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2019

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Loeffler, Thorsten. (2019). Shortage of health care professionals in South Africa's public sector :an exploratory study of the clinical associate programme regarding the encouragement of internal labour migration to rural health care facilities. University of the Witwatersrand, https://hdl.handle.net/10539/29433

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Shortage of Health Care Professionals in South Africa's public sector: an exploratory study of the Clinical Associate Programme regarding the encouragement of internal labour migration to rural health care facilities

Masters Final Report

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Johannesburg, 28/05/2019

Declaration

I, THORSTEN LOEFFLER, do hereby declare that this research report, titled "*Shortage of Health Care Professionals in South Africa's public sector: an exploratory study of the Clinical Associate Programme regarding the encouragement of internal labour migration to rural health care facilities",* is my own unaided work. It is submitted in partial fulfilment of the requirement for the degree of Master of Arts in Migration and Displacement Studies at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination at any other university.

Johannesburg, ----------

THORSTEN LOEFFLER

Abstract

Inequality in the healthcare system is a reality in South Africa. On the one hand, there is the private sector with excellent service who can only afford by the wealthier part of the population. On the other hand, there is the public sector which struggles to provide the basic healthcare needs, suffers from equipment and medical staff. In fact, more than 80% of the population in South Africa have to rely on the public sector. Additionally, there is a severe shortage of Health Care Professionals in the country. Such shortages are not only a South African phenomenon but a global one. In South Africa the public sector and rural areas are most affected. Initiatives and programmes, as well as bilateral agreements on a local and global level seek to encourage Health Care Professionals to work in rural areas by offering them different incentives. These initiatives address doctors and nurses who already finished their studies. In contrast to that, there has been a 3-year university programme (Clinical Associate Programme) implemented in 2008 with the aim that graduates work in the public sector and in underserved areas. A Clinical Associate is a mid-level healthcare provider between a nurse and a doctor. There are only some studies available regarding Clinical Associates. Most of the studies focus on the effectiveness of the Clinical Associate Programme, i.e. on economical factors. The aim of this research project is to put emphasis on the mobility of Clinical Associates instead. The social phenomenon of mobility and migration can be described by the pull and push theory, by the agency and structure dualism and by parts of the “Sustainable Livelihood Framework”. The study focusses on students and graduates of the University of the Witwatersrand, Johannesburg - one of the leading universities regarding research and education. There is one overall research question which should be answered through this study, namely: What are the main reasons for participants (students and graduates from the University of the Witwatersrand, Johannesburg) of the Clinical Associate Programme to move to a rural area of South Africa in order to work in a public health care facility?

2 objectives derive from the research question:

- To explore incentives for Clinical Associates to change their opinion if they do not want work in a rural area
- To explore the experiences of the programme for both current students graduates after 10 years of implementation

The study uses a qualitative research design with a semi-structured interview guide. Data collection methods are individual interviews as well as online surveys with open questions. Participants of the study are students, graduates and staff members of the University of the Witwatersrand, Johannesburg. In total, 48 participated in the research project (46 students/graduates and 2 staff members). The findings of the study show that Clinical Associate are more likely to move to a rural area for work when they are originally coming from those areas. Reasons to move to a rural area are intrinsic factors, like the passion about medicine and to help people and the community. But there are also external factors like unavailable jobs in urban areas. Participants mention financial compensations as major incentive for Clinical Associates to convince someone to move to a rural area. Other factors are not directly incentives but more improvements of circumstances like better working / living conditions or better recognition of Clinical Associates. According to the staff members one of the main current challenges of the programme is the decreasing number or unavailability of scholarships and jobs in rural areas, problems to find a job as a Clinical Associate and knowledge gaps to work in rural areas. The conclusion of the study is that participants of the Clinical Associate Programme have a high level of agency and are more willing to work in rural areas in comparison to other groups of Health Care Professionals (e.g. doctors). The number could even be higher if the overall conditions and the recognition of Clinical Associates by the government and the National Health Department would be improved.

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List of Abbreviations

ACMS	African Centre for Migration and Society
AIDS	Acquired Immunodeficiency Syndrome
AIHA	American International Health Alliance
AHP	Africa Health Placement
ARV	Antiretrovial Drugs
DFID	Department of International Development
DoH	Department of Health
HASA conference	Hospital Association South Africa Conference
HPCSA	Health Professions Council of South Africa
HIV	Human Immunodeficiency Virus
MEC	Member of the Executive Council
NEPI	Nursing Education Partnership Initiatives
NBT	National Benchmark Test
NHI	National Health Insurance
No.	Number
OCD	Occupation Specific Dispensation
OECD	Organisation for Economic Co-operation and Development
PACASA	Professional Association of Clinical Associates in South Africa
PEPFAR	President's Emergency Plan for AIDS Relief
SADC	Southern African Development Community
UK	United Kingdom
USB	Universal Serial Bus
WHO	World Health Organization

1. Introduction

The public health care system in South Africa is in a critical situation (Ndlozi, 2018). South Africa has plural biomedical health care systems: the public health care system and the private health care system. The public health care system is – in contrast to the private health care system - free at the point of use for South Africans because the majority of the population (82%) cannot afford services from the private health care system (Thiede, and Mutyambizi, 2010; Statistics South Africa, 2017a). According to the World Bank, South Africa is an upper middle-income country (World Bank, 2016). It has cosmopolitan city centres, comfortable neighbourhoods and suburbs, but also impoverished townships and informal housing – especially in rural areas. The income inequalities can also be seen in the 2 different health care systems in the country: the private and the public sector (Young, 2016). Additionally, the public health care sector is chronically understaffed, also mainly in rural areas. This means that there is an immense shortage of Health Care Professionals in these areas in South Africa (Health Department of the Republic of South Africa, 2011). A shortage occurs when there are not enough Health Care Professionals to meet patient demand. The World Health Organization (WHO) defined shortages as having less than 80 Percent of Health Care Professionals to meet provider demand (WHO, 2006). Therefore, it is one of the main tasks but also one of the big challenges, to mitigate Health Care Professionals from emigration to other countries and to encourage them to move to rural areas within South Africa for work. There are different policies and South African initiatives which try to achieve this. Examples for that are the WHO Global Code of Practice for International Recruitment of Health Personal or the Rural Allowance Programme. Most of these South African initiatives encourage Health Care Professionals to move to a rural area for work by offering them financial compensation, i.e. offering them a higher salary. In contrast, there is a specific programme which puts focus on increasing the task responsibility (tasks that doctors normally do) and therefore the motivation of the Health Care Professionals. This programme is called the Clinical Associate Programme and it has not yet been explored with regards to the encouragement of Health Care Professionals moving to a rural area for work. In this context, there are different questions arising: what are the reasons for participants to move to a rural area? What are incentives to convince Clinical Associates, who do not want to move

to rural areas for work, to change their opinion? Are participants who are originally from rural areas more likely to move to rural areas than participants who are from urban areas? These and other questions should be answered through this research project. The study uses a qualitative research design (a case study) with individual semi-structured interviews and an online survey with open questions. Participants are staff members, students and graduates of the Clinical Associate Programme at the University of the Witwatersrand, Johannesburg.
This final report consists of the following sections:

- A literature review including justification/rationale and theories/ theoretical framework (Section 2)
- Research question and objectives (Section 3)
- Research methodology (Section 4)
- Ethical considerations (Section 5)
- Data analysis and findings presentation (Section 6)
- Theories and theoretical framework adaptation (Section 7)
- Ideas of Improvement/Conclusion/further research fields (Section 8)

2. Literature review justification/rationale and theoretical framework

The literature review is divided into 5 different topics. These 5 topics are:

- The current health care system in South Africa and its historical developments (section 2.1.).
- Shortage of Health Care Professionals in South Africa's public sector - a global phenomenon especially in rural areas (section 2.2.).
- Reasons for the shortage of Health Care Professionals in South Africa in the public sector in rural areas (section 2.3.).
- Policies and initiatives on a global and national level to improve the Health Care Professional shortage in rural areas in South Africa (section 2.4.).
- The Clinical Associate programme as one of the South African initiatives to encourage Health Care Professionals to move to rural areas for work (section 2.5.).

2.1. The current health care system in South Africa and its historical developments

After the end of apartheid in 1994, South Africa became a democratic country for the first time in its long history and established the fundamental right of healthcare services for all South Africans, regardless of their race (The Constitution of the Republic of South Africa, 1996). The latest National Health Act was promulgated in 2003 and consists of a framework to secure a structured uniform biomedical health care system. The Act recognises that no one may be refused emergency treatment and it outlines the laws that govern national, provincial and local government (National Health Act No. 61, 2003). Although there are still many challenges and problems regarding the current health care system, in 1994 a fundamental change happened (Katuu, 2018).

Today, the South African health care system is organised on a national, provincial and district level, which means that there is a National Health Care System, a Provincial Health Care System and a District Health Care System existing. The National Health Care System is responsible for general health care standards for the whole country, the Provincial Health Care System for the health care coordination of the 9 provinces and the District Health Care System for the health care distribution on a local level for the 52 districts within the provinces. The coordination of these three systems is very difficult and challenging (ibid). In this context, scholars investigate the role of corruption and its negative impact on the provision of health services in South Africa (Rispel, de Jager and Fonn, 2016). For example, Rispel et al., 2016 use a combination of research methods and triangulated data from three sources. First, they analyse the Auditor-General of South Africa reports for each province which show a worsening trend in audit outcomes with considerable differences between the provinces. Second, key-informants explain that corruption has a negative impact on the quality of patient care and the morale of Health Care Professionals. Third, corruption is identified as an important topic in the media. The majority of the investigated print media reports on corruption in the public health care sector and the involved provincial health departments. The public sector is funded by the government and there is also a private sector existing (Katuu, 2018). The private sector is characterized by high quality medical services, which can be only afforded by the wealthier population, whereas the public sector struggles to provide the basic health care services for the majority of the

population. In fact, 82% of the population have to rely on the public health care sector in South Africa (Thiede and Mutyambizi, 2010). The total population of South Africa is estimated at around 57,7 million as of 1 July 2018 (Statistics South Africa, 2018). That means that almost 50 million South Africans are dependant on the public health care sector. One striking problem between the public and the private sector is the fact that there is an unequal distribution between Health Care Professionals working in the public and the private sector. In all major medical professions the majority (i.e. more than 50%) of the Health Care Professionals work in the private (non-public) sector. The following table 1 gives an overview of the distribution of Health Care Professionals in different professions in South Africa in 2010:

Table 1: Public and non-public sector of selected health professionals in South Africa (2010)

Sector		Public sector		Non-public sector*		Public/non-public ratio
Professional category	Total registered	Number	%	Number	%	
Medical practitioners	36 912	11 309	30.6	25 603	69.4	1:2.2
Dentists	5320	770	14.5	4550	85.5	1:5.9
Pharmacists	12 218	2966	24.3	9252	75.7	1:3.1
Physiotherapists	5777	1009	17.5	4768	82.5	1:4.7
Occupational therapists	3508	838	23.9	2670	76.1	1:3.1
Psychologists	7037	498	7.1	6539	92.9	1:6.6
Registered nurses	115 244	51 966	45.1	63 278	54.9	1:1.2

Source: van Rensburg, 2014

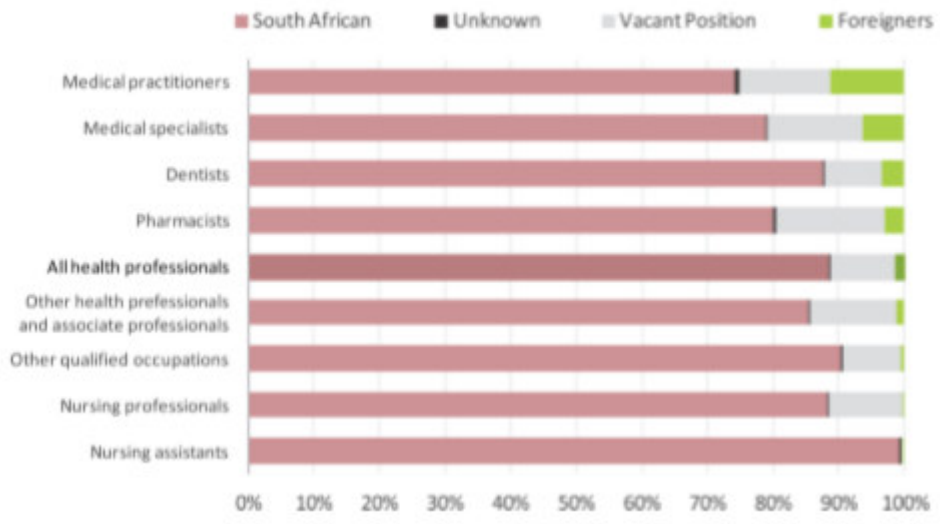
The consequence of this is an extreme understaffing of Health Care Professionals in all professions of the public sector. The difference is especially severe in the fields of dentists, physiotherapists and psychologists in which more than 80% of the Health Care Professionals work in the private sector in comparison to the public sector.

In the interests of this study, it is important to define what a Health Care Professional is. A Health Care Professional can be defined as “a person associated with either a speciality or a discipline and who is qualified and allowed by regulatory bodies to provide a healthcare service to a patient”. Health Care Professionals include for example medical and dental staff, nurses and midwives, accident and emergency ambulance staff as well as pharmacists (Free Dictionary by Farlex, 2018).

Segatti, 2014 draws a similar picture of the situation in the public sector. She gives an

overview of vacant positions in the public health sector according to the government's human resources database: the Personnel Salary System (PERSAL). The data is from February 2013 and is presented in the following table 2:

Table 2: Foreign workforce as a percentage of total public workforce by profession



Source: adapted from Segatti, 2014

Table 2 summarises the severe situation in the public health care sector in South Africa and shows that there are shortages in all Health Care professions except in the "nursing assistants" profession in South Africa. Although this data is 5 years old, the situation has not improved within the last few years. Medical professions are still on the list for professions in need (see Staff Writer 2018: National List of Occupations in High Demand, 2018).

In addition, it can be seen that the shortage of Health Care Professionals is especially severe in rural areas in South Africa (Health Department of the Republic of South Africa, 2011). "Of the 1200 medical students graduating in the country annually, only about 35 end up working in rural areas in the longer term" (Health Department of the Republic of South Africa, 2011: 30). South Africa is especially affected by the differences between the distribution of Health Care Professionals in rural and urban areas. Some parts of rural areas in South Africa have 14 times fewer doctors than the national average. The private sector employs half of the country's nurses and two-thirds of the countries doctors, but the private sector only serves around 20% of the

population (O'Brien and Gostin, 2011).

In addition to the definition of a "Health Care Professional" it is also essential for this research project to understand what the term "rural" means. The definition of the term "rural" is not universal – including the ways in which the term is understood in the South African context. Whereas developed countries tend to define "rural" according to the size of the population, this might not be useful in developing countries. Most definitions take issues such as access, infrastructure and distance into account. The term "rural health care" is very important with regards to health topics.

Couper, 2003:2 attempts to find a definition for the South African context and describes that

> "rural health care relates to the provision of health services to areas outside of metropolitan centres where there is not ready access to specialists, intensive and/or high technology care, and where resources, both human and material, are lacking. This service may be within hospitals, health centres, clinics or independent practices[1]".

