them and their families sufficient personal protection and does not provide an enabling environment within which to raise children and offer them a decent future. In the view of most health professionals, government is the problem, not part of the solution.

INTRODUCTION

South Africa is generally considered a middle-income developing country; however, extreme socio-economic inequality exists and the health status of South Africans is rooted in these disparities.¹ The country has high prevalence rates of both communicable and non-communicable diseases including TB, respiratory infection, HIV and AIDS, and heart disease. Other major contributors to the high mortality rate include road accidents and inter-personal violence.² To deal with this health burden, South Africa has parallel, and highly unequal, public and private health-care sectors.³ In 2010, total expenditure on health in South Africa amounted to 8.9% of GDP; 44% of expenditures occurred in the public sector and 56% in the private.⁴ However, nearly 80% of the population depends on access to the underfunded public sector for their health-care needs. The sector is also understaffed, especially in rural areas.⁵ In contrast, the private health sector, which services only 20% of the population, has facilities and services that are better than many countries in the North.⁶

Since the end of apartheid, South Africa has experienced a significant outflow of health professionals, prompting some to refer to their departure as “brain flight” rather than “brain drain.”⁷ The movement of health professionals from South Africa is part of a broader global trend that has recently been described as “a dominant pattern of international migration and a major aspect of globalization.”⁸ In the global health sector, this “brain drain” has led to a significant decline in the quality of care in affected countries.⁹ In the South African case, the actual numbers involved and the impacts of emigration on the health system are difficult to determine as South African migration data is inconsistent and of poor quality. In 2005, an estimated 13,000 South African-trained physicians were working in OECD countries, with 7,718 in the United Kingdom, 2,215 in the United States, 1,877 in Canada and 1,022 in New Zealand.¹⁰ Destination country statistics shed further light on the migration of health professionals from South Africa. In Australia, for example, South Africa was the fourth largest source of overseas doctors (after the UK, India and New Zealand), accounting for 2,000 (or 3%) of the nearly 60,000 doctors in 2010.¹¹ In Canada, the number of South African-trained physicians increased from 1,444 in 2000 to 2,193 in 2009, a 52% increase.¹² In 2009, 40% of all South African physicians who entered Canada were specialists. Data from the American Medical Association shows that in 2011 there were 1,474 physicians in the US who had graduated from three South African medical schools (University of the Witwatersrand, University of Cape Town and University of Pretoria), amounting to almost one-third of all African-trained physicians in the country.¹³

The costs of “brain drain” migration to countries of origin are usually measured in terms of lost investment in the training of migrating health

professionals and the gaps in medical care left by their departure. One recent study, for example, estimates that the cost to South Africa in lost investment in training from the emigration of health physicians to Australia, Canada, the US and the UK amounts to USD1.4 billion.¹⁴ Insights from migration network theory show that many migrating professionals move with their families and, when they reach their destination, they act as a source of information for other professionals seeking to undertake a similar move.¹⁵ This means that family members (particularly spouses) with their own skills are also lost to the country of origin, while the migrant effectively serves as an informal recruiter for the destination country. In Australia, each migrating South African doctor brings along about four or five other people and many of the movements are planned and executed at the extended family level.¹⁶ In Canada, as many as 20% of the immigrants from the Southern African Development Community (SADC) region entered the country under the family-class category, which is designed to reunite families and comprises foreign nationals including spouses, dependant children, parents and grandparents sponsored by family members in Canada.¹⁷

Previous research has shown that the medical “brain drain” from South Africa is unlikely to subside in the short and medium term as health professionals and trainees exhibit very high emigration potential. SAMP’s 2005 Potential Skills Base Survey, for example, found that four in ten final-year students say they have given “a great deal” of consideration to moving to another country to live and work.¹⁸ A survey of 876 final-year students at eight South African medical schools in 2007-2008 found that 55% planned to work abroad after graduation.¹⁹ Although three-quarters of these students said they would do so on a temporary basis, there is a well-established tendency for physicians to leave temporarily and remain permanently. A more recent HEARD survey of 260 students at three South African medical schools found that three-quarters had given some or a great deal of consideration to leaving South Africa.²⁰ Despite holding strong opinions about the negative consequences of physician out-migration for South Africa, a quarter said it was likely they would leave within two years of qualification and 58% that it was likely within five years. Finally, a 2011 survey of first and final-year health sciences students at three South African universities (Cape Town, KwaZulu-Natal and Limpopo) found that just over half intended to work in another country.²¹ This varied by university (from 45% at Limpopo to 66% at UCT), sex (with male students more likely to want to work overseas) and by place of origin (with students from urban areas more likely to leave than their rural counterparts). Career development was the most important motivation for wanting to work in another country, followed by financial reasons and job opportunities. Another study of final-year medical students in six African countries found higher levels of interest in emigration amongst South African students.²²

Previous studies demonstrate that the emigration potential amongst working health professionals in South Africa is also extremely high. Almost half of the working South African health-care professionals in a 2007 SAMP survey, for example, said they had given emigration a great deal of consideration.²³ Emigration potential varied by type of profession with nearly 70% of pharmacists, 58% of dentists and 48% of physicians having seriously considered leaving. Emigration potential declined with age from 52% for those in the 22-34 age category to 37% for those over 50. Asked how likely it was that they would actually leave South Africa, and when, 8% said they would probably leave within six months, a quarter within two years and half within five years. Amongst those planning an early departure were younger, public-sector physicians, pharmacists and dentists. A 2009 HEARD survey of health professionals in KwaZulu-Natal found a similarly high predisposition to emigrate although the incentive of higher earnings overseas was not a statistically significant predictor of emigration intentions.²⁴ Unlike their student counterparts, health professionals are more inclined to cite poor working conditions and social problems such as the high crime rate as reasons for leaving.

This report provides an updated picture of the state of mind of South African health professionals in 2013. The survey, conducted in partnership with the Institute of Population Health at the University of Ottawa, asked many of the same questions posed to health professionals by SAMP in 2007. This allows us to assess what changes, if any, there have been in health professional attitudes and perceptions in the past few years. The 2007 survey found extremely high levels of personal and professional dissatisfaction with working conditions and the quality of life more generally amongst health professionals, and a strong desire to emigrate to countries such as the UK, US, Australia and Canada. A comparison of the 2007 and 2013 findings allows us to assess (a) whether levels of satisfaction with work and life in South Africa have improved or worsened; (b) whether emigration potential has declined or intensified amongst health professionals and (c) whether the “brain drain” from South Africa is likely to continue. These questions are of particular relevance given various changes in the health sector since 2007 and provide an opportunity to assess whether retention strategies are having any impact on the thinking of health professionals in South Africa.

The 2007 SAMP survey found that 35% of respondents had experience working overseas before returning to South Africa.²⁵ This unanticipated finding raised the important question of whether South African health professionals are engaged in “return migration.” This form of migration has been advocated internationally as an antidote to the “brain drain” and an important downstream benefit for countries of origin in the South.²⁶ Research on South African return migration shows that this is a more

common phenomenon than previously thought.²⁷ On the other hand, recent research amongst the South African medical diaspora in Canada found low interest in return migration.²⁸ While 43% indicated that they have considered returning to South Africa, only 7% said they were likely to return within two years and 10% within the next five years. Few had taken any concrete steps to return, however. Less than 2% had applied for a job in South Africa in the year prior to the survey although 13% had had a job offer there. By including a lot more questions about return migration in the latest survey, we are able to obtain a more nuanced picture of the phenomenon in South Africa. This report therefore provides important new information about the implications of health professional return migration to South Africa.

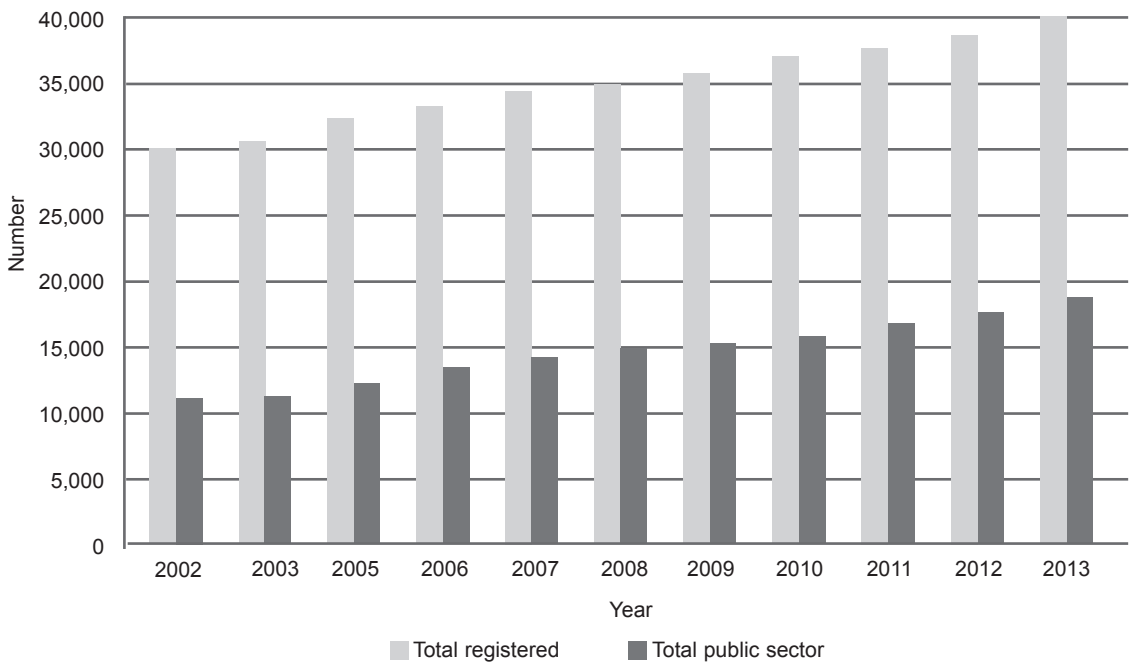
Finally, South Africa has itself become a destination for health professionals from other countries. For many years, government had a policy of not recruiting health workers from other developing countries and the inflow was therefore relatively small. Instead, it entered into bilateral agreements with countries such as Cuba for the temporary import of physicians to work in underserviced, rural areas. Over 450 Cuban doctors entered South Africa on these assignments and there was a reverse flow of 1,200 South African students to Cuba for medical school.²⁹ In 2007, South Africa signed a second bilateral agreement with Tunisia for Tunisian doctors to work temporarily in rural areas of South Africa. South Africa's skills-based immigration policy given effect by the 2002 Immigration Act introduced a system of quota work permits for skills in short supply in South Africa. Prior to 2014, the medical professions had never appeared on the scarce-skills lists that are published every year or two. Indeed, in 2006, the government limited the employment of non-South African health professionals to three-year non-renewable contracts.³⁰

The National Human Resources for Health Plan proposed that the total foreign workforce should not exceed 5% of the total health workforce in each professional category.³¹ According to one report (using 2006 data), this would mean cutting the number of foreign doctors in the country from just over 3,000 to around 1,600. Since most of these physicians work in underserviced rural areas, the impact on the rural public health service would be "devastating."³² Whether these policies were ever enforced is unclear and the numbers of non-South African doctors currently working in South Africa is unknown. However, they clearly signalled that South Africa (unlike many other countries) was not prepared to address its health professional shortages through a more welcoming immigration policy. This survey provided an opportunity to build a profile of the sub-group of non-South African doctors who work in the country in order to assess if their demographic, socioeconomic and attitudinal profile differs from South African health professionals.

IS THERE A SHORTAGE?

What impact has the “brain drain” had on the supply of medical professionals in South Africa? Despite the ongoing loss, the total number of medical practitioners registered with the Health Professional Council of South Africa (HPCSA) rose from 29,903 in 2002 to 39,847 in 2013, an increase of 33% (Figure 1). The numbers in other health professions such as dentistry, pharmacy, physiotherapy and psychology also experienced significant growth between 2007 and 2013 (Table 1).

Figure 1: Registered Medical Practitioners in South Africa (including Specialists), 2002-2013



Sources: Econex and Health Systems Trust. Note: Data for 2004 missing

	Dentists	Pharmacists	Physiotherapists	Psychologists
2007	4,937	11,547	6,310	5,059
2008	5,110	11,905	6,498	5,314
2009	5,265	No data	6,767	5,582
2010	5,320	12,218	7,037	5,777
2011	5,409	12,460	7,160	5,937
2012	5,572	13,003	7,370	6,150
2013	5,769	13,364	7,622	6,359
% change 2007–2013	16.9	15.7	20.8	25.7

Source: Health Systems Trust

South Africa has eight medical schools that produce both general and specialist medical practitioners. Between 1998 and 2006, South African medical schools produced an average of 1,300 new medical graduates and 300 specialists annually (Table 2).³³ A total of 11,745 new medical doctors graduated from the country's medical schools during the period 2000-2008 (Table 3).³⁴ The number peaked in 2005 and then started to fall. A recent survey of medical school deans in South Africa showed that most are failing to meet their enrolment targets because of funding limitations. As a result, 28% of medical school places were vacant in 2009 (Table 4).

Year	Graduate specialist	Graduate general	Total	Cumulative total
1998	263	1,131	1,394	1,394
1999	304	1,131	1,435	2,829
2000	298	1,131	1,429	4,258
2001	285	1,229	1,514	5,772
2002	306	1,212	1,518	7,290
2003	324	1,296	1,620	8,910
2004	335	1,394	1,729	10,639
2005	321	1,511	1,832	12,471
2006	308	1,366	1,674	14,145

Source: Strachan et al, "More Doctors and Dentists are Needed" p. 527.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
UCT	134	162	167	155	159	150	185	160	164	1,436
UL	235	249	243	283	238	294	239	200	153	2,134
UKZN	90	116	132	165	178	298	201	189	224	1,593
UFS	110	115	109	88	167	106	105	129	109	1,038
UP	203	212	203	184	180	197	207	198	200	1,784
SU	140	140	129	177	148	150	170	149	167	1,370
WSU	26	43	48	56	119	69	89	97	103	650
Wits	193	192	181	188	205	247	170	175	189	1,740
Total	1,131	1,229	1,212	1,296	1,394	1,511	1,366	1,297	1,309	11,745

UCT = University of Cape Town, UL = University of Limpopo, UKZN = University of KwaZulu-Natal, UFS = University of Free State, UP = University of Pretoria, SU = Stellenbosch University, WSU = Walter Sisulu University, Wits = University of Witwatersrand
Source: Department of Health, Human Resources for Health South Africa.