It is important to note that almost half of the population (43.6%) live in rural areas, but they are only served by 12% of the doctors and 19% of nurses in the public sector (Health Department of the Republic of South Africa, 2011). Furthermore, there are significant differences between urban and rural areas regarding the health care divide. The following figure 1 shows the differences regarding the travel time to the nearest health care facilities in rural and urban areas:

[1] Please note that specific quotes are indented in this research report and written in a different font in order to make them better readable.

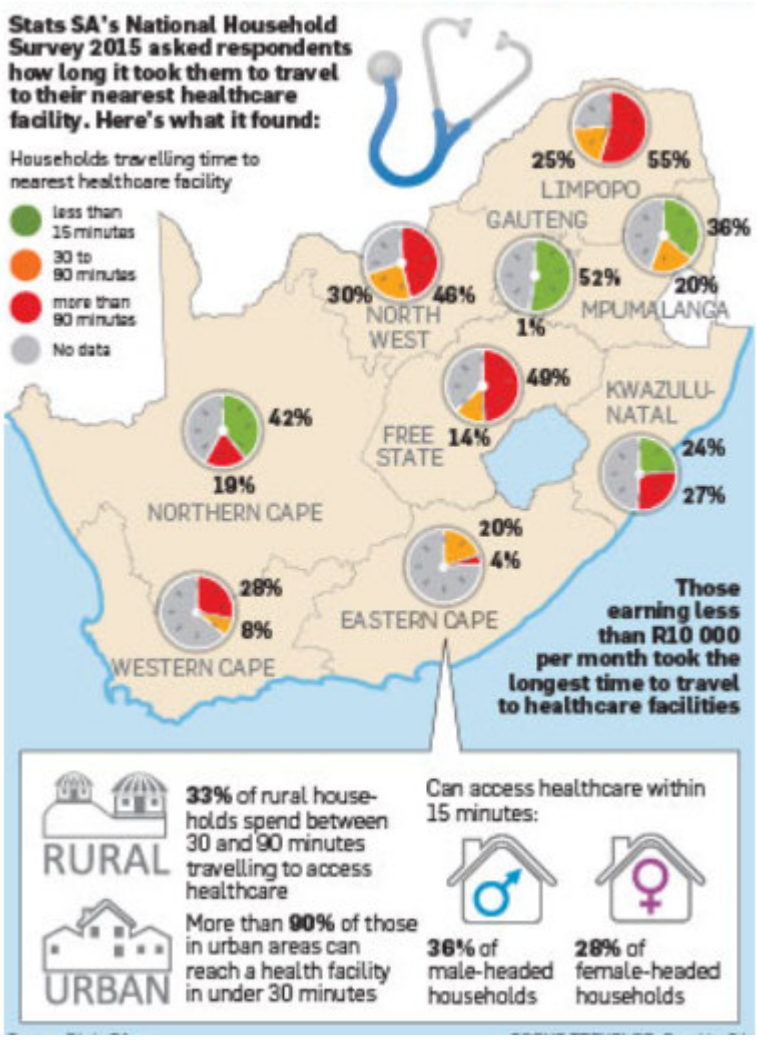


Figure 1: The rural-urban healthcare divide in South Africa

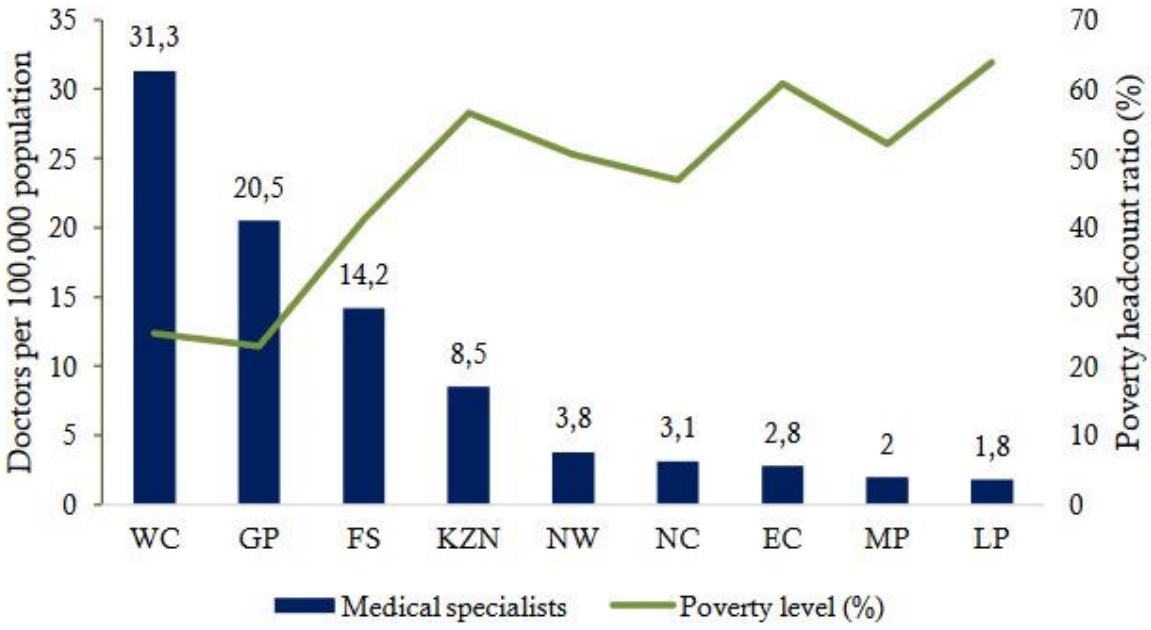
Source: Statistics South Africa, 2016: the General Household Survey, 2015

According to the General Household Survey, 2015 households in rural areas have a much longer travel time to the nearest health care facility than households in urban areas. This figure also shows that there are differences between provinces regarding travel times. Travel times are especially long in the Free State, the North West and Limpopo. Poor households with less than R 10000.00 income per month have the longest travel time.

The differences between rural and urban areas are also visible in the distribution of medical schools in South Africa. There are eight medical schools in South Africa of which three are located in Gauteng in urban areas and two are located in Cape Town. The other medical schools are in Bloemfontein (Free State), Mthatha (Eastern Cape) and in Durban (Kwa-Zulu Natal). Medical schools are concentrated in urban areas and

cannot be found in all provinces of South Africa (Merwe et al., 2015). This trend is comparable to the distribution of specialists in the public sector in provinces in South Africa. More urbanised and affluent provinces such as Gauteng or the Western Cape, have a much higher number of specialists relative to provinces where a large number of citizens live in rural areas (Econex Research Report 1, 2015)[2]. This maldistribution is illustrated in the following in table 3:

Table 3: Specialists in the public sector per 100 000 of the public sector dependent population (2014) and poverty headcount ratio per province in South Africa (2011)



Source: Econex Research Report 1, 2015

Western Cape and Gauteng – also the provinces with the most medical schools – have the highest numbers of specialists (Western Cape 31,3 specialists per 100,000 population and Gauteng 20,5 specialists per 100,000), whereas Mpumalanga and Limpopo have the lowest number of specialists in South Africa (2 specialists in Mpumalanga per 100,000 population and 1,8 specialists in Limpopo per 100,000 population). Additionally, it is striking that the number of specialists is especially low where the poverty level is high. On the one hand, in Western Cape and Gauteng where the number of specialists is the highest in South Africa, the poverty level is between 20

[2] Econex is a consulting company, specialising in competition, trade and general applied applied economics and was founded in 2005. More information about the history and tasks of Econex can be found under https://econex.co.za/about-us/our-history/

and 30%, which is the lowest ratio in the country. On the other hand, the poverty level is especially high in provinces with only a few specialists, e.g. the poverty level is the highest in Limpopo with almost 70%. In addition to that, Dell and Kahn, 2017 show a similar picture of the maldistribution of surgical resources in South Africa. They investigate the number of hospitals, the total number of beds and number of surgical beds between the different provinces and between the public and the private sector. According to their study, Gauteng has the largest number of private surgical beds.

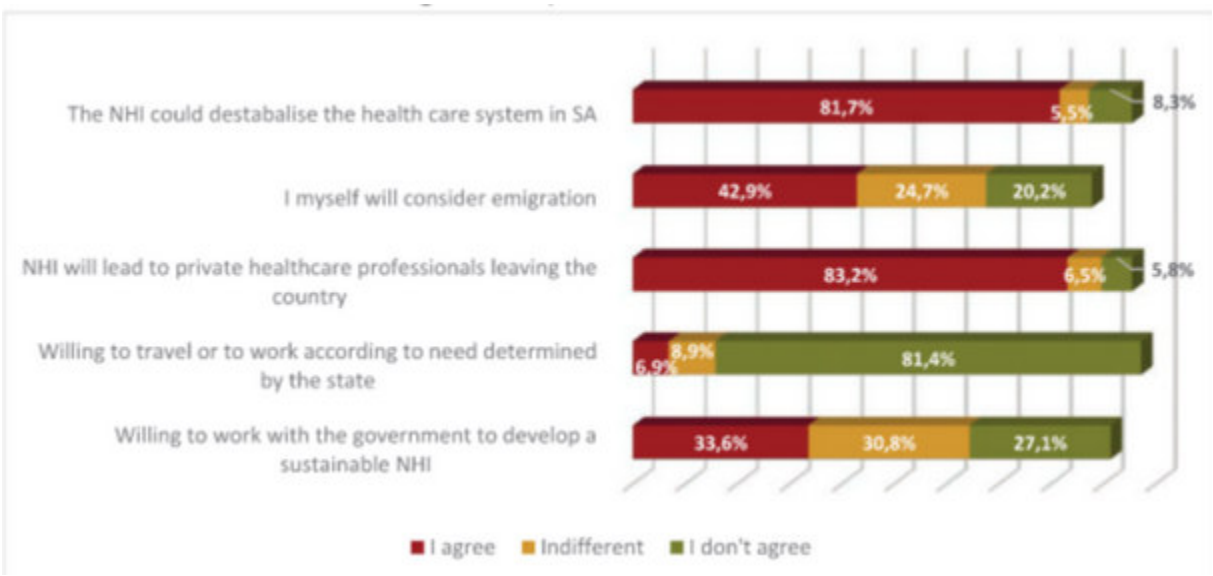
Another problem in rural areas in health care facilities is the critical shortage of medical equipment and other resources. This occurs mainly in the form of unavailability as well as the low quality of equipment and poor maintenance of the equipment which is available (Moyimane, Matlala and Kekana, 2017).

The current South African health care system is characterized by inequalities between public and private, rural and urban as well as rich and poor. The access to health care services is still a matter of race. Coovadia, Jewkes, Barron, Sanders and McIntyre, 2009: 824 highlight that “there are marked differences in rates of disease and mortality between races, which reflect racial differences in the access to basic household living conditions and other determinants of health.”

In order to address these challenges and provide all South African citizens and legal long-term residents with free basic healthcare services, regardless of their employment status and their ability to make a monetary contribution, there is an ongoing debate since 1994 about the establishment of a comprehensive mandatory health insurance scheme called the National Health Insurance (NHI) fund. The South African government decided to implement such a National Health Insurance (NHI) starting in 2012 and ending in 2025 (Department of Health of the Republic South Africa, n.d.). The emigration wave of Health Care Professionals may continue to grow in the coming years. There is also much debate around the NHI as many Health Care Professionals believe that the new system might destabilise the current health care system and push more Health Care Professionals to the private sector or out of the country. The Union Solidarity’s Research Institute has published a survey to find out what Health Care Professionals think about the planned NHI scheme and what they think will happen regarding emigration of Health Care Professionals after the implementation. The most

relevant findings are illustrated in the following table 4:

Table 4: Opinions of Health Care Professionals about the new National Health Insurance (NHI)



Source: NHI Report 2018 published by the Solidarity Research Institute

306 respondents participate in the study. 83.2% of them believe that the NHI will enforce emigration – especially of private Health Care Professionals. 43% of the respondents said that they consider emigration for themselves. There is also the belief that the new system will totally destabilise the current system. The conclusion of this could be that even more Health Care Professionals will leave South Africa even though there is a considerable number who have already left the country. Therefore, the shortage would even get worse (Solidarity Research Institute, 2018). However, it is important to note that the participants of the study are selected from the Solidarity`s member base which is a trade union and the members follow a certain purpose. That is why the group of participants may be very homogenous and subjective.

The reasons for a health care system for different classes in South Africa are rooted in the long history of inequality. It is therefore important to have a closer look at significant historical developments within South Africa because “a healthcare system in any country is rarely the product of one logical policy-making experience, but rather a manifestation of many years of historical development” (Katuu, 2018: 134).

The racial segregation of health care facilities already started at an early stage during colonialism with the Public Health Amendment Act of 1897 (Coovadia et al., 2009). This was the first health legislation in South Africa (Katuu, 2018). The Health Act in 1919 gave the responsibility of preventive and promotive health care to the local authorities and for hospital curative to the four provinces which existed at that time. The period between 1940 and 1950 is characterised by a phase of progressive and forward-thinking activities within the health care sector. Henry Gluckman tried to redirect the health care system and became Minister of Health in 1945. The Gluckman Commission (1942-1944) was an attempt to establish a chain of community health centres, which were the initiator of community-based primary health care. In 1948 the National Party assumed power and the whole system changed. The apartheid system from 1948 until 1994 reinforced the segregation between races and the differences within the health care system. During apartheid "Bantustans[3]" were created, each with its own health care budget and health department (Coovadia et al., 2009). Bantustans were created on the basis of the language and culture of a particular group (Khunou, 2009). It was an apartheid project of racial discrimination because only black South Africans were forced to live in the Bantustans, which were also called "homelands" (Phillips, 2017). "During the apartheid era, disproportionate resource allocation policies by the state at a systematic level resulted in poor-quality and inferior service being available for black people" (Dhai, 2012:2). At the end of apartheid there were 14 separate health departments in South Africa, each of them systematically underfunded (Coovadia et al., 2009). Thus, the described challenges and difficulties of the health care system today – especially the undersupply of basic health care services and the problem of understaffing in rural areas - are closely related to the apartheid regime.

Finally, it is also important to understand that the HIV/AIDS epidemic had also a severe impact on the health care system in post-apartheid South Africa. "HIV has spread at an alarming rate in South Africa, making it the country with the highest number of HIV infections" (Wilkinson, Engelbrecht and De Oliveira, 2015: 1). In fact, the total number of people living with HIV in South Africa increased over time from around 4,25 million in 2002 to 7,52 million by 2018 on the one hand. On the other hand, the percentage of AIDS deaths decreases constantly since 2006. In comparison there were 43,06% of

[3] Bantustans can be defined as "a partially self-governing area set aside during the period of apartheid for a particular indigenous African people; a so-called homeland" (English Oxford Living Dictionaries, n.d.).

AIDS deaths in 2006 and the estimation of AIDS deaths in 2018 is 22,06% (Statistics South Africa, 2018b). Before 2006 HIV/AIDS, policies prevented the introduction of antiretrovial drugs (ARV's). Especially the former President of South Africa Thabo Mvuyelwa Mbeki and his health minister, Mantombazana Tshabalala-Msimang believed that AIDS symptoms are caused by malnutrition and not by HIV (Nattrass 2008). It was only in 2008 that South Africa implemented the largest ARV programme in the world. Additionally, in 2011 the US government implemented the President's Emergency Plan for AIDS Relief (PEPFAR) in South Africa, which supports and continues to support the delivery of HIV medication to patients (Centers for Disease Controll and Prevention, 2011). The consequence of the long ignorance of the HIV/AIDS epidemic in South Africa resulted in an insufficient treatment of this disease and the death of a lot of people (ibid). The HIV/AIDS epidemic has been an additional burden on the health care system in South Africa. Of course, the situation is especially severe in rural areas because the population is more vulnerable than in cities. As already explained above rural areas are often characterised by poor socio-economic conditions, limited access to healthcare services and poor healthcare resources (Omole and Semenya, 2016).