	UCT	SU	Wits	UP	UKZN	FS	UL	WSU	Total
Filled	368	308	673	309	611	226	167	63	2,725
Vacant	116	80	173	97	293	63	126	89	1,037
Total	484	388	846	406	904	289	293	152	3,762
% Vacant	24.0	21.6	21.4	23.9	32.4	21.8	43.0	58.5	27.6

Source: Strachan et al, "More Doctors and Dentists are Needed" p. 526

The HPCSA collects data on the number of medical doctors who work in the public sector through the government's public sector Personnel and Salary Administration System. Even though the majority of South Africa's population relies on the public health system, less than half of the number of registered physicians work in the public sector (Figure 1). However, there are indications that the supply of medical doctors in the public sector is growing.³⁵ Between 2002 and 2012, for example, the numbers increased from 10,972 out of 29,903 registered medical practitioners (or 37%) to 17,287 out of 38,444 (or 45%). The other source of information on the employment of general practitioners and specialists is medical scheme industry estimates. According to this data, there were 12,014 general practitioners and 4,948 specialists in the public sector in 2013. These figures amounted to 64% and 42% of the total in practice (Table 5).³⁶

	2011		2012		2013	
	Public	Private	Public	Private	Public	Private
General practitioners	61.1	38.9	62.0	38.0	64.4	35.6
Medical specialists	42.7	57.3	42.7	57.3	42.4	57.6
Total	54.6	45.4	55.1	44.9	56.6	43.4

Source: Econex, "South African Private Healthcare Sector" p. 27

Accurate data about the number of medical doctors in the private sector is lacking partly because some medical doctors who work in the public sector also run their own private practices or work part-time in private clinics. Medical scheme data suggests that the number of general physicians in the private sector declined from 7,643 to 7,529 between 2011 and 2013, possibly indicating that the barriers to entry are high. On the other hand, medical specialists consolidated their dominance in the private sector: in 2011, 6,195 (or 57% of the total) were working in the sector against 4,620 (43%) in the public sector. By 2013, the number in both sectors had increased (to 6,726 and 4,948 respectively) but the rate of growth was faster in the private sector.

This private/public split is mirrored in data from the Colleges of Medicine of South Africa (CMSA), which shows that in 2010, 58% of general

practitioners and 44% of specialists worked in the public sector and 42% and 56% in the private.³⁷

Other data on the professional entry point of students graduating from medical school shows that there is a sizable gap between graduation rates and numbers joining the public sector. For instance, during the period 2002-2010 a total of 11,700 new doctors qualified to practise in South Africa, yet the public sector complement rose by only 4,403, which means that only 38% of graduates entered the public sector (Table 6).³⁸ The other 62% either specialized, entered the private sector or left the country. Rates for pharmacists were considerably higher (at 54%) while only 12% of dentists entered the public sector, indicative of the highly privatized nature of dental care in South Africa.

	Graduate output	Public sector post increase	Retention gap	Public sector entry rate %
Medical graduates	11,700	4,403	7,297	37.6
Dentistry	2,140	248	1,892	11.6
Pharmacy	3,645	1,960	1,685	53.8
Physiotherapy	2,934	497	2,437	16.9

Source: Department of Health, Human Resources for Health South Africa p. 33

Despite overall growth in the numbers of health professionals, vacancy rates in the public health system have remained stubbornly high and even increased over time (Table 7). The proportion of all vacant public sector posts increased from 29% in 2006 to more than 45% in 2010. The vacancy rate for medical practitioners was closer to 50%. One reason could, of course, be an increase in the number of allotted posts to cope with population growth and the treatment demands of the HIV and AIDS epidemic. However, it is clear that the number of health professionals employed in the public sector remains far below required levels.

	Medical practitioners (%)	Professional nurses (%)	All health professionals (%)
2006	29.9	31.5	29.0
2007	34.1	36.3	33.3
2008	34.9	40.3	35.7
2009	34.0	37.9	33.9
2010	49.0	46.3	42.5

Source: Health Systems Trust

The situation seems unlikely to improve in the near future. Statistical modelling suggests that the absolute number of physicians in South Africa will likely decline by 5,000 by 2020.³⁹ Accompanying this decline is a pro-

jected decrease in the doctor-to-patient ratio from 55 per 100,000 in 2010 to 46 per 100,000 in 2020 (Table 8). For general practitioners, the ratio is expected to decline from 36 to 30 per 100,000. For specialists, the ratio will decline from 19 to 16 per 100,000. Without appropriate ameliorative action, the remaining health professionals will experience heavier workloads and greater dissatisfaction with working conditions, which is a strong motive for emigration.

Table 8: Scenario for Supply of Doctors in South Africa, 2010-2020					
No. of physicians per 100,000 people					
Year	2010	2012	2015	2018	2020
GPs	35.9	34.6	32.8	31.2	30.2
Specialists	19.4	18.5	17.3	16.3	15.6
Total doctors	55.3	53.2	50.2	47.5	45.8

Source: Econex, "Human Resource Supply Constraint"

A CHANGING HEALTH SYSTEM

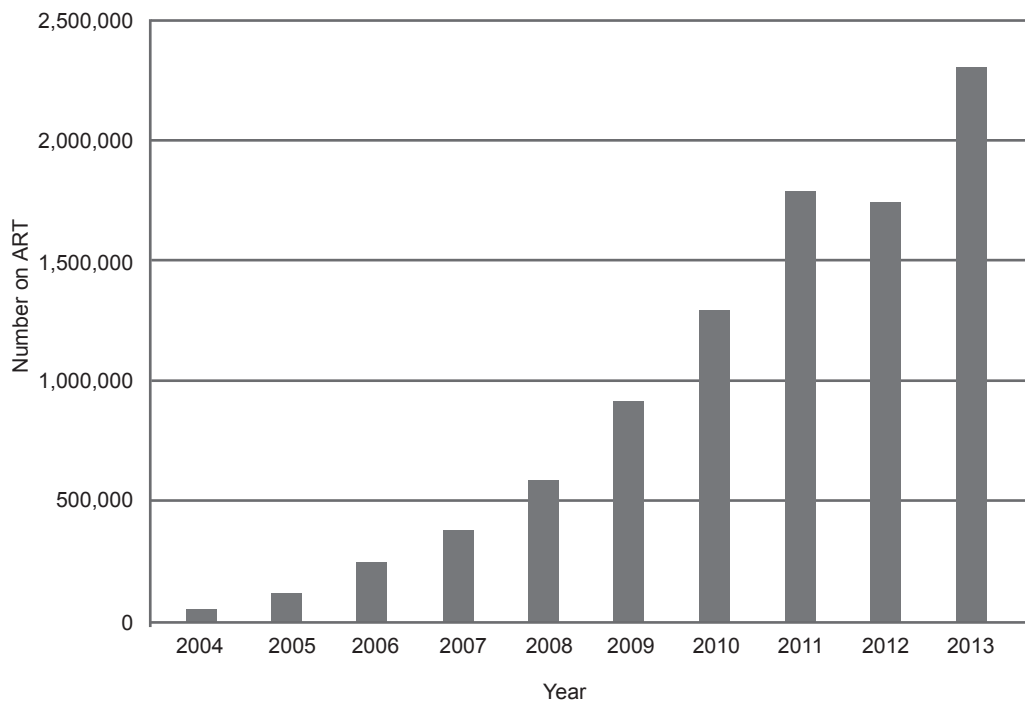
South Africa's health system has undergone several major changes since the previous SAMP survey in 2007.⁴⁰ Most are ongoing and their precise nature and impact has not been evaluated. However, it is important to specify what these changes consist of and the potential ways in which they might affect health professional attitudes and emigration intentions. The first arises from global concerns about the negative impact of the medical "brain drain" on countries in the Global South. In May 2010, the 193 member states of the World Health Assembly adopted the WHO Global Code of Practice on the International Recruitment of Health Personnel.⁴¹ The Code of Practice "establishes a global architecture, including ethical norms and legal and institutional arrangements, to guide national action and multilateral cooperation. Its key principles focus on developing sustainable health systems, protecting the human rights of migrant health workers, and supporting health systems in low- and middle-income countries."⁴²

More controversially, the Code proposes that countries adopt "ethical recruitment" policies that take into account the impact of health professional migration on source countries. However, the Code is both voluntary and short on specifics and only one country in the North (Norway) has stopped recruiting from the South. None of the major countries to which South African health professionals emigrate, with the possible exception of the United Kingdom, has taken a similar position.⁴³ The adoption of the Code is therefore unlikely to have much impact on health professional migration from the South. Although it is far too early to say, the greater impact of the implementation of the Code could be in improved working conditions of health professionals through addressing chronic personnel

shortages. This could certainly make for less stress in the workplace and reduce one of the driving forces of out-migration.

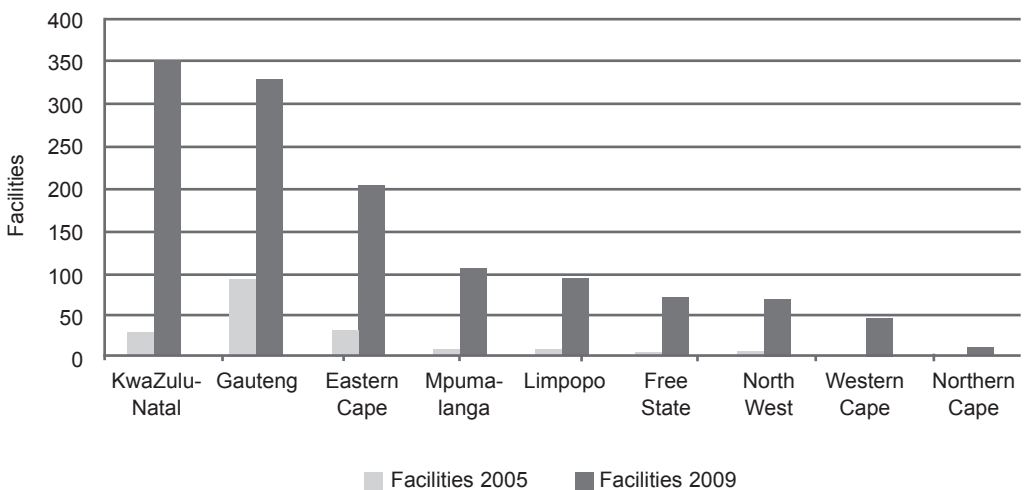
The second change concerns shifting demands on the health system and on health professionals brought about by the implementation of a comprehensive HIV and AIDS care treatment programme.⁴⁴ The Mbeki government's AIDS denialism was characterized by antipathy towards antiretroviral drugs, a massive burden of care for AIDS patients and the indefensible deaths of over 300,000 people.⁴⁵ The 2007 SAMP survey and other case study research showed that the epidemic was placing enormous strain on the health system and the country's health professionals. Since then, changes in the official attitude towards the epidemic have been "profound."⁴⁶ The ANC's decision to dethrone President Thabo Mbeki was thus a major boon for all HIV and AIDS patients. Free of the shackles of AIDS denialism, South Africa implemented a massive roll-out of antiretroviral therapy (ART) supported by the US through PEPFAR (the President's Emergency Plan for AIDS Relief).⁴⁷ The number of HIV-positive people in South Africa on PEPFAR-supported ART increased from 33,000 in 2005 to 630,000 in 2009 to over 1.7 million in 2012.⁴⁸ In total, the number of people receiving ART increased from 47,500 in 2004 to 912,000 in 2009 to 2,300,000 in 2013 (Figure 2).⁴⁹ By 2012, the HIV programme accounted for around 10% of the South African government's total health expenditure and 0.82% of the country's GDP.⁵⁰

Figure 2: Number of Patients on ART in South Africa, 2004–2013



The roll-out of ART has had several implications for the health professions. There is certainly concern that the full roll-out is hampered by health professional shortages that inevitably mean heavier workloads for existing staff.⁵¹ More positively, the burden of AIDS-related disease, palliative care and mortality has been reduced by ART, leading to fewer demands on an already-overburdened public health system and a possible reduction in work stress amongst health-care professionals. One study of health professionals in KwaZulu-Natal and the Western Cape found that a cohort involved in ART delivery reported lighter workloads, lower absenteeism and more job satisfaction than a cohort of non-ART colleagues.⁵² In South Africa, unlike other African countries, ART is largely managed by physicians. In 2010, a move towards nurse initiation and monitoring of ART was instituted although progress towards a cheaper nurse-based system has been slow.⁵³ This shift is likely to ease the patient load of physicians in the future. There has also been rapid growth in the number of facilities offering ART (from 184 in 2005 to 1,469 in 2009), especially in KwaZulu-Natal, Gauteng and the Eastern Cape (Figure 3).⁵⁴ NGOs play an important role in ART delivery and in 2010-2011 PEPFAR paid the salaries of 20,000 health workers in the NGO sector.⁵⁵ This has led to something of an internal “brain drain” into the NGO sector where working conditions and salaries are much improved over the public sector. The possibility of viable alternative employment within the NGO sector in South Africa may also have had a dampening effect on the pressures for out-migration.

Figure 3: Number of Facilities Offering ART by Province, 2005-2009



Source: Larson et al, “Supporting the Massive Scale-Up of Antiretroviral Therapy”

The third change of note is that government has adopted various financial and non-financial retention strategies to try to stem the brain drain out of the country, from rural to urban areas, and from the public to the

private sector. A Scarce Skills Allowance for medical doctors and specialists in the public sector, as well as other categories of health professionals, was introduced in 2004. The 15% allowance clearly recognized the need to provide greater financial incentives. A further Rural Service Allowance of 18-22% was introduced for selected health professionals in rural and other underserved areas.⁵⁶ An evaluation of the impact of the rural allowance on the retention of health professionals in disadvantaged areas found that between 28% and 35% of rural health professionals, mainly nurses, had changed their short-term career plans because of the introduction of the rural allowance.⁵⁷

Other retention strategies include community service for doctors, the clinical associates strategy and the occupation-specific dispensation (OSD). Community service was introduced for new medical graduates in 1998 and for nurses in 2008.⁵⁸ A recent evaluation of the programme found that a large number of the participants were positive about its value to their professional development and felt that they had made a community contribution during the year.⁵⁹ Participants placed in rural facilities were significantly more likely to plan for public sector work in the future. However, only a quarter intended to work in rural or underserved communities, which suggests that the programme is not achieving one of its primary long-term aims. Others have cautioned that community service may actually defeat its own end because young doctors assume that after one year they have done their duty and compensated society for the costs of their study.⁶⁰ However, the survey did find that only 6% were intending to work overseas in the following year, which might suggest that community service acts as something of a brake on emigration, in the short term at least.

In a number of low and middle-income countries with health human resource shortages, clinical associate schemes have been introduced. Clinical associates are mid-level health professionals who increasingly form the backbone of the primary health-care system in East African countries such as Kenya, Tanzania and Uganda. Clinical associates first entered the South African job market in 2011.⁶¹ The idea is that clinical associates will initially work in district hospitals with a shortage of doctors.⁶² They are currently being trained at three centres: the University of the Witwatersrand, University of Pretoria and Walter Sisulu University. However, the output of clinical associates has been low. Class sizes are small, ranging from 20 to 50, although one medical school recently increased its annual intake to 80.⁶³ The ultimate goal is to have five clinical associates per district hospital (which would mean training a total of 1,350 clinical associates). At current rates this would take until 2028.⁶⁴ Clinical associates are not expected or trained to replace, just to complement and ease the workload of, medical doctors. Hence, clinical associates are unlikely to be particularly effective in disadvantaged communities without supervision from doctors. There is always a danger that clinical associates will end up taking on duties for

which they are not trained, especially in under-served rural areas, as has been the experience in other countries.⁶⁵

The OSD was introduced in 2007 as a “financial incentive strategy to attract, motivate, and retain health professionals in the public health sector. The OSD policy defines the remuneration structure, frequency of pay progression, grade progression opportunities, career pathing, recognition of appropriate experience and required levels of performance.”⁶⁶ Nurses were the first to benefit from the OSD in 2007, while medical, dental and emergency medical services received their salary adjustments in 2008-2009.⁶⁷ In the case of medical doctors, the post-OSD salary for medical officers surpassed that of their foreign-based counterparts in the United Kingdom and Australia by between USD7,000 and USD12,000 per year.⁶⁸ However, poor consultation during the policy development of the OSD has been cited as one of the reasons why health professionals viewed the policy negatively.⁶⁹ In addition, the OSD agreement for doctors singles out junior doctors and the most senior doctors for meaningful salary increases. Medical officers, junior and senior consultants received only “token increases” and there were reports of an escalation in the resignation of qualified specialists at academic hospitals.⁷⁰

The final, and potentially most far-reaching, change to the South African health system is the introduction of a National Health Insurance System.⁷¹ A Green Paper on the Policy on National Health Insurance (NHI) was published on 11 August 2011 with the main goal of ensuring that everyone has access to appropriate, efficient and quality health services.⁷² The NHI seeks to correct health inequalities by improving quality health-care access for disadvantaged populations by providing a mechanism for “improving cross-subsidisation, according to which funding contributions would be linked to an individual’s ability to pay and benefits from health services would be in line with an individual’s needs.”⁷³ The NHI’s approach is based on the Brazilian experience and focuses largely on a “re-engineered primary health care model.”⁷⁴ This involves the provision of a comprehensive package of services such as the establishment of district-based clinical specialist support teams, primary health-care agents deployed in each ward, and school-based primary health-care services.⁷⁵ The NHI is supposed to be phased in over a period of 14 years with the launch of a new central fund envisaged in 2014/2015.⁷⁶ Funding for the NHI will be provided mostly through a surcharge on taxable income, payroll taxes for employees and employers, and an increase in value-added tax.⁷⁷ The estimated cost of providing universal health care is estimated at ZAR255 billion (USD33 billion) by 2025, an increase from 2.2% to 6.2% of GDP.⁷⁸ One study has argued that in order to raise the finances necessary for the implementation of the NHI, government would need to almost double the existing personal tax rate from the current average of around 20% to about 40%.⁷⁹

Attitudinal surveys have shown that there is not only strong public sup-

port for the NHI but that this has increased over time.⁸⁰ However, levels of support do vary by gender, race and occupation with predictable lower levels of support from those who would have to cross-subsidize others.⁸¹ The implementation of the NHI could well be affected by the shortage of key human resources, particularly in rural and peri-urban townships and informal settlements.⁸² Even if the NHI scheme could enrol the services of doctors currently working in the private sector, it is unlikely that they would relocate to the under-served areas and be available to those who live in such areas.⁸³ Moreover, there is a general lack of clarity on how the NHI would affect those working in the private sector.⁸⁴ Furthermore, the general erosion of real earnings contemplated by the NHI might prompt those with the means to do so, such as health professionals, to leave. A recent survey of general practitioners found that, at this point, they are “mostly ambivalent” about the NHI, with only 21% in support, 32% opposed and 47% taking a “wait and see” attitude.⁸⁵ Whether the NHI will actually accelerate the brain drain remains to be seen and it is not clear whether and how it would mitigate the current level of skills loss.

SURVEY METHODOLOGY

The current survey methodology was similar to that used by SAMP in 2007. The survey instrument was developed for a CIHR-funded global project on health professional migration from India, Jamaica, the Philippines and South Africa. Many of the questions were similar to those used by SAMP in 2007, making comparative analysis possible. As in 2007, SAMP partnered with the South African medical services provider, MEDpages, in the online implementation of the survey. The questionnaire was hosted on the MEDpages website and potential respondents were invited by email to complete the survey. MEDpages maintains a data base of nearly 19,000 South African health professionals, including physicians (general and specialist), dentists, pharmacists and nurses. Three email broadcasts were made to all those with email addresses in the database to boost the response rate. A total of 1,383 completed questionnaires were received from physicians, dentists and pharmacists, a response rate of 7%, and a larger sampler than in 2007 (when 947 responded) (Table 9).

	Total email broadcasts	Total survey responses	% response rate	2007 survey responses
Doctor (specialist)	6,645	648	9.8	745
Doctor (generalist)	7,700	416	5.4	
Pharmacists	2,466	178	7.2	110
Dentists	2,102	141	6.7	92
Total	18,913	1,383	7.3	947

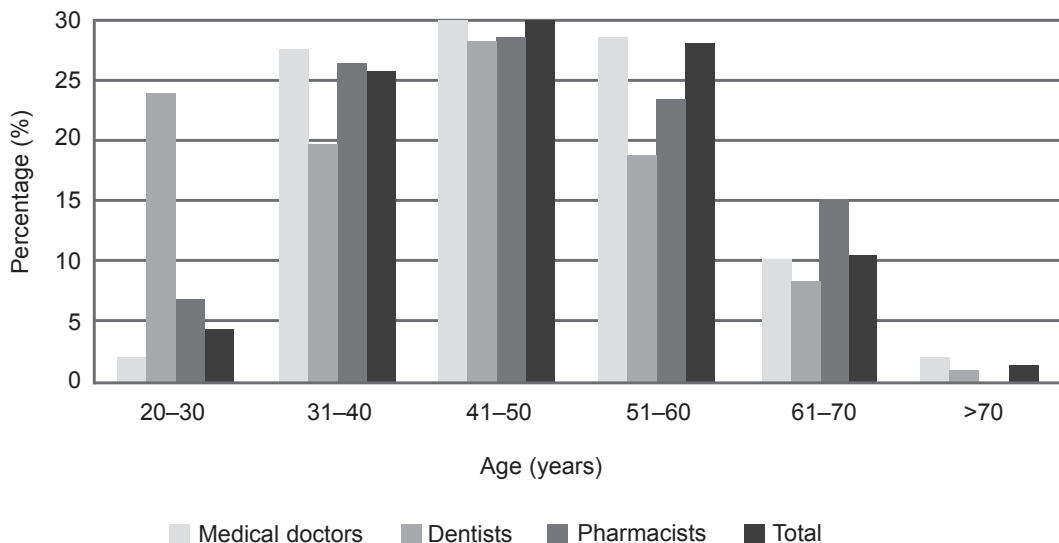
PROFILE OF HEALTH PROFESSIONALS

PERSONAL CHARACTERISTICS

This section of the report provides a profile of the cohort of physicians, dentists and pharmacists who completed the online survey. In terms of breakdown by sex, more male doctors and dentists completed the survey (by a ratio of 2:1) (Table 10). Amongst pharmacists, there were slightly more female than male respondents (53% versus 47%). The majority of the health professionals (around 60%) were under the age of 50 with 30% under the age of 40 (Figure 4). Given that emigration potential is generally likely to decline with age, this means that the survey captured a significant number of professionals who had many career years ahead of them. In general, the age profile of physicians and pharmacists was relatively similar. However, amongst dentists the cohort was much younger with 70% under the age of 50 and a quarter in their twenties. Also of interest is how many of the respondents' careers began after the end of apartheid. Taking 1990 as the cut-off date, 68% of dentists, 59% of physicians and half of the pharmacists fall into this category (Table 11).

	Doctors		Dentists		Pharmacists		Total	
	No.	%	No.	%	No.	%	No.	%
Male	568	67.6	65	67.7	64	47.1	697	65.0
Female	272	32.4	31	32.3	72	52.9	275	35.0
Total	840	100.0	96	100.0	136	100.0	1,072	100.0

	Doctors (%)	Dentists (%)	Pharmacists(%)	Total (%)
1950–1959	0.3	0.7	0.0	0.3
1960–1969	2.0	3.6	2.3	2.2
1970–1979	12.2	7.9	15.5	12.2
1980–1989	26.7	18.6	31.6	26.5
1990–1999	30.2	23.6	19.0	28.1
2000–2009	26.9	37.9	30.5	28.5
2010 or later	1.6	7.9	1.1	2.2
N	1,045	140	174	1,359

Figure 4: Age Profile of Survey Respondents

The point was made earlier in this report that the brain drain often has an unrecognized cumulative effect because the individual health professional who emigrates is often accompanied by family members. Of the respondents in the survey, over 80% were married (Table 12) and 72% had spouses who were in wage employment (ranging from 70% of doctors to 77% of dentists to 82% of pharmacists). As interesting, is the fact that the most common profession for spouses was also in the health sector (43% of all spouses employed and 47% of all doctors' spouses) (Table 13). No other sector had more than 8% of employed spouses. What this suggests is that the impact of the departure from South Africa of one health professional would probably be compounded by the fact that many would be accompanied by their spouse and, in almost half of the cases, this would be someone who also works in the health sector.

	Doctors (%)	Dentists (%)	Pharmacists (%)	Total (%)
Married/Co-habiting	83.3	78.9	80.9	82.6
Single	8.7	12.6	8.8	9.1
Divorced/Separated	7.1	8.4	5.9	7.1
Widowed	0.8	0.0	4.4	1.2
Total	100.0	100.0	100.0	100.0
N	840	95	136	1,071

Table 13: Employment Sector of Spouses				
	Doctors (%)	Dentists (%)	Pharmacists (%)	Total (%)
Education	7.0	9.3	9.4	7.5
Finance, business, banking	6.4	5.6	11.8	7.0
Management	8.1	3.7	7.1	7.5
Administrative and clerical	5.7	1.9	3.5	5.1
Advertising, media, communications	3.2	0.0	2.4	2.8
Legal	3.2	0.0	2.4	2.8
Information technology	1.5	3.7	3.5	2.0
Engineering and construction	4.4	9.3	8.2	5.4
Business owners	1.5	0.0	1.2	1.3
Health	46.8	37.0	29.4	43.5
Arts, sports and culture	1.1	3.7	0.0	1.1
Civil service	1.3	11.1	3.5	2.5
Retail and hospitality	1.5	3.7	1.2	1.6
Technical and trades	4.2	9.3	8.2	5.2
Self-employed	2.8	1.9	5.9	3.1
Other	1.5	0.0	2.4	1.5
Total	100.0	100.0	100.0	100.0
N	472	54	85	611

TRAINING PROFILE

In the economics of migration literature, the argument has been made that the brain drain is an illusion. Skills migration supposedly leads to a paradoxical increase rather than decrease in human capital in the source country. As proponents of this view argue: “The prospect of migration from a developing country to a developed, technologically advanced country changes not only the set of opportunities that individuals in the developing country face, but also the structure of the incentives that they confront: higher prospective returns to human capital in the developed country induce more human capital formation in the developing country.”⁸⁶ Put another way, the prospect of emigration exercises a strong demonstration effect, encouraging more people to enter the profession and acquire the training and skills necessary to emigrate and earn higher wages.

In the context of this study, the hypothesis would mean that the prospect of emigration is a major reason for entering the health profession. Despite an ongoing and highly visible brain drain from the country (and the fact that South African-trained professionals are in demand in several countries in the Global North), less than 2% of the respondents in this survey gave “the ability to work in another country” as the major reason for

entering the health professions (Table 14). Amongst doctors and dentists, the figure was less than 1%. In other words, there is little support for the argument of these economists in the survey results. The possibility of emigration only becomes a factor much later. Interestingly, only 9% said they were motivated to enter the profession by its earning potential (a figure that was lowest for doctors at 7% and highest for dentists at 18%). Easily the most important reasons were the personal intellectual challenge and stimulation (33%) and the ability to help other people (31%). These two reasons were more important for doctors (69%) than dentists (56%) and pharmacists (54%).

	Doctors (%)	Dentists (%)	Pharmacists (%)	Total (%)
Intellectual stimulation/challenge	34.2	33.0	27.6	33.2
The ability to help other people	32.6	25.7	26.9	31.2
Influence of my family/friends	9.3	5.5	13.1	9.4
Earning potential	6.9	18.3	13.1	8.9
Influence of a mentor	4.8	4.6	6.2	5.0
Research opportunity	3.7	3.7	6.2	4.0
Teaching opportunity	2.9	2.8	0.7	2.6
Ability to work in another country	2.6	2.8	2.1	2.5
Ability to migrate to another country	0.9	0.9	2.1	1.1
Other reason	2.0	2.8	2.1	2.1
N	849	109	145	1,103

Critics of the brain drain argue that the exodus of health professionals is not only damaging to health-care systems in Africa, but that they represent a considerable subsidy to developed countries that do not have to invest in their training.⁸⁷ In South Africa, the vast majority of doctors and dentists are trained in publicly-funded institutions; a fact confirmed by the survey which found that 98% of doctors and 91% of dentists were trained in publicly-funded institutions (Table 15). In the case of pharmacy, there is more private-sector involvement with only half receiving their training in public institutions.

	Doctors (%)	Dentists (%)	Pharmacists (%)	Total (%)
Private	0.4	3.6	31.4	4.4
Public (i.e. government funded)	98.0	91.4	48.4	91.4
Mixed public/private	1.6	5.0	20.1	4.2
Total	100.0	100.0	100.0	100.0
N	1,040	140	159	1,339

PERCEPTIONS OF WORKING AND LIVING CONDITIONS

In 2007, there were only two measures of workplace satisfaction on which more than half of health professionals were satisfied: their relationship with colleagues (75%) and the quality of their training (73%) (Table 16). In 2013, levels of satisfaction with these two measures were also extremely high and had increased even further (to 81% and 79% respectively). The increase was minimal amongst dentists and pharmacists but jumped by 8% on both measures in the case of doctors. More significant is the fact that these were not the only indicators on which there were increased levels of satisfaction. The number of indicators on which more than half of the respondents were satisfied increased from 2 to 7. In some cases, the shifts were particularly dramatic: for example, the ability to find a desirable job increased from 33% to 65%; satisfaction with job security from 29% to 61%; and satisfaction with prospects for professional advancement from 28% to 45%. Other indicators on which more than half were satisfied in 2013 included workplace infrastructure (49% to 61%) and workplace morale (38% to 55%).