2.2. Shortage of Health Care Professionals in South Africa's public sector – a global phenomenon – especially in rural areas

The shortage of Health Care Professionals is not only a South African problem, but a global phenomenon. WHO estimates a shortfall of 18 million Health Care Professionals by 2030 (Darzi and Evans 2016). Globally rural areas are especially affected by the shortage. Worldwide, approximately half of the population lives in rural areas, but less than 25% of the doctors and less than 38% of nurses work in these areas. Furthermore, it is challenging for all countries to encourage Health Care Professionals to work in rural areas and/or to stay in these areas (WHO, 2010). The consequences of the shortage are especially severe in rural areas in low-income countries and result in a lower life expectancy and poorer health status in comparison to urban centres (Strasser, Kam and Regalado, 2016). It is important to compare South Africa with other parts of the world regarding the shortage of Health Care Professionals.

The WHO puts emphasis on the shortage of Health Care Professionals worldwide by presenting definitions and data. As already mentioned above, a shortage of Health

Care Professionals is defined as having less than 80 Percent of Health Care Professionals to meet provider demand. In addition, the WHO calculates a threshold of Health Care Professionals per 1000 population which defines a critical shortage. The threshold for a critical shortage lies at 2.28 Health Care Professionals (doctors, nurses and midwives) per 1000 population. A critical shortage occurs if both scenarios occur simultaneously. According to the WHO, 57 countries worldwide had a critical shortage of Health Care Professionals in 2006. 36 of the 57 countries were situated in the Sub-Saharan African region (WHO, 2006). Figure 2 summarises these findings.

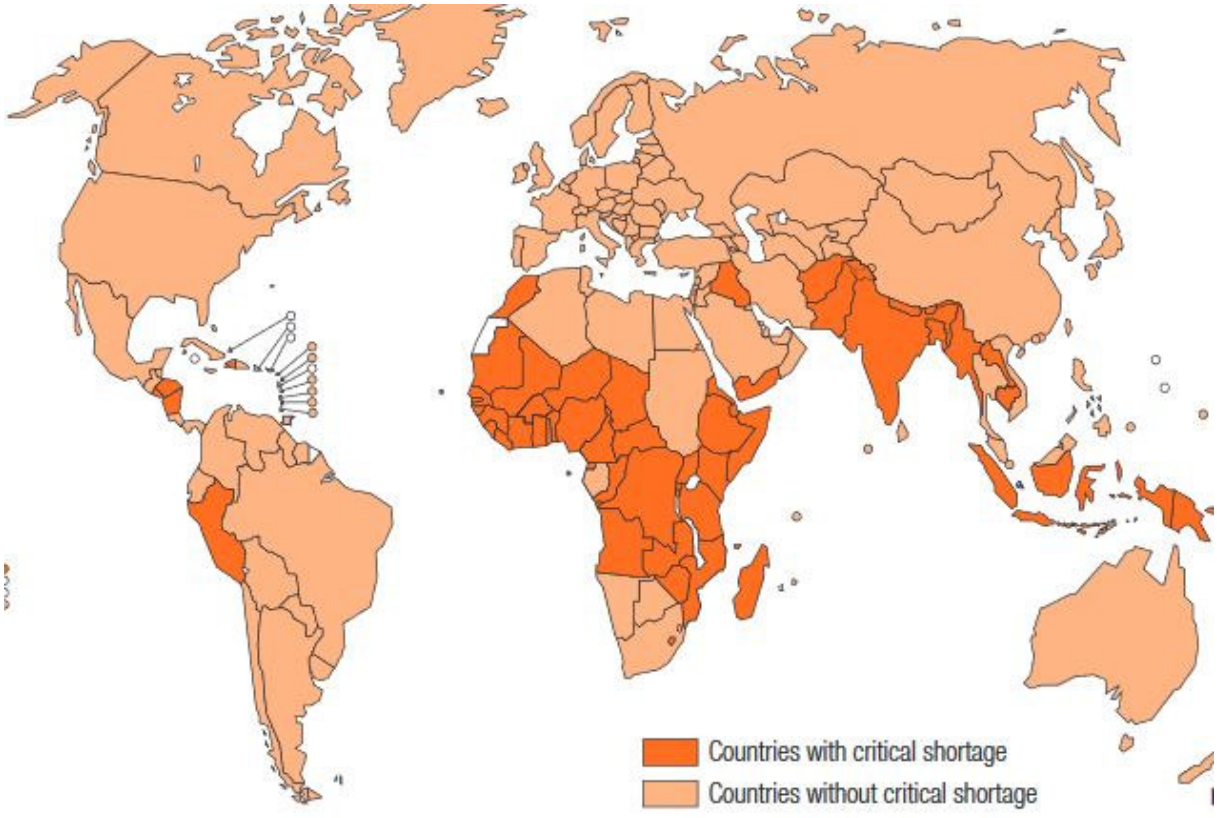


Figure 2: Countries with and without a critical shortage of Health Care Professionals (doctors, nurses and midwives)

Source: “WHO | The World Health Report 2006 - working together for health”, 2006

According to figure 2, South Africa does not belong to the countries with a critical shortage of Health Care Professionals. However, it is important to note that doctors, nurses and midwives are grouped together in the figure above and it is therefore essential to have a deeper look at these health care profession groups separately. Additionally, it is crucial to mention that this data is more than ten years old and that

the WHO defined a new threshold regarding the critical shortage of Health Care Professionals in 2013. The new threshold of Health Care Professionals in a country lies at 3.345 per 1.000 population. The density of Health Care Professionals in South Africa in 2010 was 4.33 per 1.000 population (Global Health Workforce Alliance and World Health Organization 2013). The WHO has statistics available on its website regarding the density of doctors. The following figures 3 and 4 show that there are markable differences between the density of doctors and the density of nurses in South Africa.

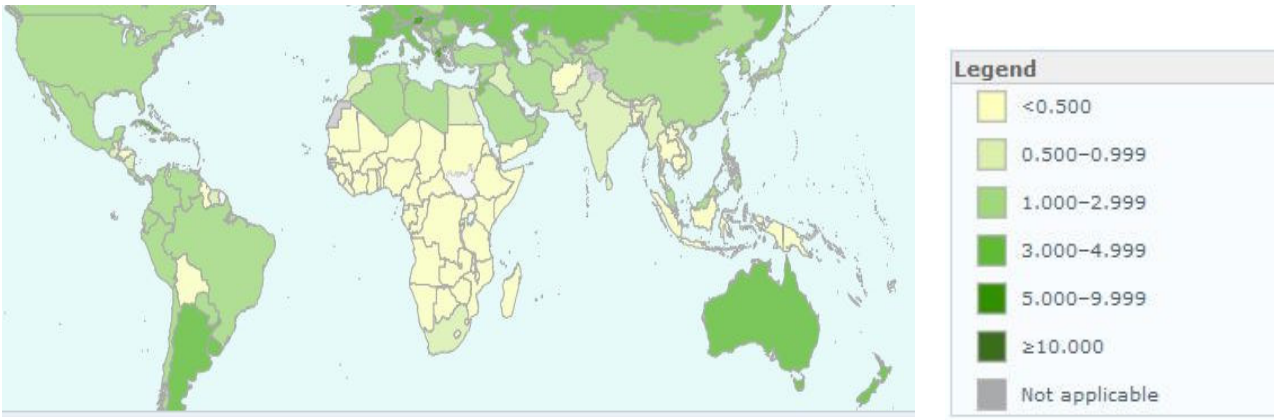


Figure 3: Density of doctors (total number per 1.000 population)

Source: Website of the WHO, 2019

According to the WHO, the last available data for South Africa is from 2016. The density of doctors from this data is 0.818 per 1.000 population. This shows a critical shortage of doctors in South Africa. In contrast to that, figure 4 shows the density of nurses and midwives in a different picture.

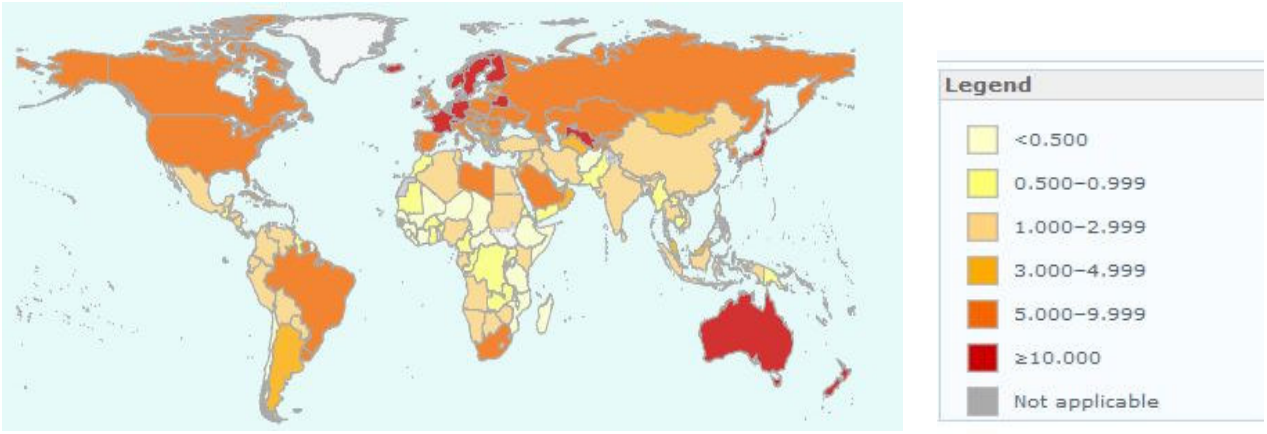


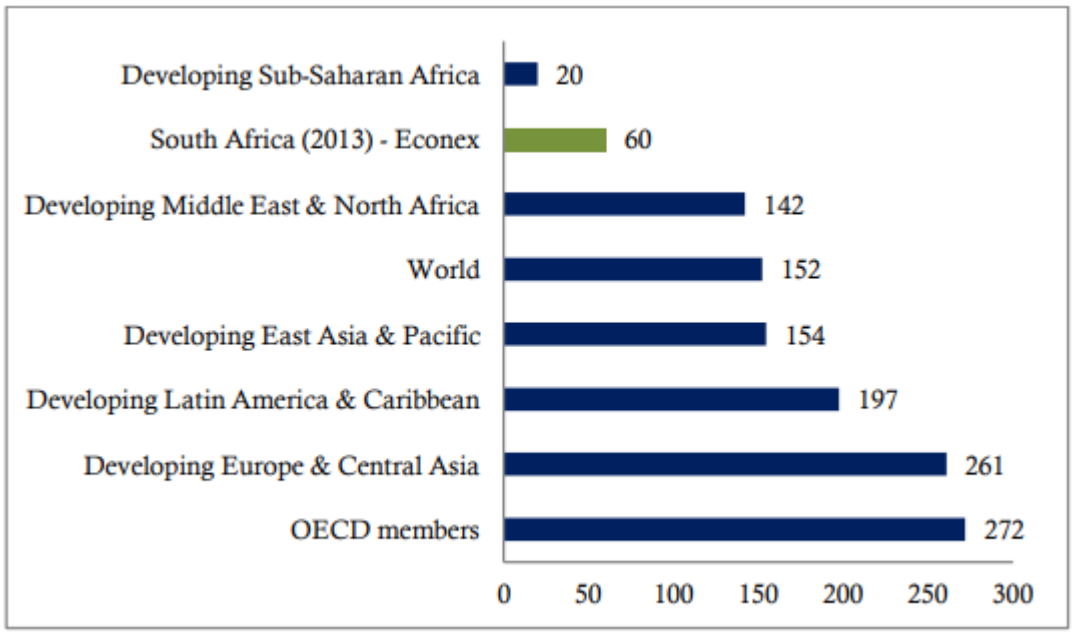
Figure 4: Density of nurses and midwives (total number per 1.000 population)

Source: Website of the WHO, 2019

Regarding the density of nurses and midwives per 1.000 population there is additional data available from the WHO for 2016. The density of nurses and midwives is much higher than the density of doctors in South Africa. It lies at 5.229 per 1.000 population and is above the threshold for a critical shortage. Due to the nurses to doctor ratio in South Africa (4.8 to 1), which is for example higher than the OECD average of 2.8 to 1 in total, there is not a claimed critical shortage of Health Care Professionals in this WHO data (Global Health Workforce Alliance and World Health Organization, 2013). However, it is important to distinguish between different categories of nurses in South Africa. There are three different categories: professional (registered) nurses with four years of training, enrolled nurses with two years and nursing assistants with one year's training. As already shown in section 2.1 there are differences regarding the shortage of nurses in these categories. Especially in the category of professional nurses there is a remarkable shortage (Becker, 2017; Segatti, 2014).

A research report from Econex illustrates the number of doctors per 100.000 citizens as a comparison between regions and countries worldwide (Econex Research Report 1, 2015). The findings are summarised in the following table 5:

Table 5: Regional comparison: all doctors per 100.000 citizens (2010 or latest year available)



Source: Econex presentation at HASA Conference, 2014 with data from the World Health Organization

Similar to the statistics from the WHO this table underlines that only the number of doctors per 100.000 citizens in developing sub-Saharan Africa is less than the number of doctors per 100.000 citizens in comparison to South Africa (20 in comparison to 60), whereas the number of doctors is much higher in all other parts of the world in comparison to South Africa. According to the table, the world median index for doctors per 100.000 citizens is 152 – a big difference in comparison to the South African numbers of doctors (see above at 60). The difference between the number of doctors is especially severe in comparison between South Africa and OECD members (60 in comparison to 272), followed by developing Europe and Central Asia (60 in comparison to 261). Although the number of doctors per 100.000 citizens is under the median world index in developing Middle East and North Africa (152 in comparison to 142), the number of doctors is even much higher than in comparison to South Africa (142 in comparison to 60).

This section underlines that the shortage of Health Care Professionals is not only a South African phenomenon but a topic in many countries all over the world – especially in rural areas. There are countries with a critical shortage of Health Care Professionals

– especially in the Sub-Saharan region. The conclusion for South Africa is that Health Care Professionals with a higher qualification (doctors and professional nurses) are especially in need in South Africa. According to the data there is even a critical shortage of doctors in South Africa.