On 11 indicators, however, more than half of the respondents remained dissatisfied. These included personal safety in the workplace (though improved from 37% to 48% satisfied) and workload (from 28% to 42% satisfied). Indicators on which levels of satisfaction improved only marginally included opportunities for further education and training and the risk of contracting HIV. Levels of satisfaction on the latter two indicators remained low in 2013 (at 30% and 19% respectively). On a small number of indicators there was a decline in satisfaction between 2007 and 2013, including relations with management and the risk of contracting Hepatitis B and MDR-TB.

The vast majority of health professionals remain dissatisfied with the economic rewards of their jobs. Only a third were satisfied with their level of remuneration (up from 20% in 2007, however). Less than 20% were satisfied with their fringe benefits and levels of taxation (down from 13% to 9%). Dentists are particularly unhappy with their earnings. With 40% of dentists with household income of less than R40,000 per month, this is perhaps not surprising (Table 17). On the other hand, two-thirds of doctors have household incomes of over R60,000 per month yet only one-third are satisfied with their income. There has been an increase in levels of satisfaction amongst doctors, however, from 20% in 2007 to 34% in 2013, possibly because of the OSD. In general, given the extremely low levels of satisfaction with income, fringe benefits and taxation, we might expect economic factors to be a major driver of health professional emigration (see below).

Table 16: Satisfaction with Working Conditions (% satisfied/very satisfied)

	Total (%)		Change	Doctors (%)		Dentists (%)		Pharmacists (%)	
	2007	2013	2007-2013	2007	2013	2007	2013	2007	2013
Relationship with colleagues	75	81	+6	75	83	69	70	78	80
Appropriateness of training	73	79	+6	74	81	73	76	70	72
Ability to find desirable job	33	65	+32	35	66	15	53	33	68
Workplace infrastructure	49	61	+12	46	61	62	64	60	61
Workplace resources to do job	51	60	+9	48	58	61	70	62	64
Job security	30	61	+32	31	62	18	47	27	62
Workplace morale	38	55	+17	36	52	49	69	39	58
Personal security in the workplace	37	48	+9	39	46	28	50	27	54
Further educational/career opportunities	34	38	+4	35	37	35	38	31	46
Relationship with management	32	32	0	29	29	26	27	55	52
Risk of contracting Hepatitis B	32	30	-2	31	28	28	33	37	43
Prospects for professional advancement	28	45	+17	30	45	25	43	18	43
Workload	28	42	+14	29	42	27	38	24	41
Risk of contracting HIV	28	30	+2	25	28	28	33	43	46
Risk of contracting MDR-TB	26	25	-1	25	23	28	30	33	36
Income level	20	34	+14	22	37	6	11	17	32
Fringe benefits	16	19	+3	16	18	7	14	20	35
Taxation	13	9	-4	13	10	8	5	14	7

Table 17: Monthly Household Income Before Tax

	Doctors (%)	Dentists (%)	Pharmacists (%)	Total (%)
<R 10,000	0.4	0.0	0.0	0.3
R 10,000–R 20,000	1.5	5.6	5.5	2.4
R 20,001–R 30,000	3.5	14.6	14.1	5.8
R 30,001– R 40,000	5.8	18.0	24.2	9.1
R 40,001–R 50,000	9.0	14.6	22.7	11.2
R 50,001–R 60,000	13.3	11.2	13.3	13.1
>R 60,000	66.6	36.0	20.3	58.1
Total	100.0	100.0	100.0	100.0
N	800	89	128	1,017

While perceptions of the working environment improved between 2007 and 2013, health professionals' views about living conditions in the country did not (Table 18). On four indicators there was a very small improvement of only 2% between 2007 and 2013 (medical services, customer service,

personal and family safety, and the HIV and AIDS situation). Only the ability to find desirable housing improved significantly (from 48% to 57%). Satisfaction with children's schooling remained exactly the same (at 48%). On every other indicator there was a decline in levels of satisfaction. Satisfaction with the cost of living, for example, fell from 29% to 18% and satisfaction with the availability of affordable quality products from 36% to 27%. The overall picture remains very negative, however, with satisfaction levels greater than 50% on only two indicators (medical services and housing). Key determinants of emigration intentions in 2013 had extremely low levels of satisfaction once again. For example, only 8% were satisfied with levels of personal safety and their children's future prospects in South Africa, while a mere 7% were satisfied with the safety of their families.

Table 18: Satisfaction with Living Conditions (% satisfied/very satisfied)

	Total (%)		Change (%) 2007–2013	Doctors (%)		Dentists (%)		Pharmacists (%)	
	2007	2013		2007	2013	2007	2013	2007	2013
Medical services for family/children	60	64	+4	63	66	44	57	56	57
Desirable housing	48	57	+9	49	60	36	42	49	48
Good school for children	48	48	0	50	50	37	40	47	42
Affordable quality products	36	27	-9	36	28	31	26	40	25
Cost of living	29	18	-11	31	20	20	12	28	12
Customer service	7	9	+2	7	8	4	12	6	10
Children's future in South Africa	8	8	0	9	8	1	6	3	6
Personal safety	6	8	+2	6	8	5	9	4	5
Family safety	5	7	+2	5	7	5	9	4	6
HIV and AIDS situation	2	4	+2	2	4	1	7	4	2
Quality upkeep of public amenities	4	3	-1	4	2	3	6	2	3
Levels of poverty and inequality		0.1			0.2		0		0

Another possible driver of emigration relates to dissatisfaction with the political environment in the country and with policies in the health sector in particular. Questions on this issue were not posed in 2007 so there is no baseline for comparison. However, it is clear that levels of satisfaction with political conditions are currently extremely low (Table 19). Only 4% of the respondents said they were satisfied with government economic policies. Related to this, less than 1% were satisfied with levels of poverty and inequality and levels of corruption. Only 7% were satisfied with government policy in the health sector. Just 13% felt that government would be justified in requiring all health professionals to join the NHI. These extremely high levels of disaffection with government could certainly increase the appetite for emigration.

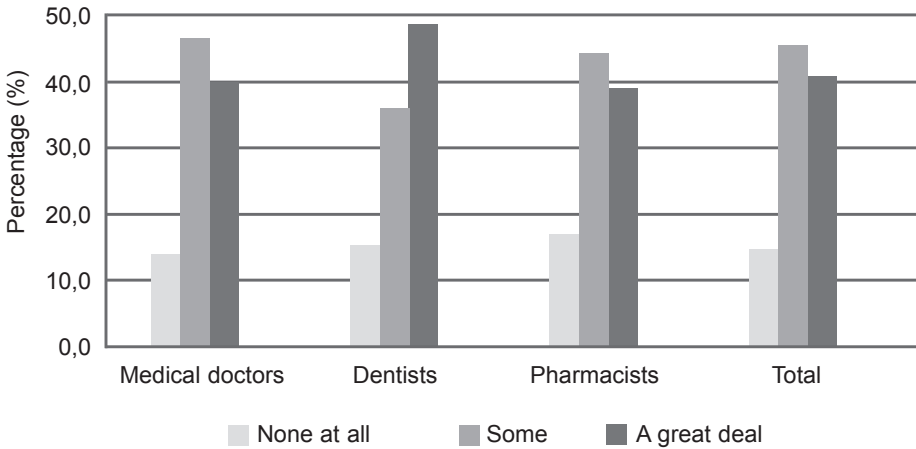
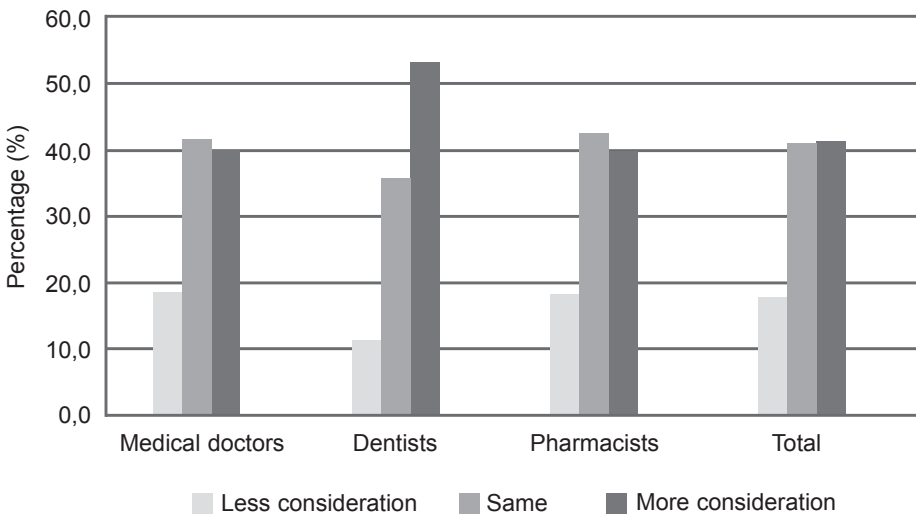
Table 19: Satisfaction with Political Environment in South Africa, 2013
(% satisfied/very satisfied)

	Total (%)	Doctors (%)	Dentists (%)	Pharmacists (%)
Government economic policies	4	4	2	5
Government policy towards health sector	6	6	3	14
Import of foreign health professionals	7	7	7	6
Level of corruption	0.3	0.4	0	0

WILL EMIGRATION WANE?

Interest in emigration remains very high amongst health professionals in South Africa. In total, 40% of those surveyed in 2013 had given emigration a great deal of consideration and 45% had given it some consideration (Figure 5). Only 14% had never considered it. Dentists had given most consideration to emigration (at 49%), followed by doctors (40%) and then pharmacists (39%). Respondents were also asked if they had given emigration more or less consideration in the previous five years (Figure 6). In total, 42% said they had given it more consideration and only 18% said they had given it less. The proportions for doctors and pharmacists were roughly similar but dentists had clearly been giving emigration much more thought than before (53% more and only 11% less).

The amount of consideration given to leaving South Africa clearly varies by sex, race and age. For example, male health professionals have given more consideration to the possibility than their female counterparts (Table 20). However, the proportion of male health professionals giving it a great deal of consideration fell significantly (by 10%) between 2007 and 2013. In terms of racial breakdown, Indian health professionals have given most consideration to leaving, followed by Coloured, Black and finally White professionals. Given that the brain drain is most often associated with the departure of skilled Whites, this is an important corrective. Again, there were shifts between 2007 and 2013 with a decline in the proportion of Whites (13%), Blacks (9%) and Indian (8%) professionals giving emigration a great deal of consideration and an increase (of 10%) in the proportion of Coloured professionals. The proportion of Coloured professionals giving emigration no consideration at all fell from 38% to 15% between 2007 and 2013, suggesting a major shift in emigration potential amongst this racial group. Finally, the consideration given to departure is clearly related to age: as age increases, the proportion who have given emigration a great deal of consideration falls (from 48% amongst those in the 22-34 age group to 35% amongst those aged 50 and over).

Figure 5: Consideration Given to Emigration**Figure 6: Change in Consideration Given to Emigration (in previous 5 years)**

Giving serious thought to emigration is obviously the first step but it certainly does not mean that all of those who think this way will actually leave. Respondents were therefore asked about the likelihood of their leaving within a given time frame (six months, two years and five years). In total, 51% said they would probably have left within five years, 30% within two years and 11% within six months (Table 21). Dentists, again, were most likely to leave (63% in 5 years, 41% in two years and 9% within six months). There are no major differences in answers given in 2007 about the likelihood of leaving, suggesting that emigration potential has not changed a great deal in the intervening years and remains extremely high.

Table 20: Amount of Consideration Given to Emigration by Sex, Race and Age						
	Great deal (%)		Some (%)		None (%)	
	2007	2013	2007	2013	2007	2013
Sex						
Male	52	42	38	43	10	15
Female	39	37	46	50	15	12
Race						
White	41	28	46	42	13	31
Black	48	39	41	47	11	13
Coloured	31	41	31	44	38	15
Indian	58	50	32	42	10	8
Age						
22–34	61	48	31	41	8	11
35–42	49	44	40	44	11	12
43–50	54	41	39	48	7	11
50+	38	35	44	47	17	18
Total	49	40	39	45	11	14

Table 21: Likelihood of Emigration (% very likely)								
	Doctors (%)		Dentists (%)		Pharmacists (%)		Total (%)	
	2007	2013	2007	2013	2007	2013	2007	2013
In the next six months	8	11	10	9	11	13	8	11
In the next two years	24	29	41	39	41	29	27	30
In the next five years	50	50	63	60	72	49	54	51

Estimates of the likelihood of leaving, and when, also vary with sex, race and age (Table 22). For example, more male than female professionals feel it is likely they will leave within six months and two years. However, at the five-year mark, the proportion is exactly the same (at 51%). Comparing 2007 and 2013, however, we find that the proportion of male professionals who think it likely they will leave within five years actually fell (by 6%) while the proportion of females increased (by 10%). What this seems to suggest is that the traditional South African brain drain pattern of skilled men being more likely to emigrate than skilled women is breaking down. It also reflects the fact that more women are being trained in the three professions under consideration. With regard to race, White health professionals are the least likely to leave in the short term and Black health professionals are least likely to leave in the long term. At all three projected cut-off points, Coloured health professionals are the most likely to leave. In terms of the relationship between age and likelihood of emigration, it is clear that younger health professionals generally think it more likely that they will

have left at each of the three benchmark time periods. As many as 10% of those in the 22-34 age group said it was likely they would leave within six months, rising to 41% at the two-year mark and 67% within five years. However, likelihood of leaving within five years is actually higher amongst those aged 43-50 than those aged 35-42. The likelihood of leaving for those 50 and over is very low (and has decreased substantially since 2007).

	Within six months (%)		Within two years (%)		Within five years (%)	
	2007	2013	2007	2013	2007	2013
Sex						
Male	8	12	29	32	57	51
Female	9	9	19	28	41	51
Race						
White	8	10	25	32	51	50
Black	9	11	37	28	72	45
Coloured	18	15	36	35	46	56
Indian	11	13	37	33	73	56
Age						
22-34	12	10	37	41	70	67
35-42	8	11	25	31	59	54
43-50	7	12	29	32	56	58
50+	7	0	22	0	41	0

In addition to self-assessment of the likelihood of emigration, respondents were also asked what steps they had taken to prepare for departure. In total, 25% had applied for a work permit in another country and 11% had applied for permanent residence elsewhere (Figure 7). Almost half (47%) had taken an examination or applied for registration with their professional body in another country. Rates of application for work permits and registration were particularly high amongst doctors (at 28% and 52% respectively). In other words, a significant minority of professionals (over 50% in the case of doctors) are taking active steps preparatory to emigration.

As in 2007, the most likely emigration destinations for South African health professionals remain the “big five” of Australia (mentioned by 26%), the United Kingdom (24%), Canada (16%), the United States (10%) and New Zealand (6%) (Table 23). Doctors are most likely to emigrate to the UK, followed by Australia and Canada, whereas dentists and pharmacists are far more likely to emigrate to Australia. The US is the second most popular destination for pharmacists. The majority of South African health professionals still think of emigration as a permanent move overseas (Table 24). Over 60% say they would remain abroad indefinitely and another 15% say they would go for at least five years. Dentists are most likely to leave for

good. Planned moves of less than two years are relatively uncommon, with only 5% of doctors and 3% of dentists engaging in temporary migration. No pharmacists would go for such a short length of time.

Figure 7: Applications for Work and Residence Permits and Registration Abroad

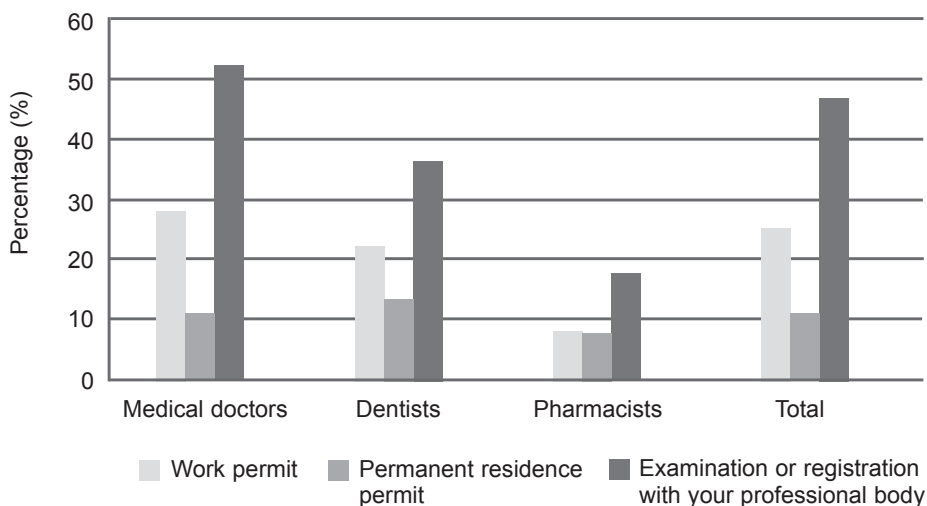


Table 23: Most Likely Emigration Destination of Health Professionals

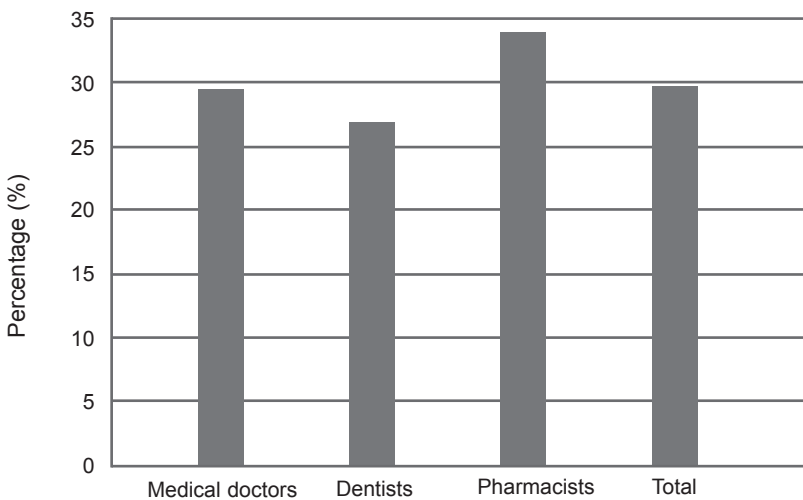
	Doctors (%)	Dentists (%)	Pharmacists (%)	Total (%)
Australia	24	31	33	26
United Kingdom	26	20	14	24
Canada	17	18	9	16
United States	9	9	16	10
New Zealand	6	6	7	6
Namibia	4	2	6	4
Other Europe	7	11	4	7
Other Africa	3	0	3	3
Asia	2	3	4	3
Middle East	1	1	2	1
South America	1	0	1	0

Table 24: Length of Intended Stay Abroad

	Doctors (%)	Dentists (%)	Pharmacists (%)	Total (%)
Less than 2 years	5	3	0	4
2 to 5 years	18	17	23	18
More than 5 years	14	13	22	15
Indefinitely	63	67	54	63

Given the argument of some neoliberal economists that the negative impacts of the health professional brain drain are offset by remittance flows from those who have left, it is worth asking whether South African health professionals who leave the country will remit.⁸⁸ A recent SAMP study of South African physicians in Canada found relatively low rates of remitting.⁸⁹ Only half (52%) had sent money to South Africa in the year prior to the survey and just 19% could be considered regular remitters (sending money at least once a month). Nearly 30% had never remitted. Here, the survey asked about intention to remit after departure (Figure 8). Only 30% indicated that they would send money back to South Africa (33% of pharmacists, 29% of doctors and 27% of dentists). In other words, while actual rates of remitting from health professionals abroad may be higher than the stated intentions of those who have not yet left, neither provides much support for the idea that there is a strong will to remit money to South Africa and that this would compensate in any way for the loss of skills, experience and investment in training.

Figure 8: Proportion Who Would Send Remittances After Departure



REASONS FOR EMIGRATION

This report has demonstrated that most South African health professionals hold negative views about working and living in South Africa. Unsurprisingly then, emigration potential remains extremely high with a significant minority already having taken steps to leave. However, simply detailing which features of working and living in South Africa evince the strongest negative reactions does not mean that these are necessarily the things that actually make people decide to leave. Unlike previous SAMP surveys, this study therefore tried to understand, from the health

professionals themselves, what weighs most heavily in the decision to emigrate.

With regard to the importance of work-related factors, “lack of respect from government” for health professionals rates as the single most important factor (with 62% viewing it as a very important part of the decision to leave) (Table 25). Professionals in all three groups rated this as the single most important factor. Other factors, which more than half the respondents agreed were very important, included poor workplace facilities (54%) and personal security (52%). Higher earning potential was important for 60% of dentists and 56% of pharmacists but only 41% of doctors. Other factors of particular importance to pharmacists included personal insecurity in the workplace (62%), job security (53%), the risk of contracting a serious illness (50%) and the lack of respect for the profession within the community (51%). Factors that were less important for all professionals than one might have expected included workload (at 30%), inadequate work benefits (38%), and workplace morale (39%). While the vast majority of health professionals (68%) were dissatisfied with management, only 42% thought this was a good reason to leave. And the fact that all professionals know many friends and former colleagues who have moved overseas, in itself, is of very little importance as a reason to emigrate. In sum, government attitudes to health professionals, inadequate infrastructure and personal security in the workplace emerge as the three most important drivers of emigration.

	Total (%)	Doctors (%)	Dentists (%)	Pharmacists (%)
Lack of respect from government	62	61	67	63
Work facilities	54	56	48	49
Personal insecurity in the workplace	52	51	51	62
Ability to find desired job	47	45	55	52
Income compared to desired income	45	41	60	56
Job security	42	39	46	53
Lack of respect from management	42	42	33	47
Morale in the workplace	39	39	35	44
Inadequate work benefits	38	36	40	46
Risk of contracting serious illness	37	36	34	50
Lack of further career advancement	37	37	37	37
Lack of respect for profession	36	34	41	51
Lack of respect from colleagues	33	32	26	39
Lack of respect from patients	33	32	32	39
Workload	30	31	28	30
Lack of opportunity to travel	28	27	36	24
Many colleagues who work abroad	13	12	24	13

The previous section of the report showed that levels of dissatisfaction with living conditions were much higher than with working conditions. This would suggest that living conditions might be the more important driver of emigration (Table 26). The two most important factors cited by health professionals as reasons for emigrating were the level of official corruption in the country (mentioned by 83%) and personal and family safety (mentioned by 81%). Other factors mentioned by more than half of the professionals included the future of their children (79%), the quality and upkeep of public infrastructure (64%), affirmative action and BEE (61% and 58% respectively), African National Congress (ANC) economic policies (58%), levels of poverty and inequality in the country (57%), the adequacy of medical services for family (55%), taxation (55%) and finding a good school for their children (52%). In sum, three types of factors seem to be most important: first, there is a great deal of antipathy towards government economic and affirmative action policies and to perceptions of corruption. Since this survey occurred during the Nkandla scandal, which implicated the President in inappropriate use of public money for personal gain, this is hardly surprising. Whether this would be such a serious concern in normal times is less clear. Second, issues of personal and family safety (in turn related to the country's high rates of violent crime) are clearly a major concern. Third, the prospects for their children in South Africa weigh heavily on their minds. Dentists and pharmacists have stronger views on almost every factor than doctors.

	Total (%)	Doctors (%)	Dentists (%)	Pharmacists (%)
Level of corruption	83	82	88	83
You or your family's safety	81	79	89	86
Children's future in South Africa	79	78	86	83
Quality/upkeep of public infrastructure	64	63	73	64
Affirmative action	61	58	77	64
ANC economic policies	58	56	71	63
Black Economic Empowerment (BEE)	58	56	71	61
Levels of poverty and inequality	57	57	68	52
Medical services for family/children	55	53	59	65
Level of taxation	55	52	66	60
Good school for children	52	51	56	62
Treatment of some ethnic/racial groups	49	48	54	57
Treatment of women compared to men	48	46	57	54
High cost of living	40	37	51	55
Ability to find desirable housing	32	31	35	41
Availability of desirable consumer goods	28	25	32	42
Many family members abroad	13	12	20	13

Most South African health professionals are confident that they would find it easy to secure employment abroad. Doctors are the most confident (61%) and dentists the least (though still 48%). They also think that it would be relatively difficult for their employer to find a replacement within the country. It would be even more difficult to replace them with someone from outside the country. In addition, 92% of health professionals (and 93% of doctors) think that the emigration of health professionals has a negative impact on the South African health system. Despite these views about the damaging consequences of emigration, there is no evidence that this would dissuade individual professionals from leaving the country.

DIMENSIONS OF RETURN MIGRATION

Studies of the South African health brain drain tend to assume that locally-trained professionals leave for good after graduation or after working for a period in the country. However, the 2007 SAMP survey found that a significant minority of doctors working in South Africa had experience working in other countries. This finding highlighted the phenomenon of return migration as well as suggesting that doctors whose primary base is in South Africa also spend periods of time in other countries. The phenomenon of recent medical school graduates doing locums in under-serviced communities in rural Alberta, Saskatchewan and Manitoba in Canada is well known. Many of these locums are arranged through and by South African doctors who have emigrated permanently to Canada. Some then settle in Canada while others return to South Africa. Various other kinds of temporary migration and work arrangements are also in operation. There is a steady stream of South African specialists on secondment to hospitals in the Gulf, for example. Others have job-sharing arrangements in other countries. At one practice in the South African city of Port Elizabeth, for example, the four physicians each spend three months of every year working in a practice in the UK.⁹⁰

Forty-two percent of the South African-trained health professionals captured in this survey had experience working in other countries. The proportion was highest amongst doctors (at 48%) and lowest amongst pharmacists (at 9%) with dentists at 36%. Within the physician group, more specialists had worked outside the country (52%) than general practitioners (42%). Two-thirds of the doctors who had worked outside South Africa did so in the UK, with smaller numbers in Canada (9%), Australia and New Zealand (both 4%) and the US (3%) (Table 27). The vast majority (85%) had worked abroad for less than three years (with 38% doing this for less than one year). This suggests that most South African doctors with overseas experience went with the express purpose of working temporarily. This is confirmed by the reasons given for returning to South Africa, where 62%

said they had returned because their job was of a temporary nature (Table 28). Only 15% had been away for longer than four years and could more accurately be described as return migrants.

	%
United Kingdom	66.6
Canada	8.8
Other Europe	5.8
Australia	3.6
New Zealand	3.6
Middle East	3.0
Namibia	2.7
United States	2.7
Other Africa	2.2
Asia	0.8
Other	0.3
Total	100.0
Period worked	
<1 year	37.8
1–3 years	47.4
4–9 years	13.7
>10 years	1.1
Total	100.0

Because a decision to leave or return is rarely determined by a single factor, respondents were asked to rate a series of possible “push” and “pull” factors in terms of their importance in the decision to return to South Africa. The most important push factor was family pressures: 62% said that the family’s desire to return to South Africa was important or very important and 44% said it was because the family was unhappy overseas. Weather was a significant factor also, with 52% saying that it drove them back to South Africa. Nearly 40% said that the poor social life overseas was an important factor in their decision. Work-related factors, as well as general economic and political conditions in the foreign country, were far less important in the decision to return, although 30% said the cost of living overseas was an important push factor. When asked about the factors that drew them back to South Africa, it is clear that pull factors were generally more important than push factors. For example, seven pull factors were cited by more than half of the respondents, compared to only three push factors. Of these, a couple of job-related factors were important: the offer of a permanent job (64%) and the prospect of greater job satisfaction (52%). Around half also said they wanted to use their medical skills in the service of the underprivi-

leged. However, as with push factors, the most important pull factors were not job-related or economic, but social and environmental. These included the South African physical environment (cited by 86%), family ties (81%), the South African “lifestyle” (77%), South African culture (74%) and social life in South Africa (61%).

Table 28: Reasons for Return: Foreign Country Factors	
	(% important/very important)
Work factors	
Job was only temporary	61.6
No job satisfaction	27.2
Poor prospects for professional advancement	27.2
Qualifications not recognized	23.2
No job security	22.4
Insufficient remuneration	18.3
Inadequate benefits	17.9
Patients too demanding	16.5
Workload too heavy	10.0
Social/Environmental factors	
Family wanted to return to South Africa	61.9
Inhospitable climate	51.7
Family unhappy with life in foreign country	44.7
Poor social life	38.8
Inadequate school system	23.2
No future for children	21.9
Treatment of visible minorities	18.7
Treatment of women	14.5
Economic/Political factors	
Cost of living too high	30.8
Too much government interference/control	24.0
Taxation too high	21.1
Disagreement with political system	16.7

Table 29: Reasons for Return: South African Factors	
	(% important/very important)
Work factors	
Permanent job in South Africa	63.8
Greater job satisfaction	51.7
Desire to use skills to serve underprivileged	49.7
Better prospects for professional advancement	39.3
Better job security	33.2

Better remuneration	28.6
Paid off medical school debts	26.4
Better benefits	26.0
Patients less demanding	22.7
Lighter workload	12.5
Social/Environmental factors	
South African landscape/climate	86.5
To be closer to family	80.9
Lifestyle preferable in South Africa	77.1
South African culture	74.2
Better social life	60.9
Better education for children	36.9
Better access to medical care	34.6
Economic factors	
Cost of living lower in South Africa	34.1

Do those who have worked overseas and returned show a different attitudinal profile to those who have only worked in South Africa? The main, and perhaps surprising, survey finding is that there is not a great deal of difference between the two groups and the differences that do exist are not statistically significant. First, with regard to perceptions of working conditions, returnees have higher satisfaction levels on 12 of the 18 indicators but the differences are very small (only 4% at most) and do not fit a discernible pattern that could be related to their experience abroad (Table 30). For example, returnees are marginally happier with workplace morale, their workplace infrastructure and available resources, and their fringe benefits. The only indicator with a higher spread was income where returnees are actually more satisfied (by 7%) than those who have never gone abroad. This could be attributable to a “grass is greener” effect but the difference is not large enough to make this a persuasive argument. Returnees are slightly less likely to be satisfied with the prospects for professional advancement, which could be attributable to experience of other health-care systems.