2.3 Reasons for the shortage of Health Care Professionals in South Africa in the public sector in rural areas

A large and growing body of the literature has investigated the reasons for the observed shortage of Health Care Professionals in South Africa. A lot of scholars have argued that one of the main reasons for the shortage is the emigration of Health Care Professionals from South Africa to other countries as well as internal migration from rural to urban areas (Labonté et al., 2015; Naicker, Plange-Rhule, Tutt and Eastwood, 2009; George, Atujuna and Gow, 2013). This literature highlights two relevant levels of migration out of South Africa and within the country. Labonté et al., 2015:1 underline that "Jamaica, India, the Philippines and South Africa have historically "sources" of skilled health worker (SHWs) migrating to other countries". Naicker et al., 2009:S1-60[4] emphasise that "the health systems of sub-Saharan Africa have been badly damaged by the migration of their health professionals". English-speaking countries, such as the UK, USA, New Zealand and Australia play an essential role because Health Care Professionals from the sub-Saharan region preferentially move to these countries (Naicker et al., 2009). According to the Australian Bureau of Statistics of its 2011 Census, Health Care Professions are one of the top 10 occupations for South Africans who moved to Australia. This is illustrated in figure 5:

[4] The quote can be found on page "S1-60". That is how the page has been named in the article.

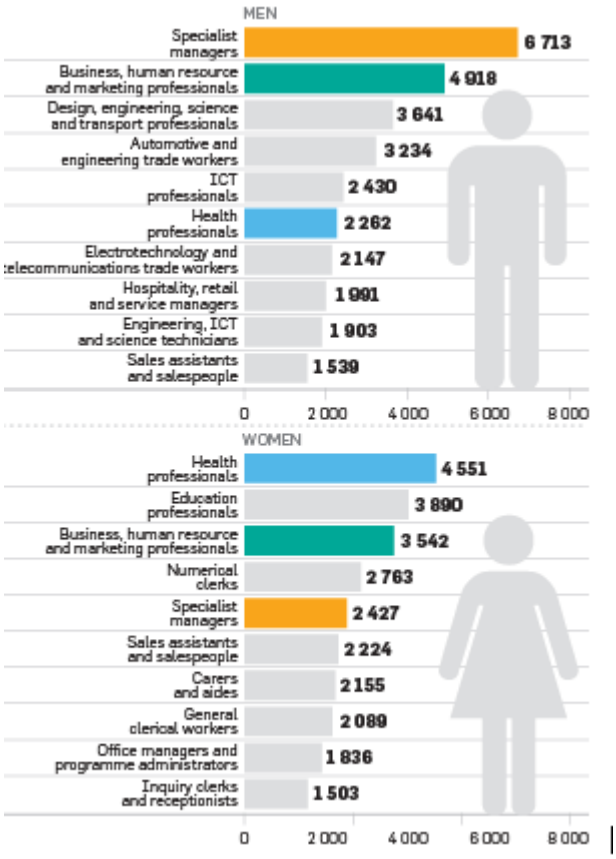


Figure 5: South Africans in Australia

Source: Australian Bureau of Statistics, Australian Census 2011

Health care professions are the number one occupations for South African women who migrate to Australia. Although the number of South African men who work in the medical field in Australia is under the number of South African women who work in that field in Australia, health care professions remain number 6 in the list of occupations for South African men working in Australia.

Unfortunately, there is no data available about the number of South African Health Care Professionals who left the country. Approximately 30% of the trained Health Care Professionals leave the Sub-Saharan countries due to medical emigration (Tam, Edge and Hoffman, 2016). This high number of the emigration of professionals is also a topic in the media. “The South African[5]” states that 2018 could be one of the years that breaks emigration records (Luke, 2018).

[5] „The South African“ is a website which covers a wide range of topics from politics to sport. It was established in 2003 and operates entirely online. More information is available under https://www.thesouthafrican.com/about-us/

Reasons for leaving the country can be seen in push factors for Health Care Professionals. These include better job prospects and rapid advancement in technology in the new country, as well as violence and crime and declining education and health care standards in the home country. In contrast to that are pull factors such as an attractive salary package in the new country and an opportunity to gain international work experience or a better lifestyle (Rasool, Botha and Bisschoff, 2012). What cannot be found in the literature is any information about the area where Health Care Professionals work (rural or urban) before they move to another country.

Furthermore, there is internal migration within the country, especially from rural to urban areas (George et al., 2013). In fact, South Africa has a long history of migration and the search for a better life. Especially in the post-apartheid era, migration to urban centres increases because they were not accessible for many people before (Vearey, Modisenyane and Hunter-Adams, 2017). The trend of rural-urban migration within South Africa is still present. Gauteng, with its urban centres Johannesburg and Pretoria was always a place where people migrated. It is the wealthiest province of South Africa, mostly a city region and the centre of the country's economy. It has the largest population of South Africa (more than 14 million people live here out of 57 million in total) which constantly increases by migration. Gauteng's net migration (i.e. the number of people minus the number of people leaving) was nearly two million between 2006 and 2016. For the period 2016-2021 Gauteng and Western Cape (with their urban centres Johannesburg, Pretoria and Cape Town) are estimated to experience the largest inflow of migrants (Gauteng: more than 1 million and Western Cape more than 300000) (Statistics South Africa, 2017b).

The number of Health Care Professionals in rural areas is also influenced by the described phenomenon of rural-urban migration. Health Care Professionals cannot be trained in rural areas and have to move to urban centres. There are eight medical schools in South Africa, the majority of them in Gauteng and Western Cape, all of them located in urban centres (Merwe et al. 2015). The access for medical students from rural areas in comparison with students from urban areas is much more difficult. Numbers of undergraduate students admitted from 1999 to 2002 for medicine, dentistry, physiotherapy and occupational therapy, show that most of the students are

coming from cities (59%) and towns (15%) and only 26% from rural areas. In fact, medical students from rural areas are more likely to move back to their communities than students from urban areas to rural areas, but not everyone from a rural area is going to move back (Tumbo et al., 2009; de Vries and Reid, 2003). However, due to the complex challenges of medical education in South Africa, there are additional concepts needed to encourage medical graduates to move to a rural area for work. For example, there is a model called “home stay” where medical students are hosted by a family within the community in which they work as part of the rural medicine experience. It is crucial for medical students to get in contact with the rural context and gain a positive experience (Ntshabele and Padayatchi, 2018). It can be assumed that the shortage of Health Care Professionals in rural areas has a long history and is a problem caused by the system. Additionally, a 15-year review about the compulsory community service for doctors states that although there is a compulsory community service for doctors and nurses in South Africa to work in the public sector, mostly in rural and underserved areas for 12 months after finishing their studies, only 15% of the doctors want to stay in rural areas, the others move back to the urban centres and/or change to the private sector (Reid, Peacocke, Kornik and Wolvaardt, 2018).

Furthermore, there are different factors why many Health Care Professionals struggle to move to a rural area for work.

> “Lack of career structure, inappropriate training at undergraduate and postgraduate level, spouse dissatisfaction, limited schooling for children, academic isolation and bureaucratic problems have been identified as factors that discourage doctors from working in underdeveloped areas. Furthermore, scant management support and too little time or opportunity for continuing their education were found to contribute to discontentment or frustration. Other problems of rural practice include a lack of recreational facilities, poor housing, inferior clinical facilities, violence and inadequate pay” (De Villiers, 2004:21).

Due to the circumstances in rural areas the shortage of Health Care Professionals is accelerated.

2.4. Policies and initiatives on a global and national level to improve the Health Care Professional shortage in rural areas in South Africa

According to the literature, there are policy regulations on a global and a national level which try to influence the trends of emigration to other countries and urban-rural migration within South Africa. The aim is to improve the situation and therefore to reduce the shortage of Health Care Professionals in South Africa (Labonté et al. 2015).

One of the global agreements is the WHO Global Code of Practice on International Recruitment of Health Personnel 2010. It was developed as a global framework for dialogue and cooperation regarding health care workers migration and health system strengthening. It is a voluntary, non-legal agreement and signed by the WHO members, including South Africa. It consists of 10 articles. One of the principles is the assumption that health care workers have the right to migrate from one country to another for work (Siyam et al., 2013). Most observers of globalisation agree that freedom of movement to improve one's own livelihoods is a basic human right (Bundeszentrale für politische Bildung 2007). However, there is also criticism of the Code. "The WHO is neither a perfect text nor the solution to the challenges associated with health worker migration. The substantive norms advanced by the Code remain relatively general and are advanced in soft manner to Member States" (Taylor and Dhillon, 2011: 15). Furthermore, there are evaluation studies available (e.g. for Australia, Canada, UK and USA) which have been conducted 4 years after the implementation of the Code. The participants of the study reported that there has been no significant policy or regulatory changes regarding health worker recruitment in their country as a direct result of the Code. The reasons for that is for example a lack of incentives and a lack of supporters of the Code (Tam et al., 2016). In the South African context, there are also policies which contradict the principle of the WHO Code. South Africa is also a destination country, especially within the region. South Africa is part of the Southern African Development Community (SADC). In 2001 and 2006 there were policies implemented regarding health worker immigration from SADC countries to South Africa (Labonté et al., 2015). The policies were implemented by the National Department of Health (DoH). Segatti, 2014:5 states that "the DoH's policy has chosen to prohibit immigration from developing countries, including from its own region and sub-region (SADC). This has been done in spite of the fact that large numbers of foreign African professionals mostly

from SADC, are already employed in and keep arriving in South Africa". The 2006 statement summarises that "recruitment of individual applicants from identified developing countries, in particular from another SADC country, will not be endorsed by the department" (Labonté et al., 2015). The consequence of the contradictions of these policies is that Health Care Professionals and health care facilities are using loopholes in the immigration system to hire professionals from SADC countries. The asylum system provided for the Refugee Act is one of these loopholes (Segatti 2014). Thus, there are a lot of Health Care Professionals from SADC countries working in South Africa.

Additionally, South Africa has bilateral agreements/contracts[6] with non-SADC countries for example the UK, Tunisia, Iran and Cuba (Labonté et al., 2015). Bilateral agreements are important methods to address the international migration of Health Care Professionals, especially in an increasing context of an internationally mobile health workforce. A body of bilateral agreements which focus specifically on managing migration flows and addressing the negative effects from developing countries to industrialised countries of Health Care Professionals has not been fully developed yet (Dhillon, Clark and Kapp, 2010). In this case it should help to make it easier to move from one country to another for work, but there is consistently a dilemma regarding the implementation of bilateral agreements because the rights and needs of all main actors have to be taken into consideration. In 2003 and again in 2008, the National Health Service (NHS) in the UK and the South African government signed an agreement on an exchange programme between both countries enabling Health Care Professionals from both countries to work in the other country for 6 months. The UK profited more because more Health Care Professionals went from South Africa to the UK than the other way round (Bundeszentrale für politische Bildung, 2007). Another bilateral agreement was signed in 1999 between South Africa and Tunisia, renewed in 2004. In addition, a technical agreement was signed in 2007 to give more than 200 Tunisian doctors the opportunity to work in South Africa. A similar agreement was signed with the Iranian government in 2006 which also brought doctors from Iran to South Africa (Reardon, Enigbokan and George, 2014). Furthermore, there is a long history of government-to-government agreements between South Africa and Cuba which led to

[6] A bilateral contract can be defined as "an agreement formed by an exchange of one party in consideration supporting the promise of the other party" (The Free Dictionary by Farlex, 2018).

the establishment of the Nelson Mandela Fidel Castro medical collaboration programme in 1996. As part of the programme South African medical students are trained in Cuba before going back to South Africa (Sokutu, 2018).

Another programme which has been implemented in South Africa in 2004 is the United States President's Emergency Plan for AIDS Relief (PEPFAR). This programme has already been mentioned in section 2.1. The reasons for the implementation was the rising number of people with HIV infections and the need for ARV treatment. In fact, South Africa has the highest number of HIV infected individuals worldwide (Larson, O'Bra, Brown, Mbengashe and Klausner, 2012). PEPFAR is a global programme and has globally supported ARV treatment for more than 11.5 million people by 2016 (U.S. Embassy and Consulates in South Africa, n.d.). Since 2013 PEPFAR also supports Medical Education and Nursing Education Partnership Initiatives (NEPI) in South Africa (Labonté et al*.,* 2015). NEPI developed a model curriculum for South Africa's 2 foundational nursing degrees (Bachelor of Nursing and National Diploma in Nursing) as well as the post-basic midwifery qualification (Advanced Diploma in Midwifery) in cooperation with 3 partner schools (Welkom Campus of the Free State School of Nursing; Prince Mshiyeni Memorial Hospital Campus of the KwaZulu-Natal College of Nursing; Mpumalanga College of Nursing) (ICAP, 2017). The purpose is to recruit and train students from rural areas and increase the chance of retention of their graduation (Labonté et al., 2015). PEPFAR is still an active programme. In December 2018 President Donald Trump signed an extension for additional 5 years (PEPFAR, 2018).

Additionally, there are South African initiatives on a national basis to prevent emigration or encourage Health Care Professionals to move to rural areas for work. One of the initiatives is to increase training of Health Care Professionals, open more training facilities and offer sponsorships to students. Besides that, there were specific programmes established to attract applicants for the public health care sector (e.g. Occupation Specific Dispensation) or to work in a rural area (e.g. Africa Health Placement (AHP) programme.

The Occupation Specific Dispensation (OSD) was implemented in 2007. The purpose of this programme is to attract, motivate and retain Health Care Professionals in the public sector by financial compensation. Implementation commenced in the nursing

sector for professionals nurses with a 4-year-education (Ditlopo, Blaauw, Rispel, Thomas and Bidwell, 2013). Other Health Care Professionals profited from the programme from 2009 (Labonté et al., 2015). By offering Health Care Professionals a higher salary the incentives to emigrate should be reduced (George and Rhodes, 2012). Studies found that there were implementation problems due to mismanagement of planning. The information system for the successful policy implementation was incomplete. Not enough attention was paid to time and resources, dependency relationships, task specification, communication and coordination (Ditlopo et al., 2013). Additionally, the salaries of Health Care Professionals in South Africa are still below the salaries of international counterparts (e.g. the UK, Australia, Canada and Saudi Arabia) – even after the implementation of the financial incentive strategy. Thus, it is difficult to attract Health Care Professionals to stay in South Africa due to financial reasons (George and Rhodes, 2012). Although there is criticism about the programme the OCP has narrowed the gap between salaries in South Africa and abroad. The implementation was especially beneficial for nurses. The OCP was cited as one factor to have slowed down migration and also for return migration (Labonté et al., 2015).

Similar to this, there is the Rural Allowance Programme with the intention “to attract and retrain health professionals to work full-time in public health services in rural, underserved and other inhospitable areas identified by provincial health departments. Government awarded the rural allowance, a non-pensionable fixed percentage linked to the annual salary notch to most categories of health professionals including doctors, dentists, dieticians, pharmacists, psychologists, radiographers, therapists and professional nurses with 4-year diploma or degree” (Makapela and Useh, 2013).

The African Health Placement (AHP) programme has similar aims regarding the encouragement of doctors from abroad to work in rural areas and give doctors from rural areas a voice. The AHP seeks to attract doctors from abroad and started to recruit doctors from the UK, USA and Canada to work in rural areas in South Africa. The recruitment to work in these regions is very challenging and that is why participants start to work in semi-urban areas. AHP tries to attract doctors by addressing the passion of being a Health Care Professional, but it is also a matter of a higher salary. But the total number of doctors who moved to South Africa to work in rural areas, especially from industrialised countries is not very high. In contrast to that, doctors from

other African countries are more likely to move to South Africa and are more likely to stay (Labonté et al., 2015; Website ahp: www.ahp.org.za).

As illustrated one major incentive of all described programmes in order to attract Health Care Professionals to work in rural areas are financial compensations. Studies which are available in the literature focus mainly on the factors which can retain Health Care Professionals to stay in rural areas. For example, Kotzee and Couper, 2006 analysed the factors which are important for doctors to stay in a rural area. They present a research project which was conducted in the Limpopo province in rural hospitals. It becomes obvious that financial compensations are only one aspect among a lot of others which play a role for doctors to stay in a rural area. These are, for example, strengthening relations between communities and doctors, improving working conditions and improving physical infrastructure. Unfortunately, there are no studies available about the incentives which can convince Health Care Professionals to change their opinion to move to a rural area for work in South Africa.

The conclusion of this section is that there is no unique policy or regulation which can overcome the shortage of Health Care Professionals in South Africa. It is important to note that South Africa realised the problem and tries to address it from different ways. The question is if it is sufficient or if there are more ideas and initiatives needed. What cannot be found in the available literature, so far, is a detailed evaluation of all these regulations.

In addition to the described regulations, policies and initiatives there is another domestic response to the shortage of Health Care Professionals which is the implementation of new cadres of skilled health workers, such as the Clinical Associate Programme (Labonté et al., 2015).

The following table 6 summarises the above-described policies (domestic and global), bilateral agreements and South African initiatives:

Table 6: Strategies to mitigate health worker emigration and address health worker shortages in South Africa

Global Agreements	WHO Global Code of Practice on International Recruitment of Health Personal (2010)
Domestic policy statements on migration	South Africa's policy Statements on health worker immigration (2001, 2006)
Bilateral Agreements	UK/South Africa (2003) Cuba (1996) Tunisia (1999 and 2007 technical agreements) Iran (2006) US PEPFAR/Medical and Nursing Education Partnership Initiative (2013)
South African initiatives	New Health Care Professional cadres (Clinical Associate Programme) African Health Placements (AHP) Occupation Specific Dispensation (OSD) Rural Allowance Programme

Source: adapted from Labonté et al., 2015

2.5. The Clinical Associate Programme as one of the South African initiatives to encourage Health Care Professionals to move to rural areas for work

As described above South African initiatives try to encourage Health Care Professionals to move to rural areas for work. AHP and OSD focus on professionals with work experience by offering a higher salary for working in the public sector and/or in rural areas. In contrast to that the Clinical Associate Programme puts emphasis on the training of students in the medical field with the purpose to increase the number of skilled Health Care Professionals in underserved provinces and areas in South Africa (AIHA, 2015). The Clinical Associate Programme starts one step earlier than the other programmes, i.e. it starts already in the education process.

The programme was implemented in 2008 by the National Department of Health in South Africa (Hamm, Bodegraven, Bac and Louw, 2016). Similar to Physician Assistants in the United States and other mid-level cadres in Africa and around the globe, Clinical Associates are university-trained Health Care Professionals. Today, the Clinical Associate Programmes are offered in partnership with the departments of health on a national and provincial level, as well as the South African Military Health

Service (SAMHS).

Currently, the Bachelor programme is offered at the University of the Witwatersrand Johannesburg, the University of Pretoria and the Walter Sisulu University in South Africa (AIHA, 2015). The Clinical Associate is a mid-level health care provider between a nurse and a doctor who works under the supervision of a doctor but can also take over more tasks which doctors usually do. Officially the study programme is called Bachelor of Clinical Medical Practice (BCMP) (University of the Witwatersrand, Johannesburg, 2012; Czaika, 2018). Clinical Associate students spend the first year of their studies on campus, learning clinical theory with a focus on taking a detailed medical history, conducting physical examinations and reaching a possible diagnosis. The remaining 2 years are more practically orientated as the students start to work in the clinics. The training provides a broad range of medical care, including assisting with surgeries, developing and implementing a treatment plan and making appropriate referrals to specialised care (Website of the University of Pretoria, 2019). After completing their studies a Clinical Associate can register with the Health Professions Council of South Africa (see Website of the HPCSA) (AIHA, 2015). The registration with the HPCSA is a prerequisite to work as a Health Care Professional in South Africa. There are nine different categories of registration, including private practice and public service (HPCSA, n.d.).

“The aim of the programme is to develop a group of Clinical Associates with the knowledge, attitudes and psychomotor skills to be able to assist doctors in district hospitals so as to improve patient care especially in rural disadvantaged communities” (Website of the University of the Witwatersrand, 2019). The major shortage of health care workers in South Africa impacts negatively at the level of patient care and Clinical Associates can make an essential contribution to improve the situation (Spotlight, 2014[7]). The precondition for this is that enough Clinical Associates are trained.

According to an available report of the year 2018 from PACASA 937 Clinical Associates have been trained between 2008 and 2017. There are approximately 150 graduates per year from the 3 universities in the country who offer the Clinical Associates

[7] „Spotlight“ is an online and print publication monitoring South Africa’s answer to HIV and TB as well as to the state of the health care system. There is more information available under https://www.spotlightnsp.co.za/

Programme. In order to meet the requirements of the population of the public sector and to make a contribution to the existing shortage there are estimations that 11000 Clinical Associates are needed in the public health service (PACASA 2018). Currently, the number of trained Clinical Associates is much too low to fill the shortage gap of Health Care Professionals in South Africa. PACASA is the abbreviation for the Professional Association of Clinical Associates in South Africa. It was founded because there was no formal representative body for Clinical Associates to advocate the profession (PACASA – Advocating for Clinical Associates and quality health care, 2012).

In the literature several studies can be found regarding Clinical Associates. Most of them focus on the benefits for the South African economy. Hamm et al. 2016 conducted a study regarding the cost effectiveness of training and employing Clinical Associates and medical practitioners instead of employing only medical practitioners. The results show that Clinical Associates are likely to free up the time of a medical practitioner up to 76%, they can provide the same quality of care as higher level workers but the costs are much lower than for medical practitioners (Hamm et al., 2016). Doherty, Couper and Fonn, 2012 deal with a similar question of effectiveness of Clinical Associates and summarise the benefits and concerns of the implementation of such a new programme.

The major aspects are illustrated in the following figure 6:

Benefits

They will perform tasks that nurses currently perform because there is no-one else to do them but which are outside their scope of practice, allowing nurses to fulfil their own roles better and become more effective.

They will perform tasks and procedures that have been delegated by doctors, allowing doctors to focus on tasks for which they are uniquely qualified e.g. diagnostic work and supporting the development of primary care services.

They will strengthen district-level health services, allowing different professionals to provide better quality care within their own scopes of practice, improving access for marginalised communities and reducing the need for referral.

They are less costly to train than doctors because their course is shorter.

They will spur the development of district hospital training sites that can be used for training several types of health professional in a multi-disciplinary setting, also allowing development of teaching approaches and materials that benefit students from other professions.

They represent a new means of entry for matriculants into the medical field, providing training access in particular for people from marginalised communities.

Because they derive from the local community there will be no language barrier, and they will be more culturally sensitive, better health educators and more successful change agents in their place of work.

They will be easier to retain in the public sector service because they will derive from, and work in, remote communities and have a strong commitment to these communities. There will be less brain drain overseas because their degree is not recognised internationally.

Concerns

They could become a second-best option for poor and rural communities in response to the brain drain of doctors to the private sector and overseas, and as a way to cut costs, without regard to the effect on quality of care.

They could become a device to avoid having to address the ongoing human resource concerns of doctors and nurses.

They could have an unsatisfactory relationship with doctors and nurses, especially if lines of accountability and post levels are not sorted out appropriately, as this new relationship is not yet well defined.

They could end up working without appropriate supervision because of doctor shortages, as sometimes happens with community service doctors, which could compromise the quality of care.

They could potentially be exploited in the private sector by performing activities for which the doctor will charge and be paid.

Figure 6: Benefits and concerns regarding the Clinical Associate Programme

Source: Doherty et al., 2012

On the one hand, the Clinical Associate Programme as a South African initiative prevents Health Care Professionals from leaving the country (see also section 2.3.) because Clinical Associates are trained for the South African health care system. Additionally, many students come from rural areas and want to serve their local community after their studies. On the other hand, there is a danger of exploitation in the job market for Clinical Associates. The implementation of Clinical Associates in the existing health care system could be problematic, but in total, the benefits exceed the concerns (Doherty et al., 2012). Bac, Hamm, van Bodegraven, Pater and Louw, 2017: 14 state that “the introduction of this new profession has led to task sharing and redefining of professional boundaries”. They used a semi-structured questionnaire to access the effectiveness of Clinical Associates in Shongwe hospital situated in a rural area in Mpumalanga. The results show that patient care has improved through the implementation of the Clinical Associate programme and the establishment of a Clinical Learning Centre in Shongwe (Bac et al. 2017).

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The aim of the Clinical Associate programme is that graduates work in rural areas in the public sector. But is this the reality? Where do Clinical Associates really work? PACASA presents data from 2018 regarding the distribution of Clinical Associates per sector. The results are illustrated in table 7:

Table 7: Total Graduates Deployment in public and other sectors

	Number of Working ClinAs	Total	%
Work in Government/Public	456	456	49
Work in Private	198	198	21
Work in NGOs	56	56	6
Work in Universities	14	14	1
Left profession	31	31	3
Studying postgraduate programe	37	37	4
Other (unknown/unaccounted for)	145	145	15
Total	**937**	**937**	

Source: PACASA, 2018

Although the number of Clinical Associates who work in the public sector is the highest of all other sectors, only half of all graduates work in that sector. What is missing in this table is if they are working in a rural or urban area. It can be assumed that the number of graduates who work in the public sector in a rural area is under 49% because this number also includes health care facilities in the public sector in urban areas.

What is certain is the fact that the number of Clinical Associates who work in the public sector is much higher in comparison to those of doctors. As pointed out earlier almost 70% of the doctors work in the private sector. Additionally, Clinical Associates are more willing to work in a rural area in comparison to doctors and, as stated in section 2.3., students who derive from those areas want to go back after finishing their studies (Doherty et al., 2012). Although there is no data available about the exact percentage of doctors who work in a rural area in South Africa, it can be assumed that the percentage is much lower than the percentage of Clinical Associates who work in those areas. Findings from the literature suggest that only 15% of doctors stay in rural areas in South Africa (see also section 2.3.). Furthermore, in a report by AIHA, 2016 there is a table available which shows the comparison between students who study medicine and who study medical practice regarding their choice to work in a rural area. The data was collected in 2011 and shows that there is a large difference between those 2

groups. Whereas less than 10% of the students who study medicine would like to work in a rural area, more than 50% of the students who study medical practice would like to work in a rural area (AIHA, 2016). What is striking is that there is only data available about working in the public sector or working in rural areas. A combination of both is missing.

The Clinical Associate Programme is unique in South Africa because it focuses not only on the remuneration of Health Care Professionals, but more on ways to increase responsibilities and motivation to work in a rural area. This is the primary reason why this case has been chosen for this research project. Additionally, the University of the Witwatersrand has been chosen because it has an excellent reputation worldwide for its coursework and research. It is one of only 2 universities in Africa which has been ranked as a leading world institution for higher education (AIHA, 2015). The number of graduates in the Clinical Associate Programme vary from 25 (minimum in 2011) up to 56 (maximum in 2016) per year (PACASA, 2018). There is no data available about the exact number of students who are taken in every year and about the break up rate. Furthermore, there is no information available about applicant numbers and the distribution between students from urban in comparison to rural areas or if there are international students in the programme. Information on the official application website of the University of the Witwatersrand, Johannesburg include a short video about Clinical Associates and the work they do, career opportunities, entry requirements, application process and closing dates. The entry requirements are a combination of school graduation results and a National Benchmark Test (NBT). A score is determined for both. 5 subjects (English, Mathematics, Physical Sciences and the highest acquired grades in another 2 subjects) are used to get a matriculation score. In addition to that all applicants are required to write the NBT.

Although there is a shortage of Health Care Professionals in South Africa it is surprising that there are Clinical Associates unemployed according to the media. According to an article by Bhekisisa[8] written by van Dyk, 2017 dozens of Clinical Associates are looking for jobs. Problems also arise within the public sector who cannot provide salaries for the Clinical Associate jobs. Graduates who received a bursary are at home waiting to get a post.

[8] Bhekisisa is the health journalism centre of the Mail & Guardian newspaper in South Africa.

The next section summarises the findings in order to present a justification/rationale for the research project.

2.6. Justification/rationale

South Africa has a long history of its plural health care system which is characterized by a huge inequality between the public sector (for the majority of the population) and the private sector (for the minority of the population: the wealthier people). The public sector is in special need in South Africa because it struggles to offer basic health care services to the majority of the South African population. It is for this reason that this study focuses on the public sector because it is the public sector in South Africa that it is in need of significant attention. In addition, there is an extreme shortage of Health Care Professionals in public health care services (Health Department of the Republic of South Africa, 2011). Although the shortage also impacts urban areas, rural areas are undoubtedly more affected (ibid) and therefore this study puts emphasis on rural areas. The shortage of Health Care Professionals is not only a South African but a global phenomenon. South Africa has a critical shortage of doctors and professional nurses and is affected severely by this shortage. Thus, it is reasonable and necessary to focus on the South African context. According to the literature the shortage is mainly caused by the emigration of Health Care Professionals, i.e. the movement of Health Care Professionals from South Africa to other countries or by internal migration from rural to urban areas. It is important to highlight the issues with regards to this explanation for the shortage of Health Care Professionals. Firstly, there is no information about the place where they are migrating from when they are leaving the country, i.e. if they are from an urban or rural area. Secondly, it can be assumed that there have never been enough Health Care Professionals in South Africa's rural areas because medical students have to move to the urban centres for studying and have to move back after finishing their studies. It cannot be expected that there will be quick change within the educational system, that medical students are also trained in rural areas and therefore that it is essential to investigate under which circumstances Health Care Professionals move (back) to rural areas. Accordingly, this research project focuses on rural-urban migration within South Africa. Policy regulations aimed to improve the situation, regarding the shortage of the Health Care Professionals, but partly contradict each

other. Some of them try to prevent immigration of Health Care Professionals from other countries (e.g. from SADC countries). Moreover, there are also South African initiatives such as the African Health Placements (AHP), the Rural Allowance Programme and the Occupation Specific Dispensation (OSD) which try to encourage Health Care Professionals to work in the public sector and/or work in rural areas. The Clinical Associate Programme, as one of the new health care professional cadres, has a similar aim, but commences already in the education process of medical practice students. Different scholars have investigated the Clinical Associate Programme regarding the cost effectiveness and the benefits for the South African economy. As the Clinical Associate Programme has not yet been explored with regards the factors and reasons for its participants (graduates and students) to move to a rural area for work a gap in the literature can be identified and serves as the justification for the intended research project.

2.7. Theories and Theoretical Framework

It is not the intention of this research project to use one single theory or one theoretical framework in order to explain a phenomenon or to test a theory. In contrast, different frameworks and theories are utilised.

One of these is the “Pull and Push” theory. The “Pull and Push” theory is a venerable theory of migration. It was first coined by Ravenstein of England in the 19th century. People who migrate are pushed out of the country by different factors and are pulled into another country by other factors (UK Essays, 2019). For the South African context there are also different factors contributing to the emigration of skilled individuals to industrialised countries, such as crime, better wage offers, better quality of life and future for their children, economic stability and improved health care. Immigrants, on the other hand, are pulled to South Africa as they see this as offering them economic opportunities which they do not have in the countries where they are coming from. Immigrants range from a large number of unskilled to limited number of high skilled workers. When people migrate it is mostly in search of a better life (Rasool et al., 2012). Such a scenario can be compared to internal migration phenomena within South Africa. As described in section 2.3. internal migration within South Africa from rural to urban areas also occurs in high numbers, especially from poorer provinces

such as from Eastern Cape to Gauteng – the wealthiest province. It is also the search for a better life or better income opportunities within the country. The intention is similar when migrating to another country.