In general, return migrants are more satisfied than non-migrants with living conditions in South Africa but, again, the differences are not significant (Table 31). On only one indicator – satisfaction with ability to obtain desirable housing – is there more than a 10% spread. This could be related to higher earnings while abroad facilitating access to higher-priced housing in South Africa. The other point to draw from this analysis is that levels of satisfaction amongst return migrants are low across a range of work and living measures. Less than half of the return migrants were satisfied with 10 of the 17 workplace indicators and 10 of the 13 living conditions indicators. Return migrants are less enamoured with South African government

policies than non-migrants but the levels of dissatisfaction do not vary significantly and are extremely low (less than 10% satisfied) amongst both groups (Table 32).

Table 30: Comparison of Satisfaction with Work Conditions (% satisfied/very satisfied)

	Return migrants (%)	Non-migrants (%)	Difference (%)
Appropriateness of training	83	80	+3
Relationship with colleagues	82	84	-2
Ability to find desirable job	68	67	+1
Workplace infrastructure	63	59	+4
Job security	61	63	-2
Workplace resources to do job	61	57	+4
Workplace morale	55	51	+4
Personal insecurity in the workplace	49	46	+3
Prospects for professional advancement	43	47	-4
Workload	44	42	+2
Level of income	42	35	+7
Further educational/career opportunities	38	37	+1
Risk of contracting Hepatitis B	29	27	+2
Risk of contracting HIV	28	27	+1
Relationship with management	29	30	-1
Risk of contracting MDR-TB	23	23	0
Fringe benefits	20	16	+4

Table 31: Comparison of Satisfaction with Living Conditions (% satisfied/very satisfied)

	Return migrants (%)	Non-migrants (%)	Difference (%)
Medical services for family/children	68	64	+4
Desirable housing	66	55	+11
Good school for children	50	49	+1
Affordable quality products	31	27	+4
Cost of living	21	18	+3
Level of fair taxation	11	10	+1
Customer service	10	7	+3
Personal safety	7	8	-1
Children's future in South Africa	7	10	-3
Family safety	6	7	-1
Quality upkeep of public amenities	3	1	+2
HIV and AIDS situation	3	5	+2
Levels of poverty and inequality	0	0	0

Table 32: Comparison of Satisfaction with Government Policies (% satisfied/very satisfied)			
	Return migrants (%)	Non-migrants (%)	Difference (%)
Import of foreign health professionals	6	8	-2
Government policy towards health sector	4	7	-3
Affirmative action	4	7	-3
Government economic policies	4	4	0
Black Economic Empowerment (BEE)	4	7	-3
Levels of corruption	0.2	0.5	-0.3

WILL RETURN MIGRANTS LEAVE AGAIN?

Does return to South Africa mean that the returnees will stay permanently or are less likely to leave the country than those who have not yet left for the first time? Only 50% of the respondents who had worked in a foreign country said that their return to South Africa was permanent, which suggests that re-emigration is a strong possibility for many. Indeed, the survey found that those who have experience working in other countries are generally more likely to emigrate than those who have not. For example, 46% of return migrants said they have given a great deal of consideration to emigration compared with only 36% of non-migrants (Figure 9). Only 10% of return migrants said they had given no consideration to leaving, compared to 17% of non-migrants. Return migrants also indicated that they were more likely to leave than non-migrants. At each of three different time periods (within six months, two years and five years) the proportion of return migrants likely to leave was slightly higher (by 3%, 7% and 4% respectively) (Table 33).

Figure 9: Consideration Given to Emigration (% a great deal)

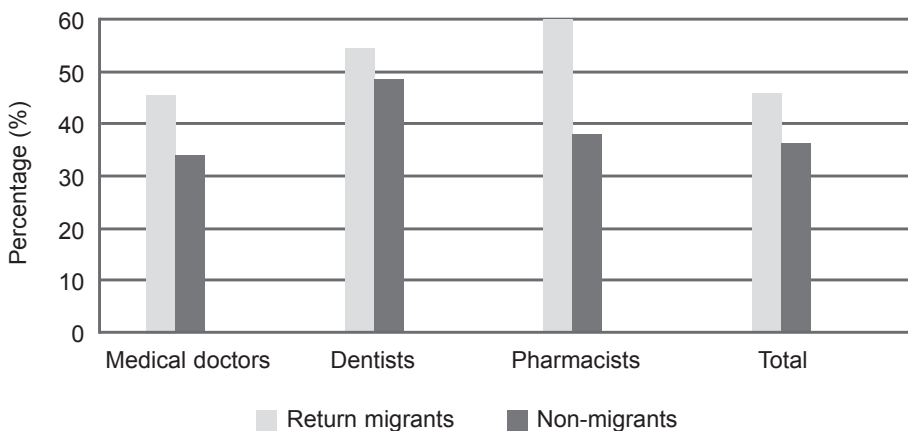


Table 33: Likelihood of Emigration by Migration Status (% very likely)			
	Return migrants (%)	Non-migrants (%)	Difference (%)
In the next six months	12	9	+3
In the next two years	33	26	+7
In the next five years	52	48	+4

Figure 10: Applications for Work and Residence Permits and Registration Abroad (Return Migrants)

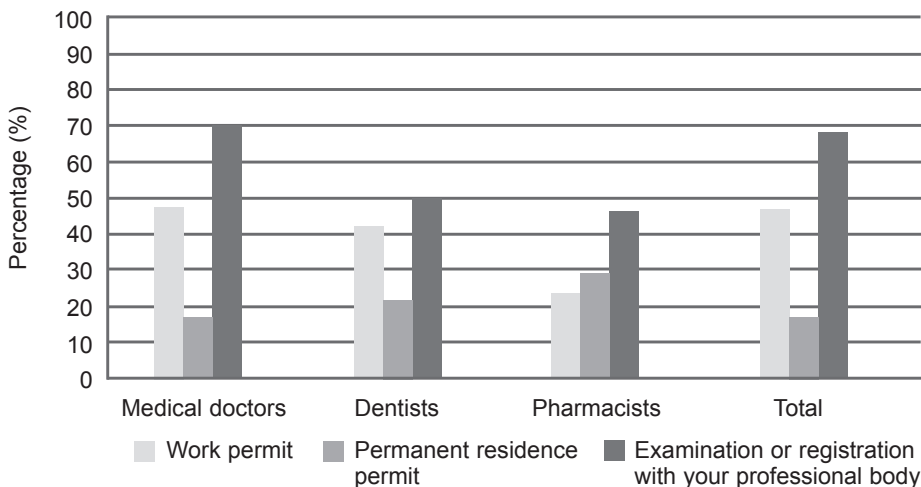
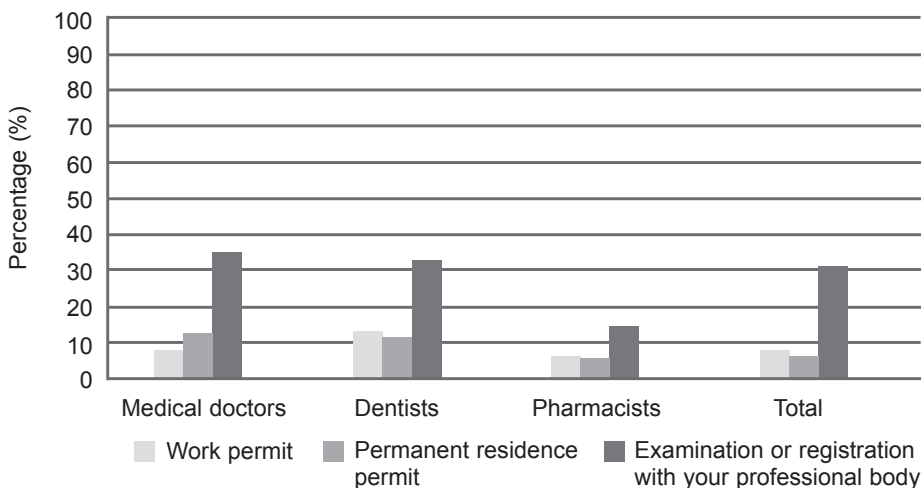


Figure 11: Applications for Work and Residence Permits and Registration Abroad (Non-Migrants)



The difference between migrants and non-migrants was especially marked regarding concrete indicators of departure intentions. For example, 46% of migrant health professionals had applied for a work permit abroad compared with only 8% of non-migrants (Figures 10 and 11). The equiva-

lent figures for permanent residence permits were 17% (migrants) and 6% (non-migrants). As many as 68% of migrants had applied for registration with their professional body overseas, compared with 31% of non-migrants. While these figures might seem to indicate a much higher inclination to leave amongst migrants, the differences may reflect the fact that migrants may have obtained their work permits, permanent residence permits and registration while they were outside the country. What this does mean, of course, is that it would be easier for them to leave again since all the paperwork has been done.

The final issue is whether return migrants and non-migrants hold the same opinions about the reasons why they would (re)emigrate. In general, return migrants see working conditions as slightly less important as a reason to leave (Table 34). However, the differences between return migrants and non-migrants were not especially large (less than 5% in most cases) and were in roughly the same rank order. Almost the opposite pattern pertains with regard to living conditions where return migrants are generally more likely than non-migrants to view these as an important reason to leave (Table 35). Once again, the differences between the two groups are not large (less than 5% on almost all indicators). Overall, the top six indicators in terms of importance for return migrants (and 7 of the top 10) relate to living conditions.

	Return migrants	Non-migrants	Difference
The lack of respect from government	59	63	-4
The infrastructure (e.g. facilities, equipment, supplies) where you work	55	57	-2
Personal security in the workplace	48	51	-3
Ability to find the job you want (i.e. work in your chosen profession)	42	47	-5
Your income compared to what you would like to earn	40	42	-2
The security of your job	36	42	-6
The lack of respect shown to you by management	40	42	-2
The morale in the workplace	39	38	+1
The lack of work benefits (e.g. health insurance, pension)	33	38	-5
The risk of contracting serious illness in the workplace	34	35	-1
The lack of opportunity for further educational/career advancement	37	36	+1

The lack of respect for your profession within the community	32	35	-3
The lack of respect from colleagues with whom you work	30	34	-4
The lack of respect from patients	30	33	-3
Your workload	27	33	-6
The lack of opportunity to travel	28	26	+2
The fact that you have many professional colleagues who work abroad	12	12	0

Table 35: Importance of Living Conditions in Decision to Emigrate (% very important)

	Return migrants	Non-migrants	Difference
Level of corruption	84	81	+3
You or your family's safety	81	77	+4
The future of your children in your country	77	78	-1
Quality/upkeep of public infrastructure	63	63	0
Affirmative action	61	56	+5
Black Economic Empowerment (BEE)	60	53	+7
ANC economic policies	58	54	+4
Levels of poverty and inequality	55	59	-4
Ability to find medical services for family/children	52	54	-2
A fair level of taxation	51	53	-2
Ability to find a good school for your children	48	52	-4
How certain ethnic/racial groups are treated in your country	50	45	+5
How women are treated in your country in general compared to men	46	46	0
The high cost of living	34	40	-6
Ability to find the house/housing that you want to live in	27	34	-7
Availability of affordable quality consumer goods	20	29	-9
The fact that you have many family members abroad	12	13	-1

CONCLUSION

Since the end of apartheid, South Africa has experienced a major outflow of health professionals. This exodus has justifiably earned the “brain drain” label although previous SAMP reports have referred to it both as a “brain haemorrhage” and as “brain flight” to capture the seriousness of the implications for health delivery to the South African population.⁹¹ SAMP has been monitoring the attitudes of South African professionals and students towards living and working in the country and emigration since the late 1990s. Emigration potential hardly declined at all in the first decade of democracy. In 2007, SAMP’s survey of the health professions provided an extremely pessimistic picture. Health professionals were deeply dissatisfied with their jobs and with life in the country and many were contemplating departure. A significant minority had taken active steps to join the brain drain to countries in the Global North, especially the UK, Australia, Canada, the US and New Zealand.

Since 2007, the South African government has continued its rhetorical campaign against the brain drain abroad and largely lived up to its commitment not to “poach” replacement health professionals from other countries in the South. Despite the evidence of health professional shortages, the health professions never appeared on the official scarce-skills lists before 2014. The government has also recognized that appeals to countries in the North to deny work permits to South African health professionals not only violate the constitutional rights of those professionals but are unlikely to be heeded by countries anxious to recruit them. Instead, it has begun to think about various retention strategies, trying to address the high levels of dissatisfaction that underwrite the exodus. In this context, it becomes important to assess whether the retention strategies adopted to date have had any impact. It is also necessary to understand, from the perspective of health professionals, why they are leaving. In other words, if the brain drain is not slowing, it is quite possible that government retention strategies are targeting the wrong factors.

Between 2007 and early 2013, when the surveys discussed in this report were implemented, there were a number of important changes in the South African health-care system. These are certainly not all directed at health professional retention but they have all had an actual or potential impact on health professionals. For example, the nationwide roll-out of ART in the country with the world’s largest HIV epidemic has had major implications for the workloads and expectations of health professionals. Also, the proposed National Health Insurance policy has stirred considerable debate and controversy in the health professions. These changes, and their implications for the health professions, are discussed in some detail in this paper. The major finding of this report is that these changes have had very little impact on the attitudes of health professionals towards their working condi-

tions and to their emigration potential. Comparing the findings from 2007 and 2013, there is little positive change, and none of any significance, in the attitudes of the medical, dental and pharmacy professions. The majority of professionals remain extremely dissatisfied with their working conditions, across a wide range of metrics. At the same time, and this is something of a paradox, it is not primarily working conditions that are driving health professionals out of the country. In other words, amelioration and improvement of work conditions will not, in themselves, reduce the brain drain and the high emigration potential of those who remain.