In contrast to the described above, this research project deals with the opposite phenomenon of urban-rural migration. The pull and push theory can be used to explain why participants/graduates move to rural areas for work or not because migration decisions are always determined by factors in the areas of origin and destination (Passaris,1989).

Besides the “Pull and Push” theory, the “Structure and Agency Dualism” can be used to analyse decision making processes. In this context, agency is the ability to act independently and structure is the influence by the social field to do something or not or the availability of choices (Barker, 2005). Anthony Giddens was the first scholar who presented his thoughts about structure and agency and the relationship between it in 1984. ‘Structure’ refers to external forces by which individuals are influenced and ‘agency’ refers to internal motivations; structure is the macro perspective and agency is the micro perspective (Lamsal, 2012). Structure and agency and the relationship between them continues to be an ongoing debate within social sciences until today (Rafiee, Mirzaee, Mirzaee and Hashemzadeh, 2014). For example, there is a debate whether refugees have their own agency or if they are merely vulnerable victims (Mainwaring, 2016).

In the context of this research project the “Structure and Agency Dualism” can help to explain the reasons for movements of participants of the Clinical Associate Programme. It is important to investigate the interaction and the relationship between structure and agency in detail. For example, students from rural areas have to move to urban centres to study medical practice because there is no option in rural areas to be trained. Thus, the structure influences their movements. The question remains as to what role structure and agency play after they are graduated and have to make a decision to move to a rural area or not.

Lastly, some parts of the “Sustainable Livelihoods Framework” are also suitable to explain the phenomenon of the study. “The livelihoods approach is used to explain the

diversity and complexity of the ways in which people make a living" (Thieme, 2008:53). It is widely applied in research and has been endorsed and developed further e.g. to the "Sustainable Livelihoods Framework" by the Department of International Development (DFID). The basis for the development of the other frameworks is the "Sustainable rural livelihoods framework" which was developed by Robert Chambers and Gordon Conway in 1992. The livelihoods approach and frameworks were originally developed to explain the livelihood strategies of poor people in order to analyse development problems and design policies, but it is also increasingly used to analyse internal migration. (Internal) migration is one of the livelihoods strategies (Thieme, 2008). People are making decisions in order to achieve a certain livelihood outcome, i.e. livelihood strategies (e.g. to move or not to move) are choices that people make in order to achieve their livelihood outcomes, such as more income (Mc Dowell and de Haan,1997). In addition to that, it can also serve to investigate decisions in general, not only for poor people (Dorward et al., 2001).

The following the parts of the "Sustainable Livelihoods Framework" which are relevant for the research project are illustrated in figure 7:

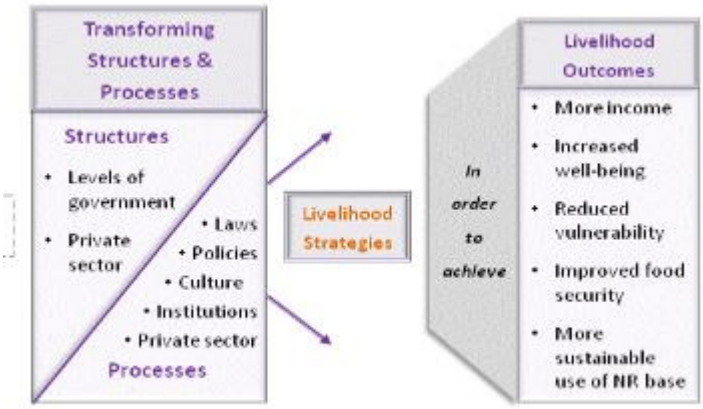


Figure 7: Parts of the Sustainable Livelihoods Framework: structure, strategies and outcomes

Source: adapted from DFID, 1999

Structure (as described above) also plays a role in this framework, which then influences the livelihood strategies. The phenomenon to move to urban centres in order to study can be explained by this framework as well. This study investigates the livelihood outcomes of Clinical Associates when moving to a rural area for work.

The literature review and the presented theories serve as a basis to formulate the research question and its objectives. These are presented in the following section.

3. Research Question and Objectives

As little is known about the mobility of Clinical Associates, this research project aims to answer the following overall research question:

What are the main reasons for participants (students and graduates from the University of the Witwatersrand, Johannesburg) of the Clinical Associate Programme to move to a rural area of South Africa in order to work in a public health care facility?

2 objectives derive from the research question:

- To explore incentives for Clinical Associates to change their opinion if they do not want work in a rural area

- To explore the experiences of the programme for both current students graduates after 10 years of implementation

4. Research Methodology

The research question and its objectives show that the focus of this study lies on the perspectives of graduates and students. However, it is also helpful to interview staff members from the department in order to get a different and more in depth point of view. Students are those who are currently enrolled at the University of the Witwatersrand, Johannesburg. Students from the 1st, 2nd and 3rd year were identified as participants for the study. Approximately 60 students were enrolled in the whole programme at the time of the research. Graduates are those who have finished the programme. The study was conducted at the Health Science Campus in Parktown at the University of the Witwatersrand, Johannesburg. The data collection process started mid November 2018 and was finished at the end of January 2019. Access to the participants was achieved through a senior staff member of the Clinical Associate Programme. The study was presented to the 1st and 2nd year students during one of

their classes at the beginning of November 2018. All students were provided with a participant information sheet with summarised information about the study (see Appendix 4). After the presentation the students had the option to register for individual interviews. Unfortunately, it was not possible to present the study to the 3rd year students because they were no longer on campus due to their timetables. That is why the 3rd year students were informed about the study through one of their lecturers by email. The interview process with the students took place between mid November 2018 and the second week of January 2019. 14 interviews were conducted, 6 with students from the 1st year, 5 students from the 2nd year and 3 students from the 3rd year.

Using a constructivist paradigm as a point of departure, with the understanding that there is more than one truth, a Qualitative Research Methodology in the form of a case study was used for this research project. The form of data collection was semi-structured interviews for the research question focusing on the 2 above-mentioned objectives. Semi-structured interviews provide a very flexible technique for relatively small-scale research (Drever, 1995). As Pathak and Intratat, 2012:4 point out, “semi-structured interviews are used when the research would benefit from a fairly open framework. They are also used when more useful information can be obtained from focused yet conversational two-way communication with the participants”. In addition to the benefits of semi-structured interviews Dumay and Qu, 2011:246 state that “it enables interviewees to provide responses in their own terms and in the way that they think and use language”. Semi-structured interviews follow a guideline and not all questions are designed and phrased ahead. In this case, relevant questions were formulated as an interview guide with additional possible questions during the interviews. For this research project, semi-structured interviews are used instead of structured interviews because the answers of the participants should be open and flexible and not limited. In comparison, structured interviews only allow a certain number of possible answers (Dumay and Qu, 2011).

In addition to the participant information sheet, all interviewees filled out a consent form for general participation and a consent form for the audio recording (see Appendix 4, 5 and 6). The data was analysed through an inductive approach. The interviews were recorded in accordance to the participants and were transcribed thereafter. For the research question and the objectives, the data was analysed by using an inductive

approach because the purpose was to understand and engage with the ideas of the participants regarding these topics and not to test an existing theory. As Schadewitz and Jachna, 2007:5 point out "the inductive approach uses the data to generate ideas, the deductive method starts with an idea or theoretical framework and uses the data to verify or disprove the idea."

In addition to the data collection through interviews, a survey was sent out to the students. Many students asked to fill out an online survey (instead of participating in an interview) because the study was conducted during the phase of exams and it was more appropriate for them. "SurveyMonkey[9]" was used as a provider to create the online survey. The survey for the 1st and 2nd year students consists of 10 open questions – in accordance to the interview guideline (see Appendix 7). Additionally, there was also a survey sent out to the 3rd year students. Most of the questions were similar to the survey which was sent to the 1st and 2nd year students. A few were different and put more emphasis on the aims and perspectives after the programme (see Appendix 8). In total, 10 students of the 1st and 2nd year and 3 students from the 3rd year filled out the online survey. The reasons why the number of participants from the 3rd year is below the number of participants from the 1st and 2nd year is because of the missing personal contact before the study (as already mentioned above).

Furthermore, an online survey was also used as a data collection method in order to get information from graduates of the Clinical Associate Programme. An online survey was a more appropriate and suitable method of data collection for graduates (instead of conducting interviews) as there was a limited time for data collection for the research report. A contact list of graduates from August 2016 was provided by the Clinical Associate department at Wits University. As people normally change telephone numbers more frequently than their email address this method was chosen and no interviews by telephone were conducted. Of course, face to face interviews with graduates would have been favourable in order to get a more detailed insight for the study. Finally, the online survey for the graduates was sent out to 412 recipients by email together with the participant information sheet. 32 email addresses were no longer correct so that they bounced back. Finally, 19 graduates participated and filled

[9] "SurveyMonkey" is a tool that allows users to create their own online surveys using question format templates. The basic version of SurveyMonkey is free; an enhanced version is also available at a cost. (http://www.surveymonkey.com/)

out the online survey. Once again “SurveyMonkey” was used for the survey creation and the survey was sent out by email together with the participant information sheet. Lastly, 2 additional interviews were conducted with staff members of the Clinical Associate Programme to get an additional input.

The interview guides and online surveys are not identical throughout the entire data collection process. The reason for this is that more challenges and issues arose during the process, which were discovered and evident at the beginning.

The participants of this research project are summarised in table 8:

Table 8: Participants of the research project "Mobility of Clinical Associates"

Participant group	Data collection method	Name in the analysis	Number of participants	Interview guideline
Students 1st 2nd, 3rd year from Wits University	Individual interviews	Interviewee plus No. (e.g. Interviewee No. 1)	14 (6 from 1st year, 5 from 2nd year, 3 from 3rd year)	see Appendix 7 and 8
Students 1st and 2nd year from Wits University	Online survey	Participant plus No. (e.g. Participant No. 1 of the 1st and 2nd year students)	10	see Appendix 7
Students 3rd year from Wits University	Online survey	Participant plus No. (e.g. Participant No. 1 of the 3rd year students)	3	see Appendix 8
Graduates from Wits University	Online survey	Participant plus No. (e.g. Participant No. 1 of the graduates)	19	see Appendix 9
Staff members from Wits University	Individual interviews	Staff member plus No. (e.g. staff member No. 1)	2	see Appendix 10

5. Ethical considerations

Ethical clearance was obtained from the Human Research Ethics Committee (Non-Medical) of the University of the Witwatersrand, Johannesburg on the 8th of November 2018 (see Appendix 2). The research does not expose the researcher and the participant to any potential risk or harm that they would not otherwise be exposed to. This means that the research does not include vulnerable categories. Shivayogi, 2013:53 defines the term “vulnerable population” as a “disadvantaged sub-segment of the community requiring utmost care, specific ancillary considerations and augmented protections in research.” According to the website of the International Review Board for Social & Behavioral Sciences at the University of Virginia, 2019 examples for vulnerable participants are pregnant women and fetuses, minors, prisoners, persons with diminished mental capacity and persons who are economically and educationally disadvantaged.

Access to the participants (students, graduates and staff members of the programme) was reached through one of the staff members of the Clinical Associate Programme after receiving the University Registrar approval on the 2nd of November 2018 (see Appendix 1) and the approval from the Head of School of Clinical Medicine (Faculty of Health Sciences at the University of the Witwatersrand, Johannesburg) on the 8th of November 2018 (see Appendix 3). Before conducting the interviews with the students individually, the researcher arranged an information meeting with students in which the study and the purpose was explained in detail. It is important to build up trust between the researcher and the students. After the meeting the students were given a participant information sheet and appointments for individual interviews were made (see also section 4). Participants were told that their participation would not influence their coursework grades in any way. In addition, they were told that the research was for degree purpose and that there are no direct benefits to participate or not participate. Participants were requested to sign a consent form for the general participation of the study and another consent form for audio recording but had the right to withdraw from the research process at any time. The researcher attempted to guarantee utmost confidentiality and anonymity, but one hundred percent anonymity cannot always be guaranteed - especially in smaller institutions, e.g. after the information meeting when other students discover who participated and who did not. The researcher discussed anonymity with the participants in detail. The protection of the data is also very

important. Each participant received a pseudonym in order to not be directly linked with any information provided during the interview and after. Notes, interview transcripts and any other identifying participant information were locked in a file cabinet in the personal possession of the researcher. Recordings were kept on a password protected laptop. Data will be kept in a new USB drive after the study. Research results – in the form of this report - will be available in the online library, at ACMS and for the participants. Results can also be presented on conferences and in discussions with other researchers.

6. Data analysis and findings

6.1. Short summary of the main findings

The analysis of the data shows that Clinical Associates are aware of the severe situation within the public health care sector and the problems especially in rural areas.[10] In this context, the reasons for the implementation of the Clinical Associate Programme, which are explained in the literature, are similar to those mentioned by the participants of this study[11]. Problems of the public health care system are understaffing, shortage of equipment/resources, inequality between the private and the public sector, differences between urban and rural areas, bad working conditions and bad quality treatment of patients and corruption within the public health care system. Reasons for the implementation of the Clinical Associate Programme are the shortage of Health Care Professionals in rural areas, closing the gap between a nurse and a doctor and getting more Health Care Professionals in the job market faster. Participants of the study formulated a broader spectre of responses than expressed in the literature. Both themes are important in order to set the scene because they create the framework for the research project. The findings are presented in detail in sections 6.2 and 6.3.

Another important finding from the data includes that all participants are from South Africa and that no one is from outside the country[12]. Furthermore, the distribution of the participants who are from rural areas in comparison to urban areas is striking in

[10] The severe situation within the current public health care system in South Africa and the problems in rural areas are mainly described in section 2.1.
[11] The reasons for the implementation of the Clinical Associate Programme can be found in section 2.5.
[12] see section 2.5. In the literature there is no information available if there are international students in the Clinical Associate Programme.

this research project because the majority of the participants is coming from an urban area. More information about that is provided in section 6.4.

In this context, the number of graduates working in a rural area who are originally from a rural area is higher in comparison to the number of graduates working in a rural area who are originally from an urban area[13]. Detailed information about these findings are illustrated in section 6.5.

The findings of the study suggest that Clinical Associates are driven by intrinsic motivational factors and extrinsic motivational factors when making the decision to move to a rural area for work. Intrinsic motivational factors are the passion about medicine, helping people and the community and to learn more when working in a rural area. Extrinsic motivational factors are caused by the system such as being placed in a rural area due to a scholarship or being pushed to work in a rural area because no work is available in an urban area. The findings for the overall research question are demonstrated in section 6.6.

According to the participants of the study, financial compensations are one major incentive to encourage Clinical Associates to move to a rural area if they do not want to move. Other responses include the improvement of circumstances such as better working and living conditions and the better recognition of Clinical Associates within the health care system. Additionally, a few participants express that they would work in a rural area with a broader medical knowledge. More findings with regards to this theme are displayed in section 6.7.

Current students and graduates expressed their experiences after 10 years of the implementation of the Clinical Associate Programme within this research project. Knowledge gaps and missing recognition of Clinical Associates in the existing health care system were also mentioned in this context. Other experiences are marked by problems to find a job after graduation or as a Clinical Associate in general and

[13] see section 2.5. There is no information available about the distribution between students from urban areas in comparison to students from rural areas in the Clinical Associate Programme. The findings of the study show a similar trend like former studies. There are much more medical students from urban areas than from rural areas. In addition, students from rural areas are more likely to move back after finishing their studies (see section 2.3.).

problems to work in the private sector as a Clinical Associate[14]. The findings of the experiences of students and graduates of the Clinical Associate Programme are presented in section 6.8.

Needless to say, this research project covers only a small sample size of Clinical Associates from one university. It is not the intention to make generalisations, but to get an idea about possible trends. In addition, answers from students in this research project are given on a hypothetical basis in comparison to the graduates who already made a decision (e.g. to move or not to move). This means that the opinions of the students could change over time and they are not really in the situation to make a decision. That is why the answers of the graduates are from special importance with regards to some questions (e.g. to move or not move) because they already made the decision.

6.2. Problems of the public health care system in South Africa

A common answer which was given by the participants of the study was the shortage of staff and the shortage of equipment and resources as characteristic for the public health care system in South Africa. In addition, there are other answers from the participants regarding the problems of the public health care system in South Africa[15].

A few of the participants make comparisons between the public and the private sector in South Africa and point out the inequalities between both systems. According to one of the students

> "the health care system favours the people that have money and then the people who actually need the health care system to work for them, but don't have the finances to do so struggle a lot in our country. I think we see that with the public hospitals so full and the private hospitals being less full..." (Interviewee No. 1).

Another participant of the students has a similar opinion about the imbalances between

[14] some of the aspects are already mentioned in section 2.5.
[15] see the previous section 6.1.

the private and the public sector and stated that

> "we have a wastage of resources in private sectors, you know, where you get a machine and you only use it once in 5 months. Where if you put it in a public health sector you could use it ten times in the day and save ten lives instead of saving zero lives that comes to private sectors" (Interviewee No. 4).

Additionally, another student describes the health care system in South Africa as "incredibly two-tiered" (interviewee No. 6). They[16] explain that

> "we have private which is amazing and it services such a small portion of the population whereas government has this large portion of this population and it has less specialists than you will ever find in private…" (Interviewee No. 6).

Finally, one of the staff members summarises that

> "there is a great difference between the government provided health and private provided health. And if one has money, they can receive high quality care" (Staff member No. 1).

A second problem which is mentioned several times by the participants is the difference between urban and rural areas within the public health care system. One of the students who filled out the online survey points out that the South African health care system

> "has improved than before because there is improved medical treatment, advancing support for critical patients and improving first care services. Although this implies more to the urban areas, there is still more that needs to be done in the rural areas" (Participant No. 7 of the 1st and 2nd year students).

[16] The gender-neutral form is used here and in the following.

Furthermore, another participant thinks that it is necessary

> "to improve the number of clinics that are there in rural areas" (Participant No. 6 of the 1st and 2nd year students).

Another student believes that it is essential

> "to focus more on the rural sector and also to provide more on the rural sector such that when medical people graduate. [...] you get used to be in Johannesburg like where there's everything around you. Finally, participant No. 10 of the graduates who filled out the online survey explains that "public healthcare is still in a dire situation, especially in rural areas" (Interviewee No. 8).

Corruption or the problem of financial management is mentioned by some participants. One of the graduates demands to

> "reduce corruption" (Participant No. 18).

One of the staff members sees the main challenges and problems of the current health care system in the financial management and in the management structure (staff member No. 1). Corruption is also one of the problems in the health care system for another student. They state that South Africa needs

> "better people to manage the finances. I feel that there is a lot of corruption" (Interviewee No. 6).

Working conditions for Health Care Professionals are mentioned by a few participants. The workload in the public sector is very high which can result in burn out over time. Another consequence could be that Health Care Professionals leave their job and move to another area as highlighted one of the staff members (staff member No. 1). One of the students hopes

> "that this degree [Clinical Associate Programme] can be able to

> improve the working conditions or the help that is offered in public hospitals" (Interviewee No. 3).

The patient treatment quality as a consequence of the problems in the public health care system is also mentioned by some participants. A student summarises that

> "the quality in which people receive health care, whether it's in how the health care workers interact with them of the way their conditions are treated – sometimes it may not be thorough" (Participant No. 10 of the 1st and 2nd year students).

The issue of extremely long ques at public clinics which have a bad influence on the patient treatment quality, was voiced by several participants of the study.

6.3. Reasons for the implementation of the Clinical Associate Programme

It is not surprising that the most frequent answer of the participants is the shortage of Health Care Professionals as the main reason for the implementation of the Clinical Associate Programme. The second frequent answer addresses this problem in rural areas. Many participants mention that the Clinical Associate Programme has been implemented because of the shortage of medical staff in rural areas. A noticeable number of the participants think that "gaps between nurses and doctors" can be filled through Clinical Associates. Several respondents believe that the programme has been implemented to get Health Care Professionals in the job market faster because Clinical Associates are trained within 3 years in comparison to doctors who are trained within six year. In this context, one of the students thinks that the reason for the implementation of the Clinical Associate Programme was

> "to try and get more healthcare workers into the healthcare system as fast as they can and as more competent as they can be" (Interviewee No. 7).

In addition, another student believes that

> "the government had to come up with a strategy or a way to produce

> Health Care Professionals or rather to take them out of university faster, so they can come and fill the gap that was there by that time" (Interviewee No. 10).

The sections 6.2. and 6.3. show that the participants of the study who are practitioners confirm the theoretical findings from the literature review and add additional important aspects. The participants are fully aware of the difficult circumstances in the public health care system in rural areas. This knowledge is essential for the general frame of the research project.

6.4. Origin of students in the research project

There are two interesting aspects about the data which are noticeable. First, it is striking that all participants of the study are coming from South Africa. No one of the participants is from another country[17]. Doherty et al., 2012 point out that the degree of Clinical Associates is not internationally recognised so that there is less "brain drain" in comparison to doctors[18]. At this point it can be concluded that the Clinical Associate Programme is a South African initiative from which the local health care system benefits – regardless of the private or public health care system. This can be regarded as specific for the Clinical Associate Programme.

Second, the distribution of students and graduates who are originally from an urban area in comparison to students and graduates who are originally from a rural area is significant. In total, 46 students and graduates were interviewed and filled out an online survey. The majority of the students and graduates (29) is coming from an urban area and less than half of the students and graduates (17) are coming from a rural area. In the presented study of Tumbo et al., 2009 59% of the medical students were from an urban area and only 26% of the medical students were from a rural area[19]. The findings of this study draw a similar picture of the rural-urban distribution. The two staff members of the Clinical Associate Programme who were interviewed confirmed that there are more students enrolled in the programme who are originally from urban areas. One of the staff members thinks that there are 75% from urban areas and 25%

[17] see section 6.1.
[18] see sections 2.3. and 2.5.
[19] see section 2.3.

from rural areas (staff member No. 1). The other staff member believes that the distribution is “60:40, urban to rural” (staff member No. 2). This information is very helpful to find answers to the question of why there are not more Clinical Associates working in the public sector in rural areas[20].

One reason could be that the number of students from rural areas are influenced by the system. One of the staff members explains that

> “the intention was to get students from rural areas. The problem is that the province, the government withdrew the bursaries. The consequence is that there are students who are private students and they are paying for themselves” (Staff member No. 2).

6.5. Current working places of graduates

18 of 19 graduate participants provide information about where they are working at the moment. 3 out of 18 work in a rural area and 3 work in an urban area. 2 out of 3 additionally mention that they work in a rural area in the public sector. 2 out of 3 add that they work in an urban area in the public sector. It is striking that 8 out of the 18 respondents work in a different field, i.e. that they do not work as Clinical Associates in the public or private sector. 4 of the respondents work in the private sector.

There are 9 out of 19 participants (18 who answered the question of the current working place) who filled out the online survey of the graduates and are coming from a rural area. All of the above mentioned 3 participants who work in a rural area are originally from a rural area. Thus, 3 out of 9 participants who are originally from a rural area are working in a rural area at the moment. In comparison there are 10 out of 19 participants (18 who answered the question of the current working place) who are from an urban area but none of them work in a rural area at the moment[21].

[20] In section 2.5. it is stated that 49% of Clinical Associates work in the public sector.
[21] The study population seems to represent the trend of the findings from the literature review from section 2.3. and 2.5. Students from rural areas are more likely to move back after finishing their studies.

6.6. Reasons for Clinical Associates to move to a rural area for work

6.6.1. Findings from the graduates

There are 3 graduates who work in a rural area. Thus, it is essential to have a closer look at their answers. One of the graduates expressed that the reason to move to a rural area for work was

> “to make a change as more health workers are needed (Participant No. 1 of the graduates).

Unfortunately, one of the other graduates does not give any details and only states that

> “I was employed there” (i.e. in a rural area) (Participant No. 2 of the graduates).

Lastly, the third graduate puts forward that

> “I was placed to serve the community of my district whilst am paying back my bursary and had to accept the job offer there...”(Participant No. 11 of the graduates).

Although there are only two responses which are suitable an interim conclusion can be drawn. Reasons for Clinical Associates to move to a rural area for work are intrinsic motivational factors on the one hand (a matter of passion) and extrinsic motivational factors on the other hand (moving to a rural area because of bursary issues). In addition, there are a few other answers from graduates, although they are not working in a rural area, who underline these findings. One of the graduates explains that

> “sometimes no work is found in urban or private so the only option is to go to rural” (Participant No. 18 of the graduates).

Thus, the motivation to move to a rural area is coming from extrinsic factors. Another graduate puts emphasis on the intrinsic motivational factors and states that they

> “would love to work in a rural area to uplift the health system and because it’s where we are really needed” (Participant No. 5 of the graduates).

6.6.2. Findings from the students

As a next step, the collected data of the student’s online surveys and the interviews is analysed. There are 8 students of the 1st and 2nd year who filled out the online survey, who are originally from an urban area and 2 students who are from a rural area. Both students who are originally from a rural area express that they want to work in a rural area after their studies. Their answers underline the findings from the graduates regarding the intrinsic motivational factors. One of the students explains that they want to work in a rural area because they were

> “encouraged to do this degree by the rural circumstances back home” (Participant No. 6 of the 1st and 2nd year students).

Another of the students states that

> “the aim of me being in the health science field is to make an impact in people’s lives. This would mean so much if I go to the rural areas where my service would be greatly appreciated.” (Participant No. 7 of the 1st and 2nd year students).

In addition, there are only 2 out of 8 participants from an urban area who would like to work in a rural area after their studies. One of them only expresses that they to work in a rural area but does not give any details why. The other one puts forward that they want to work in a rural area because

> “that is the sector I’ve always desired to serve” (Participant No. 3 of the 1st and 2nd year students).

The three participants of the 3rd year students who filled out the online survey are all from an urban area. Two of them would like to work in a rural area. The reasons

provided are the lack of the health care system in those areas and that the work of Clinical Associates is needed (Participant No. 1 of the 3rd year students). Another reason provided is to get a job and that any work is appreciated (Participant No. 3 of the 3rd year students).

This research project consists of 14 individual interviews. 6 of the interviewees are coming from a rural area and 8 are coming from an urban area. 5 out of 6 of the interviewees who are coming from a rural area put forward that they want to work in a rural area after their studies. In contrast, 2 out of 8 who are coming from an urban area want to work in a rural area when they have graduated. In fact, 4 of the interviewees seem to be undecided because they do not give a clear answer.

Intrinsic factors also play an essential role for those who want to work in a rural area. Reasons provided are the passion about medicine, the opportunity to learn a lot in rural areas, helping the people and giving something back to the home community. One student who is coming from a rural area wants to work after their studies because they want to change their community (Interviewee No. 4). They think that a lot of Health Care Professionals who are coming from a rural area are inspired to be in healthcare because they

> "saw the need in the community" (Interviewee No. 4).

Three of the students who want to work in a rural area believe that Health Care Professionals can learn a lot in those areas. Another student explains that

> "most of the health occurrences happens in rural areas and there is not much health so if there can be dispensary of more Health Care Professionals in that area, healthcare systems could pick up the knowledge in staff" (Interviewee No. 5).

According to another student there are more problems and challenges in rural areas (Interviewee No. 7). They want to find solutions to those problems. Furthermore, they believe that Health Care Professionals see things that they mostly only know from theory and can therefore learn a lot in rural areas. Passion about medicine and helping

people and the community are mentioned by several interviewees.

The key findings of this section are summarised in table 9:

Table 9: Reasons for Clinical Associates to work in a rural area

Intrinsic motivational factors	Extrinsic motivational factors
Passion about medicine	Placed by the system in a rural area
Helping people / the community	Pushed to work in a rural area because there is no work in urban areas
Amount of knowledge gained in rural areas	

6.7. Incentives for Clinical Associates to move to a rural area

It is evident that there are also Clinical Associates who do not want to move to a rural area for work. Perhaps there are incentives or the improvement of circumstances which could convince them to change their opinion. Incentives are also extrinsic motivational factors.

6.7.1 Findings from the graduates

A major part of the answers of the graduates relate to the financial compensation for Clinical Associates in rural areas. Those graduates demand for a higher salary for those who move to a rural area for work. Several graduates ask for the implementation of a Rural Allowance Programme for Clinical Associates[22]. Other incentives or improvements of circumstance are better working and living conditions, including safe accommodation and a good and healthy system in the rural institution according to some graduates. Additionally, one graduate addresses another aspect which is also important for Clinical Associates in rural areas. They state that

> "working in a place where they are familiar with what a CA does" (Participant No. 15 of the graduates).

[22] As explained in section 2.4. there is the Rural Allowance Programme in place for different health care professions in South Africa. Clinical Associates are not part of this programme.

Thus, the recognition of Clinical Associates is significant for working in rural areas.

6.7.2. Findings from the students

Half of the participants of the 1st and 2nd year students who filled out the online survey mention a higher financial compensation as incentive for moving to rural areas. One of the students sees also a problem in the recognition of Clinical Associates (Participant No. 8 of the 1st and 2nd year students). They suggest to implement an internship or compulsory community service so that the government would recognise Clinical Associates better[23]. One student has the feeling that the knowledge of a Clinical Associate is not sufficient in order to work in a rural area and claims that the course should be longer in order to get students more confidence (Participant No. 1 of the 1st and 2nd year students).

All three participants of the online survey of the 3rd year students are from urban areas. Two would like to move to a rural area, one does not. An incentive for participant No. 2 to change their opinion would be financial compensation such as “benefits. Fair pay. All expenses paid….”

Financial compensations are also the most frequently named answer of the interviewees. Half of the interviewees mention a higher salary as one major incentive for Clinical Associates to change their opinion to move to a rural area. Better living standards and working conditions in the rural area would also help to encourage more Clinical Associates to move to those areas according to some interviewees. One of the students explains that

> “one big challenge is housing because you get there, you don’t know anyone. You don’t know anything. You have to find a place to stay because they literally just send you there” (Interviewee No. 12).

A few of the interviewees believe that more Clinical Associates would move to a rural area if they would have more knowledge. For example, one student is scared to work in a rural area because they think that the knowledge is not sufficient to work there.