The 2013 survey not only shows that the majority of health professionals are thinking about leaving the country but that around half expect to do so within the next five years. Rather than simply inferring reasons for leaving from measures of dissatisfaction, as in past surveys, this survey specifically asked health professionals to identify which factors were most likely to push them out of the country. Here it is clear that factors beyond the health sector are more important than those within the sector. Certainly, there is a great deal of dissatisfaction with government in general, and health sector policies in particular. But it is not clear that the almost universal animosity towards government is sufficient to induce people to leave. Rather it is combined with the feeling that government does not offer them and their families sufficient personal protection and does not provide an enabling environment within which to raise children and offer them a decent future. In the view of most health professionals, government is the problem, not part of the solution.

One of the major findings in the 2007 SAMP survey, now confirmed, is that a significant minority of South African physicians in the country have worked in other countries for various lengths of time. The concept of return migration is usually associated in the migration literature with individuals who have emigrated to and effectively settled in another country and then, at a later point, decide to re-emigrate to their country of origin. This concept, as traditionally conceived, does not adequately capture the complexity of mobilities in the modern world. While there are some South African physicians who fit the traditional picture, other research has shown that the return intentions of emigres are in fact low. What we are dealing with, then, is a complex and varied category of physicians who have worked (and even continue to work) abroad for varying lengths of time from their base in South Africa. Take, for example, the varied experiences and motivations of only three “return migrants” who participated in the survey. The first had experience working in the UK, Brunei, Oman, the Emirates and New Zealand “doing locums over the years and building up a nest egg abroad.” The second noted that they had lived and worked in the UK for eight years: “the reason was so that my husband and I could get UK citizenship - we now hold dual citizenship. The reason for wanting this is for safety. We are

both Indian and although we love our country we feel threatened by the political situation.” A third is worth quoting at length:

I trained here and went abroad to earn an income that would allow me to continue to work in the public sector on my return without being saddled with a huge mortgage. What was supposed to be a two-year commitment abroad was extended as house prices sky rocketed and then the lure of obtaining a British passport. There had never been an intention to permanently emigrate. However on my return to South Africa, I have been dismayed at the quality of health service we are offering our people, that medical aid rates are so exorbitant and only for the wealthy. The corruption within the country, the unaccountability of politicians and the general public work force for ineptitude and abuse is unacceptable. The crime rate has not improved, the education system has deteriorated, the cost of living has escalated. I have many moments when I think of leaving again.

This account draws attention to the other question addressed in this report: that is, are there differences in the attitudes and emigration potential of those who have left and returned and those who have not worked in other countries? The basic finding is that there are no significant differences between the two groups. Neither is more satisfied with working and living conditions than the other, they share the same concerns about the country and its future and they are equally likely to leave the country for good.

ENDNOTES

- 1 H. Coovadia, R. Jewkes, P. Barron, D. Sanders and D. McIntyre, “The Health and Health System of South Africa: Historical Roots of Current Public Health Challenges” *The Lancet*, 374(2009): 817-34.
- 2 C. Day and A. Gray, “Health and Related Indicators” In A. Padarath and R. English, eds., *South African Health Review 2012/13* (Durban: Health Systems Trust, 2013), p. 218.
- 3 J. Ataguba and D. McIntyre, “Who Benefits From Health Services in South Africa?” *Health Economics Policy Law* 8(2013): 21-46.
- 4 OECD, (2013) *OECD Factbook 2013: Economic, Environmental and Social Statistics* (Paris: OECD Publishing).
- 5 B. Gaede and M. Versteeg, “The State of the Right to Health in Rural South Africa” In A. Padarath and R. English, eds., *South African Health Review 2011* (Durban: Health Systems Trust, 2012), pp. 99-106.

- 6 D. McIntyre, "Private Sector Involvement in Funding and Providing Health Services in South Africa: Implications for Equity and Access to Health Care" Equinet Discussion Paper No. 84, Harare, 2010.
- 7 J. Crush and W. Pendleton, "Brain Flight: The Exodus of Health Professionals from South Africa" *International Journal of Migration, Health and Social Care* 6(2010): 3-18.
- 8 F. Docquier, "Globalization, Brain Drain, and Development" *Journal of Economic Literature* 50(2012): 681-730.
- 9 E. Kalipeni, L. Semu and M. Mbilizi, "The Brain Drain of Health Care Professionals from Sub-Saharan Africa: A Geographic Perspective" *Progress in Development Studies* 12(2012): 153-71.
- 10 J. Dumont and P. Zurn, "Immigrant Health Workers in OECD Countries in the Broader Context of Highly-Skilled Migration" *International Migration Outlook* (Paris: OECD, 2007), pp. 162-228.
- 11 P. Arnold, *A Unique Migration: South African Doctors Fleeing to Australia* (Seattle: CreateSpace, 2011); see also S. Oberoi and V. Lion, "Brain Drain of Doctors from Southern Africa: Brain Gain for Australia" *Australian Health Review* 30(2006): 25-33; D. Groutsis and P. Arnold, "Tracking the Career Decisions and Experience of Migrant Elites: The Case of South African-Trained Medical Professionals in the Australian Labour Market" *Health Sociology Review* 21(2012): 332-42.
- 12 J. Crush, A. Chikanda and W. Pendleton, "The Disengagement of the South African Medical Diaspora in Canada" *Journal of Southern African Studies* 38(2012): 27-49; see also H. Grant, "From the Transvaal to the Prairies: The Migration of South African Physicians to Canada" *Journal of Ethnic and Migration Studies* 32(2006): 681-96; R. Joudrey and K. Robson, "Practising Medicine in Two Countries: South African Physicians in Canada" *Sociology of Health & Illness* 20(2010): 1-17.
- 13 A. Tankwanchi, C. Ozden and S. Vermund, "Physician Emigration from Sub-Saharan Africa to the United States: Analysis of the 2011 AMA Physician Masterfile" *PLoS Medicine* 10(9) (2013):e1001513.
- 14 E. Mills, S. Kanters, A. Hagopian, N. Bansback, J. Nachega, M. Alberton, C. Au-Yeung, A. Mtambo, I. Bourgeault, S. Luboga and N. Ford, "The Financial Cost of Doctors Emigrating from Sub-Saharan Africa: Human Capital Analysis" *British Medical Journal* 343 (2011): d7031.
- 15 W. Harvey, "The Social Networks of British and Indian Expatriate Scientists in Boston" *Geoforum* 39(2008): 1756-65; W. Harvey, "British and Indian Scientists Moving to the United States" *Work and Occupations* 38(2011): 68-100.
- 16 Arnold, *Unique Migration*.
- 17 J. Crush, A. Chikanda, W. Pendleton, M. Caesar, S. Ramachandran, C. Eberhardt and A. Hill, *Divided Diasporas: Southern Africans in Canada* (Waterloo: SAMP and CIGI, 2013).

- 18 R. Mattes and N. Mniki, "Restless Minds: South African Students and the Brain Drain", SAMP Migration Policy Series No. 36, Cape Town, 2005.
- 19 E. de Vries, J. Irlam, I. Couper and S. Kornik, "Career Plans of Final Year Medical Students in South Africa" *South African Medical Journal* 100(4) (2010): 227-8.
- 20 G. George and C. Reardon, "Preparing for Export? Medical and Nursing Student Migration Intentions Post-Qualification in South Africa" *African Journal of Primary Health Care and Family Medicine* 5(1) (2013): Art. #483.
- 21 C. Naidu, J. Irlam and P. Diab, "Career and Practice Intentions of Health Science Students at Three South African Health Science Faculties" *African Journal of Health Professions Education* 5(2013): 68-71.
- 22 V. Burch, D. McKinley, J. van Wyk, S. Kiguli-Walube, D. Cameron, F. Cilliers, A. Longombe, C. Mkony, C. Okoromah, B. Otieno-Nyunya and P. Morahan, "Career Intentions of Medical Students Trained in Six Sub-Saharan African Countries" *Education for Health* 24(2011): 614.
- 23 Crush and Pendleton, "Brain Flight."
- 24 G. George, M. Atujuna and J. Gow, "Migration of South African Health Workers: The Extent to which Financial Considerations Influence Internal Flows and External Movements" *BMC Health Services Research* (13) (2013): 297.
- 25 Crush and W. Pendleton, "Brain Flight."
- 26 A. Davies, R. Borland, C. Blake and H. West, "The Dynamics of Health and Return Migration" *PLoS Medicine* 8(6) (2011): e1001046; E. Asampong, J. Harrison, L. Yarney, K. Opoku-Mensah, A. Karim and J. Fobil, "Back to My Roots: A Study of 'Returning' Emigrated Health Professionals in the Greater Accra Region of Ghana" *Africa Today* 59(2013): 118-30; A. Sahay, "Reverse Brain Drain: New Strategies by Developed and Developing Countries" In S. Sahoo and B. Pattanaik, eds., *Global Diasporas and Development* (New York: Springer, 2014), pp. 183-201.
- 27 M. Andrucki, "The Visa Whiteness Machine: Transnational Mobility in Post-Apartheid South Africa" *Ethnicities* 10(2010): 358-70; A. Morcillo-Espina and R. Bhat, "Return Migration to South Africa: Reasons and Socioeconomic Profile" Working Paper No. 03/2013, Navarra Center for International Development, University of Navarra, 2013.
- 28 Crush et al, "Disengagement of the South African Medical Diaspora in Canada."
- 29 D. Hammett, "Cuban Intervention in South African Health Care Service Provision" *Journal of Southern African Studies* 33 (2007): 63-81; D. Hammett, "Physician Migration in the Global South between Cuba and South Africa" *International Migration* (published online August 2013).
- 30 HSRC, DPRU and SWOP, "The Shortage of Medical Doctors in South Africa" Report for Department of Labour, Pretoria, 2010, pp. 23-4.
- 31 Department of Health, *A National Human Resource Plan for Health* (Pretoria, 2006).

- 32 Ibid., p. 24.
- 33 B. Strachan, T. Zabow and Z. van der Spuy, "More Doctors and Dentists are Needed in South Africa" *South African Medical Journal* 101(2012):523-8.
- 34 Department of Health, *Human Resources for Health South Africa: HRH Strategy for the Health Sector, 2012/13 – 2016/17* (Pretoria: Department of Health, 2011), p. 41.
- 35 Definitive numbers about how many doctors work in the public and private sectors are impossible since some doctors work across both sectors with private sector doctors doing sessions in public hospitals and clinics and public sector doctors also doing private work.
- 36 Econex, "The South African Private Healthcare Sector: Role and Contribution to the Economy" Report for SAPPF and HealthMan Ltd, 2013, p. 27.
- 37 B. Strachan, "Meeting South Africa's Needs: A Preliminary Report of an Investigation into Specialist Training and Development" Colleges of Medicine in South Africa, Johannesburg, 2009.
- 38 Department of Health, *Human Resources for Health South Africa*.
- 39 Econex, "The Human Resource Supply Constraint: The Case of Doctors" Health Reform Note 8, 2010, at http://www.mediclinic.co.za/about/Documents/ECONEX_Health%20reform%20note_8.pdf
- 40 B. Mayosi, J. Lawn, A. van Niekerk, D. Bradshaw, S. Abdool Karim and H. Coovadia, "Health in South Africa: Changes and Challenges since 2009" *The Lancet* 380(2012): 2029-43.
- 41 WHO Global Code of Practice on the International Recruitment of Health Personnel at http://www.who.int/hrh/migration/code/WHO_global_code_of_practice_EN.pdf
- 42 A. Taylor, L. Hwenda, B-I. Larsen and N. Daulaire, "Stemming the Brain Drain – A WHO Global Code of Practice on International Recruitment of Health Personnel" *New England Journal of Medicine* 365(2011): 2348-51.
- 43 V. Runnels, C. Packer and R. Labonte, "Global Policies and Local Practice in the Ethical Recruitment of Internationally Trained Health Human Resources" In I. Cohen, ed, *The Globalization of Health Care* (Oxford: Oxford University Press, 2013), pp. 203-20.
- 44 F. Venter, "HIV Treatment in South Africa: The Challenges of an Increasingly Successful Antiretroviral Programme" *South African Health Review* 2012/13 (Durban: Health Systems Trust, 2013), pp. 36-47.
- 45 P. Chigwedere, G. Seage, S. Gruskin, T-H. Lee and M. Essex, "Estimating the Lost Benefits of Antiretroviral Drug Use in South Africa" *Journal of Acquired Immune Deficiency Syndromes* 49(2008): 410-15.
- 46 Venter, "HIV Treatment in South Africa" p. 40.
- 47 M. Kavanagh, "The Politics and Epidemiology of Transition: PEPFAR and AIDS in South Africa" *Journal of Acquired Immune Deficiency Syndromes* 65(2014): 247-50.

- 48 J. Klausner, C. Serenata, H. O’Bra, C. Mattson, J. Brown, M. Wilson, T. Mbengashe and T. Goldman, “Scale-Up and Continuation of Antiretroviral Therapy in South African Treatment Programs, 2005–2009” *Journal of Acquired Immune Deficiency Syndromes* 56(2011): 292-5; S. Patel, E. Larson, T. Mbengashe, H. O’Bra, J. Brown, T. Goldman and J. Klausner, “Increases in Pediatric Antiretroviral Treatment, South Africa 2005–2010” *PLoS ONE* 7(2012):e44914.
- 49 Health Systems Trust, “Number of Medical Practitioners (Including Specialists) Registered” at <http://indicators.hst.org.za/healthstats/281/data>
- 50 Venter, “HIV Treatment in South Africa” p. 43.
- 51 E. Wouters, C. Heunis, J. Michielsen, F. Van Loon and H. Meulmans, “The Long Road to Universal Antiretroviral Treatment Coverage in South Africa” *Future Virology* 6(2011): 801-12.
- 52 P. Tobi, G. George, E. Schmidt and A. Renton, “Antiretroviral Treatment and the Health Workforce in South Africa: How Have ART Workers Been Affected by Scaling Up?” *Tropical Medicine & International Health* 13(2008): 1452-58; see also G. George, M. Atujuna, J. Gentile, T. Quinlan, E. Schmidt, P. Tobi and A. Renton, “The Impact of ART Scale Up Upon Health Workers: Evidence from Two South African Districts” *AIDS Care* 22(2010): 77-84.
- 53 I. Sanne, C. Orrell, M. Fox, F. Conradie, P. Ive, J. Zeinecker J, et al. “Nurse Versus Doctor Management of HIV-Infected Patients” *The Lancet* 376(2010):33-40; L. Fairall, M. Bachmann, C. Lombard, V. Timmerman, K. Uebel, M. Zwarenstein et al. “Task Shifting of Antiretroviral Treatment from Doctors to Primary-Care Nurses in South Africa” *The Lancet* 380(2012): 889-98; M. Boyd and D. Cooper, “Optimisation of HIV Care and Service Delivery: Doing More with Less” *The Lancet* 380(2012): 1860-6.
- 54 L. Johnson, “Access to Antiretroviral Treatment in South Africa, 2004-2011” *Southern African Journal of HIV Medicine* 13(2012): 22-7; E. Larson, H. O’Bra, J. Brown, T. Mbengashe and J. Klausner, “Supporting the Massive Scale-Up of Antiretroviral Therapy: The Evolution of PEPFAR-Supported Treatment Facilities in South Africa, 2005-2009” *BMC Public Health* (2012) 12:173.
- 55 CSIS, *The Future of the U.S.-South Africa HIV/AIDS Partnership* (Washington DC, 2013), p. 3.
- 56 G. George, T. Quinlan and C. Reardon, “Human Resources for Health in South Africa” Health Economics and HIV & AIDS Research Division (HEARD), University of KwaZulu-Natal, Durban, 2009.
- 57 S. Reid, “Monitoring the Effect of the New Rural Allowance for Health Professionals” Health Systems Trust, Durban, 2004.
- 58 V. Burch and B. Van Heerden, “Are Community Service Doctors Equipped to Address Priority Health Needs in South Africa?” *South African Medical*

- Journal* 103(12): 905; George et al, "Human Resources for Health in South Africa."
- 59 A. Hatcher, M. Onah, S. Kornik, K. Peacocke and S. Reid, "Placement, Support, and Retention of Health Professionals: National Cross-Sectional Findings from Medical and Dental Community Service Officers in South Africa" *Human Resources for Health* 12(2014).
- 60 Reid "Monitoring the Effect of the New Rural Allowance."
- 61 J. Doherty, I. Couper and S. Fonn, "Will Clinical Associates be Effective for South Africa?" *South African Medical Journal* 102(2012): 833-5.
- 62 Department of Health, *Human Resources for Health South Africa*.
- 63 J. Doherty, D. Conco, I. Couper and S. Fonn, "Developing a New Mid-Level Health Worker: Lessons from South Africa's Experience with Clinical Associates" *Global Health Action* 6(2013).
- 64 Department of Health, *Human Resources for Health South Africa*.
- 65 Doherty et al. "Will Clinical Associates be Effective for South Africa?"
- 66 P. Ditlopo, D. Blaauw, L. Rispel, S. Thomas and P. Bidwell, "Policy Implementation and Financial Incentives for Nurses in South Africa: A Case Study on the Occupation-Specific Dispensation" *Global Health Action* 6(2013).
- 67 G. George and B. Rhodes, "Is There Really a Pot of Gold at the End of the Rainbow? Has the Occupational Specific Dispensation, As a Mechanism to Attract and Retain Health Workers in South Africa, Leveled the Playing Field?" *BMC Public Health* 12(2012).
- 68 Ibid.
- 69 K. Motsosi and L. Rispel, "Nurses' Perceptions of the Implementation of Occupational Specific Dispensation at Two District Hospitals in the Gauteng Province of South Africa" *Africa Journal of Nursing and Midwifery* 14 (2012): 130-44.
- 70 J. Parkes et al. "How has the OSD Affected Our State Hospitals?" *South African Medical Journal* 99(2009): 788-9.
- 71 D. McIntyre, "National Health Insurance: Providing a Vocabulary for Public Engagement" *South African Health Review* 2010(2010): 145-56.
- 72 D. McIntyre, J. Goudge, B. Harris, N. Nxumalo and M. Nkosi, "Prerequisites for National Health Insurance in South Africa: Results of a National Household Survey" *South African Medical Journal* 99(2009): 725-9; S. Naidoo, "The South African National Health Insurance: A Revolution in Health-Care Delivery!" *Journal of Public Health* 34(2012): 149-50.
- 73 M. Matsoso and R. Fryatt, "National Health Insurance: The First 18 Months" *South African Health Review* 2012/13 (Durban: Health Systems Trust, 2013), p. 22.
- 74 Naidoo, "South African National Health Insurance."
- 75 Ibid, p. 150; Matsoso and Fryatt, "National Health Insurance."
- 76 Matsoso and Fryatt, "National Health Insurance."

- 77 S. Ramjee and H. McLeod, "Private Sector Perspectives on National Health Insurance" *South African Health Review 2010* (Durban: Health Systems Trust, 2010), pp. 179-93; McIntyre, "National Health Insurance"; A. Baleta, "South Africa Rolls Out Pilot Health Insurance Scheme" *The Lancet* 379(2012): 1185; O. Okorafor, "National Health Insurance Reform in South Africa: Estimating the Implications for Demand for Private Health Insurance" *Applied Health Economics and Health Policy* 10(2012): 189-200.
- 78 Baleta, "South Africa Rolls Out Pilot Health Insurance Scheme"; D. McIntyre and J. Ataguba, "Modelling the Affordability and Distributional Implications of Future Health Care Financing Options in South Africa" *Health Policy and Planning* 27(2012): i.101-12.
- 79 A. van den Heever, "A Financial Feasibility Review of NHI Proposals for South Africa" *South African Health Review 2010* (Durban: Health Systems Trust, 2010), pp. 157-70.
- 80 M. Evans and O. Shisana, "Gender Differences in Public Perceptions on National Health Insurance" *South African Medical Journal* 102 (2012): 918-24.
- 81 Ibid.; B. Harris, N. Nxumalo, J. Ataguba, V. Govender, M. Chersich and J. Goudge, "Social Solidarity and Civil Servants' Willingness for Financial Cross-Subsidization in South Africa: Implications for Health Financing Reform" *Journal of Public Health Policy* 32(2011): S162-83.
- 82 B. Lloyd, D. Sanders and U. Lehmann, "Human Resource Requirements for National Health Insurance" *South African Health Review 2010* (Durban: Health Systems Trust, 2010), pp. 171-8.
- 83 Ibid.
- 84 Moosa et al., "Introducing A National Health Insurance System in South Africa."
- 85 S. Moosa, J. Luiz and T. Carmichael, "Introducing a National Health Insurance System in South Africa: A General Practitioner's Bottom-Up Approach to Costing" *South African Medical Journal* 102 (2012): 794-7.
- 86 G. Sorger, O. Stark and Y. Wang, "Migration and Dynamics: How a Leakage of Human Capital Lubricates the Engine of Economic Growth" *International Review of Economics and Finance* 28(2013) 26-37.
- 87 Mills et al., "Financial Cost of Doctors Emigrating from Sub-Saharan Africa."
- 88 M. Clemens, "The Financial Consequences of High-Skilled Emigration: Lessons from African Doctors Abroad" In S. Plaza and D. Ratha, eds., *Diaspora for Development in Africa* (Washington DC: World Bank, 2011).
- 89 Crush et al, "Disengagement of the South African Medical Diaspora in Canada."
- 90 Personal communication, Michael Mittermaier, March 2014.
- 91 W. Pendleton, J. Crush and K. Lefko-Everett, "The Haemorrhage of Health Professionals from South Africa" SAMP Migration Policy Series No 47, Cape Town, 2007; Crush and Pendleton, "Brain Flight."

MIGRATION POLICY SERIES

1. *Covert Operations: Clandestine Migration, Temporary Work and Immigration Policy in South Africa* (1997) ISBN 1-874864-51-9
2. *Riding the Tiger: Lesotho Miners and Permanent Residence in South Africa* (1997) ISBN 1-874864-52-7
3. *International Migration, Immigrant Entrepreneurs and South Africa's Small Enterprise Economy* (1997) ISBN 1-874864-62-4
4. *Silenced by Nation Building: African Immigrants and Language Policy in the New South Africa* (1998) ISBN 1-874864-64-0
5. *Left Out in the Cold? Housing and Immigration in the New South Africa* (1998) ISBN 1-874864-68-3
6. *Trading Places: Cross-Border Traders and the South African Informal Sector* (1998) ISBN 1-874864-71-3
7. *Challenging Xenophobia: Myth and Realities about Cross-Border Migration in Southern Africa* (1998) ISBN 1-874864-70-5
8. *Sons of Mozambique: Mozambican Miners and Post-Apartheid South Africa* (1998) ISBN 1-874864-78-0
9. *Women on the Move: Gender and Cross-Border Migration to South Africa* (1998) ISBN 1-874864-82-9.
10. *Namibians on South Africa: Attitudes Towards Cross-Border Migration and Immigration Policy* (1998) ISBN 1-874864-84-5.
11. *Building Skills: Cross-Border Migrants and the South African Construction Industry* (1999) ISBN 1-874864-84-5
12. *Immigration & Education: International Students at South African Universities and Technikons* (1999) ISBN 1-874864-89-6
13. *The Lives and Times of African Immigrants in Post-Apartheid South Africa* (1999) ISBN 1-874864-91-8
14. *Still Waiting for the Barbarians: South African Attitudes to Immigrants and Immigration* (1999) ISBN 1-874864-91-8
15. *Undermining Labour: Migrancy and Sub-contracting in the South African Gold Mining Industry* (1999) ISBN 1-874864-91-8
16. *Borderline Farming: Foreign Migrants in South African Commercial Agriculture* (2000) ISBN 1-874864-97-7
17. *Writing Xenophobia: Immigration and the Press in Post-Apartheid South Africa* (2000) ISBN 1-919798-01-3
18. *Losing Our Minds: Skills Migration and the South African Brain Drain* (2000) ISBN 1-919798-03-x
19. *Botswana: Migration Perspectives and Prospects* (2000) ISBN 1-919798-04-8
20. *The Brain Gain: Skilled Migrants and Immigration Policy in Post-Apartheid South Africa* (2000) ISBN 1-919798-14-5
21. *Cross-Border Raiding and Community Conflict in the Lesotho-South African Border Zone* (2001) ISBN 1-919798-16-1

22. *Immigration, Xenophobia and Human Rights in South Africa* (2001) ISBN 1-919798-30-7
23. *Gender and the Brain Drain from South Africa* (2001) ISBN 1-919798-35-8
24. *Spaces of Vulnerability: Migration and HIV/AIDS in South Africa* (2002) ISBN 1-919798-38-2
25. *Zimbabweans Who Move: Perspectives on International Migration in Zimbabwe* (2002) ISBN 1-919798-40-4
26. *The Border Within: The Future of the Lesotho-South African International Boundary* (2002) ISBN 1-919798-41-2
27. *Mobile Namibia: Migration Trends and Attitudes* (2002) ISBN 1-919798-44-7
28. *Changing Attitudes to Immigration and Refugee Policy in Botswana* (2003) ISBN 1-919798-47-1
29. *The New Brain Drain from Zimbabwe* (2003) ISBN 1-919798-48-X
30. *Regionalizing Xenophobia? Citizen Attitudes to Immigration and Refugee Policy in Southern Africa* (2004) ISBN 1-919798-53-6
31. *Migration, Sexuality and HIV/AIDS in Rural South Africa* (2004) ISBN 1-919798-63-3
32. *Swaziland Moves: Perceptions and Patterns of Modern Migration* (2004) ISBN 1-919798-67-6
33. *HIV/AIDS and Children's Migration in Southern Africa* (2004) ISBN 1-919798-70-6
34. *Medical Leave: The Exodus of Health Professionals from Zimbabwe* (2005) ISBN 1-919798-74-9
35. *Degrees of Uncertainty: Students and the Brain Drain in Southern Africa* (2005) ISBN 1-919798-84-6
36. *Restless Minds: South African Students and the Brain Drain* (2005) ISBN 1-919798-82-X
37. *Understanding Press Coverage of Cross-Border Migration in Southern Africa since 2000* (2005) ISBN 1-919798-91-9
38. *Northern Gateway: Cross-Border Migration Between Namibia and Angola* (2005) ISBN 1-919798-92-7
39. *Early Departures: The Emigration Potential of Zimbabwean Students* (2005) ISBN 1-919798-99-4
40. *Migration and Domestic Workers: Worlds of Work, Health and Mobility in Johannesburg* (2005) ISBN 1-920118-02-0
41. *The Quality of Migration Services Delivery in South Africa* (2005) ISBN 1-920118-03-9
42. *States of Vulnerability: The Future Brain Drain of Talent to South Africa* (2006) ISBN 1-920118-07-1
43. *Migration and Development in Mozambique: Poverty, Inequality and Survival* (2006) ISBN 1-920118-10-1
44. *Migration, Remittances and Development in Southern Africa* (2006) ISBN 1-920118-15-2

45. *Medical Recruiting: The Case of South African Health Care Professionals* (2007) ISBN 1-920118-47-0
46. *Voices From the Margins: Migrant Women's Experiences in Southern Africa* (2007) ISBN 1-920118-50-0
47. *The Haemorrhage of Health Professionals From South Africa: Medical Opinions* (2007) ISBN 978-1-920118-63-1
48. *The Quality of Immigration and Citizenship Services in Namibia* (2008) ISBN 978-1-920118-67-9
49. *Gender, Migration and Remittances in Southern Africa* (2008) ISBN 978-1-920118-70-9
50. *The Perfect Storm: The Realities of Xenophobia in Contemporary South Africa* (2008) ISBN 978-1-920118-71-6
51. *Migrant Remittances and Household Survival in Zimbabwe* (2009) ISBN 978-1-920118-92-1
52. *Migration, Remittances and 'Development' in Lesotho* (2010) ISBN 978-1-920409-26-5
53. *Migration-Induced HIV and AIDS in Rural Mozambique and Swaziland* (2011) ISBN 978-1-920409-49-4
54. *Medical Xenophobia: Zimbabwean Access to Health Services in South Africa* (2011) ISBN 978-1-920409-63-0
55. *The Engagement of the Zimbabwean Medical Diaspora* (2011) ISBN 978-1-920409-64-7
56. *Right to the Classroom: Educational Barriers for Zimbabweans in South Africa* (2011) ISBN 978-1-920409-68-5
57. *Patients Without Borders: Medical Tourism and Medical Migration in Southern Africa* (2012) ISBN 978-1-920409-74-6
58. *The Disengagement of the South African Medical Diaspora* (2012) ISBN 978-1-920596-00-2
59. *The Third Wave: Mixed Migration from Zimbabwe to South Africa* (2012) ISBN 978-1-920596-01-9
60. *Linking Migration, Food Security and Development* (2012) ISBN 978-1-920596-02-6
61. *Unfriendly Neighbours: Contemporary Migration from Zimbabwe to Botswana* (2012) ISBN 978-1-920596-16-3
62. *Heading North: The Zimbabwean Diaspora in Canada* (2012) ISBN 978-1-920596-03-3
63. *Dystopia and Disengagement: Diaspora Attitudes Towards South Africa* (2012) ISBN 978-1-920596-04-0
64. *Soft Targets: Xenophobia, Public Violence and Changing Attitudes to Migrants in South Africa after May 2008* (2013) ISBN 978-1-920596-05-7

SAMP



IMRC
International Migration
Research Centre