[23] As described in section 2.3. a community service is only compulsory for doctors and nurses in South Africa but not for Clinical Associates.

They do not want to work alone and worry about making a wrong decision which can influence people's life (Interviewee No. 3). Finally, the recognition of Clinical Associates is also one issue for one of the interviewees. One of the students states that

> "if the South African Government can actually give the Clinical Associates the recognition they deserve, they will particularly move to rural areas" (Interviewee No. 10).

Although financial compensations is the incentive which was mentioned most frequently by the participants of the study, the factors which influence the decision-making process to move to a rural area are diverse[24].

The findings of this section are summarised in table 10:

Table 10: Incentives and improvement of circumstances to encourage Clinical Associates to move to a rural area for work

Incentives / improvement of circumstances
Financial compensation
Better working and living conditions
Better recognition by Clinical Associates by the government
Better knowledge to work in a rural area

6.8. Experiences of both current students and graduates of the Clinical Associate Programme after 10 years of its implementation

6.8.1 Problems of recognition of the Clinical Associate Programme

Several participants of the research project express that there are problems of

[24] As described in section 2.4. there are studies for other health care professions (e.g. doctors) available but the focus is mainly on factors to retain them in rural areas. What is certainly a fact is, that money always plays a large role as an incentive for all groups of Health Care Professionals. In addition, each group has specific incentives which other groups do not have.

recognition of the programme by the government[25]. For example, one of the graduates states, that there is

> "no continued support from the National and Provincial Departments of Health" (Participant No. 19 of the graduates).

Another graduate has a similar opinion and puts forward that there is a

> "lack of interest and political will from the minister of health on a national level down to MEC at a provincial level" (Participant No. 10 of the graduates).

The lack of recognition by the government has different consequences which are visible in the implementation problems of Clinical Associates in the existing health care system mainly that people do not know what a Clinical Associate is. These consequences are raised by many participants of this research project. According to one of the students the Clinical Associate Programme is not part of the integrated system in terms because there are Health Care Professionals who do not know what Clinical Associates are (Interviewee No. 3). Another student believes that there are not many who know Clinical Associates (Interviewee No. 11). In addition, one student sees the

> "downfall now is that it hasn't been planned to integrate the Clinical Associates into the existing healthcare system" (Interviewee No. 12).

One of the staff members summarises that

> "we still need to educate the people about what a Clinical Associate is. We need to educate clinicians, we need to educate the hospital managers, the patients as well" (Staff member No. 1).

One of the graduates states that there is

[25] see section 6.7.

> “no public and fellow professionals awareness. Most people and fellow healthcare workers have no idea what a clinical associate is. This results in the graduates facing many difficulties in the places they work…” (Participant No. 15 of the graduates).

6.8.2. Problems of knowledge gaps

In total a few participants of the study express that they think that there are large knowledge gaps within the programme that compromise the efficiency of their work – especially in rural areas. For example, one participant of the graduates suggests that

> “the course should be more theory as well, not so much practical (Participant No. 8 of the graduates).

For some of the participants three years of study are not enough. One graduate believes that the course should be a 4 years degree with two years of practical (Participant No. 7 of the graduates). In context to that, one student explains

> “that in this three years there’s things that we still need. We still need the basic anatomy” (Interviewee No. 8).

6.8.3. Problems of job perspectives for Clinical Associates

Some Clinical Associates experience problems to find a job after the programme although there is a shortage of Health Care Professionals in South Africa[26]. This problem is mentioned by several participants of the study. In this context the graduates were asked two questions regarding job perspectives after finishing the programme. The first question: Do you think it is easy to get a job for Clinical Associates after the programme?; the second question: How long did it take to get a job after the programme?

According to some participants of the graduates there are no adequate jobs or only a few jobs available for Clinical Associates. One of the graduates explains that

[26] In section 2.5. in the literature review an article from 2017 is presented in context to this issue.

> “there are still graduates who are unemployed” (Participant No. 11 of the graduates).

In addition, another graduate mentions the problem of unemployment for Clinical Associates (Participant No. 14 of the graduates). A student states that

> “there aren’t enough jobs anywhere available for the new graduates” (Participant No. 3 of the 3rd year students).

Furthermore, all interviewees from the 3rd year are just about to graduate but none of them have a job offer yet. One of the students, for example, wants to work in a rural area after graduation, but it is uncertain if they can get a post there (Interviewee No. 12). According to another student it is difficult to find a job after finishing your studies (Interviewee No. 13). They feel that “you don’t really choose as much” which means that you have to take any job. One of the staff members draws a similar picture and expresses that they are

> “very unfortunate and sad because a lot of Clinical Associates are not finding a job immediately” (Staff member No. 2).

On the one hand, most of the participants think that is difficult to find a job and only a few believe that it is easy. On the other hand, the majority of the participants of this research project immediately found a job after graduation or were already employed before. Only a few of the participants searched for a job for a couple of months (in this case for six months as a maximum) and for the rest this question is not applicable because they did not work as a Clinical Associate after graduation. This shows that the majority of the Clinical Associates from the University of the Witwatersrand can find a job directly after graduation, but that there is a minority who has to search for a job for a while. The answers of these two questions seem to contradict each other. Although the majority think that it is difficult to find a job as a Clinical Associate most of them found a job very quick. Only assumptions can be made as to why a lot answer with “no” to the first question. Maybe it was easier to get a job as a Clinical Associate when they graduated because there were more jobs available at that time and potentially

they know someone who struggled to find a job as a Clinical Associate. One of the staff members explains that

> “Wits has done a study that the majority of its students who graduate within nine months find employment...And up to 96% find employment within a year...Now we have not looked at our own conclusions yet, but just conversations that I have had with them is that usually exactly within a year most of them have found employment if they want to” (Staff member No. 1).

6.8.4. Problems of working in the private sector as a Clinical Associate

Another challenge and experience of students and graduates is the unavailability of posts provided by the government. One of the staff members explains that

> “in rural areas we do not necessarily have posts either. So it is a problem of posts” (Staff member No. 2).

The lack of posts provides a reason why more and more Clinical Associates try to find a job in the private sector (according to the data from PACASA, 2018 presented in section 2.5. there are 21% of the Clinical Associates working in the private sector). In this context, one of the students explains

> “that there were a couple of doctors who have got their own private practice who are looking for Clinical Associates” (Interviewee No. 11).

But there are two problems arising for Clinical Associates who work in the private sector. First, it is an unawareness of the role of a Clinical Associate in some parts of the private sector and second, there are currently no salary guidelines for a Clinical Associate. This problem is mentioned by a few participants. Second, there are no guidelines for a salary. These problems are mentioned by several participants. According to one of the graduates the private sector does not know enough about the role of Clinical Associates and there are no guidelines for a salary (Participant No. 7 of the graduates). Additionally, another participant of the graduates believes that the capability is not recognised enough in the private sector (Participant No. 11 of the

graduates). Due to missing salary guidelines one of the students thinks that Clinical Associates get exploited in the private sector and that they do not get any benefits (Participant No. 2 of the 3rd year students). Some of the participants see the problem of Clinical Associates in the fact that they do not get the salary from the medical aid like other healthcare workers do, but from the doctor they are working for. It is a bit of a challenge because the doctor does not really know what to pay for the Clinical Associate.

7. The social phenomenon of Clinical Associates mobility: theories/theoretical framework

As described in section 2.7. the “Pull and Push theory”, the “Agency and Structure Dualism” and parts of the “Sustainable Livelihoods Framework” can be used to describe the social phenomenon of this research project. After presenting them in general the data from the previous section 6. is taken to analyse the specific topic of Clinical Associate mobility.

The reasons for Clinical Associates to move to a rural area for work can be described by the agency and structure dualism. As pointed out in section 6.2.2. the reasons to move to a rural area for work can be distinguished between intrinsic motivational factors and extrinsic motivational factors. Intrinsic motivational factors mentioned by the participants of this research project are passion for medicine, helping people and the community and the amount of knowledge gained in rural settings. Extrinsic motivational factors are pushed by the system in a rural area and working in a rural area because there were no jobs available in an urban area. Intrinsic motivational factors require a high agency. Extrinsic motivational factors are systematic factors, i.e. the agency is not the main reason for working in a rural area but the system or external factors.

In figure 7, a small part of the “Sustainable Livelihoods Framework” which is applicable on this research project is presented. Structure sometimes determines the “livelihood strategies”. “Livelihood strategies” are the options “to move to a rural area” or “not to move to a rural area”. Structure can limit the options so that the only one is “to move to a rural area” because of the system, e.g. a scholarship. By moving everyone wants to achieve certain things which are reflected by the “livelihood outcomes” in figure 7.

Participants who are intrinsically motivated want to achieve “helping people / their community” or “gaining more knowledge” by moving to a rural area. In contrast to that, the “livelihood outcomes” look differently for those who do not want to move to a rural area right from the beginning. In section 6.3. financial compensations are the most frequently named answer as incentive to change the opinion to move. Thus, a “higher salary” is one “livelihood outcome” for those who have to be convinced to move. The other three aspects which are mentioned by the participants of the study can be characterised as improvements of circumstance or structural factors (i.e. the box “structure” in figure 7). It will probably take a long time to change living and working conditions in the rural areas, whereas it is easier to work on the knowledge gaps for Clinical Associates. The recognition of Clinical Associates by the government is a challenge but can be achieved in medium-term. Furthermore, a higher salary in the rural areas can also be seen as a pull factor. This means that it could be the decisive factor for Clinical Associates to move to a rural area.

The findings from the second objective regarding the current challenges of the Clinical Associate Programme address mainly structural issues, i.e. that there have to be improvements within the system (e.g. increases in the number of students from rural areas, claims for better recognition of Clinical Associates so that there is a better integration into the existing healthcare system).

8. Ideas of improvement conclusion and further research

8.1. Ideas of improvement

Coming back to the findings from section 6. it is important to think about possible action plans and solutions regarding the described challenges.

First, the number of students who are originally from a rural area could be increased by promoting the programme more in those areas to get more applications. One of the staff members explains that they already organise a road show in Mpumalanga and Limpopo in order to inform high school students about the Clinical Associate Programme (Staff member No. 1). Another idea would be to favour applicants from rural areas in the recruitment process. Potentially, coming from a rural area could have

a small influence on the score of the applicants[27]. The problems of recognition of Clinical Associates, missing scholarships and missing implementation of Clinical Associates in the existing health care system are enormous ones. PACASA, the universities, Clinical Associates and health care facilities where Clinical Associates work can develop a communication and awareness strategy in order to address the government and the National Department of Health. The purpose of this is to demonstrate the benefits of Clinical Associates. There is no group of Health Care Professionals who is more willing to work in rural areas. The universities could build partnerships with hospitals in rural areas and make claims for the need of scholarships for students in those areas. PACASA, the universities and partnership health care facilities could present a strategy to the government to implement Clinical Associates better in the existing health care system. The problem of getting a job for Clinical Associates after graduation could be solved by hiring a recruitment manager who is working for the university and who begins to work with the students at the beginning of the last year before graduation. In this way, everyone who wants to work can get a job directly after finishing their studies. The recruitment manager can also build up partnerships with health care facilities (especially in rural areas and in the public sector) and explain the tasks of a Clinical Associate in detail. In addition, they could design a "welcome rural programme[28]" for students who want to move to a rural area, including ensuring the basic needs for the participants such as housing and food etc. Thus, the recruitment manager would also be an important part of the interest group who supports Clinical Associates. The recruitment manager would also help to get a better recognition of Clinical Associates from the government. Additionally, a compulsory community service for Clinical Associates could be implemented to help the students to find jobs after graduation. The graduates, some interviewees and the staff members were asked what they thought about the aforementioned suggestions. The findings are indifferent as some of them would appreciate it and others not. One of the staff members would support that, but is hesitant right now because there are some problems with the community service for nurses and doctors. The system has to improve first, before Clinical Associates can enrol (Staff member No. 1). A participant of the graduates thinks that a compulsory community service

[27] The application process for Clinical Associates is described in section 2.5.
[28] see section 2.3. Such a programme can be comparable to the described model called "home stay" on page 20.

> “would improve placement and employment...” (Participant No. 2 of the graduates).

In contrast to that, another graduate sees that there is

> “no need hence Clinical Associates spend most of their time as students at healthcare facilities, doing same job equivalent to community service” (Participant No. 10 of the graduates)

Another challenge, already described, is that Clinical Associates work in the private sector without clear salary guidelines. Furthermore, some Health Care Professionals in the private sector do not know the role of Clinical Associates. In this context, one of the students explains that PACASA is already working on billing codes for Clinical Associates. The aim is to get paid by the medical aid and not directly by the doctor (Interviewee No. 12). This is especially important to avoid or minimise exploitation of Clinical Associates in the private sector. Therefore, salary guidelines are essential and necessary and help the Clinical Associates to gain more recognition from the health care facilities. Finally, the participants of the study mentioned the problem of knowledge gaps – especially in working in rural areas. One idea could be to implement a preparation course for Clinical Associates who want to work in a rural area. This course could be part of the above-described “welcome rural programme” for students organised by the recruitment manager of the university. The preparation course should help students to feel more secure to move to a rural area. Another idea could be that it is compulsory to do an internship for at least one time during the Clinical Associate Programme. Some participants from the 3rd year put forward that they did not work in a rural area during their studies. Thus, the decision-making process can be easier for students if they want to work in a rural area or not.

8.2. Conclusion and further research

The findings of the study show that Clinical Associates have a high level of agency. They are more willing to work in the public sector and in rural areas in comparison to other Health Care Professionals (especially doctors). Furthermore, the Clinical Associate Programme is a South African programme with participants from all over the country. Graduates from that programme are trained for the South African health care

system. The danger of “brain drain” is much lower in comparison to doctors. This study puts focus on a research area which has not yet been explored. There is not much known about the mobility of Clinical Associates and the reasons for them to move to a rural area for work. The findings suggest that many Clinical Associates are passionate about their job and want to help their community and people in general. They have a high will to learn new things. Although money is the most frequently mentioned incentive by the participants this study underlines that Clinical Associates are facing different challenges within the South African health care system. According to the participants of the study one major problem is the missing recognition of Clinical Associates by the government. The consequence of this is that Clinical Associates are still unknown in some parts of the healthcare system although the programme was implemented more than ten years ago. Additionally, scholarships in rural areas and in the public sector are cancelled which has an influence on the number of students within the Clinical Associate Programme who are coming from a rural area. In fact, the number of students who are coming from a rural area in comparison to those who are coming from an urban area is much lower. In this context, this study emphasises that students who are originally from a rural area are more likely to move back to their communities in comparison to students from urban areas moving to rural areas. However, there are sometimes no jobs available in a rural area or in the public sector resulting in Clinical Associates being unemployed or pushed into the private sector. Within the private sector there are no billing codes or salary guidelines existing and this results in the possibility of Clinical Associates being exploited. Furthermore, some of the participants mention that they have knowledge gaps – especially regarding working in rural areas. Some of them claim for an additional year of study. After presenting the current challenges of the Clinical Associate Programme ideas of improvement are presented. Of course, these ideas are not conclusive.

To summarise, Clinical Associates have specific characteristics which are different in comparison to other Health Care Professionals. They are beneficial for the healthcare system in South Africa – especially for the public sector and for rural areas. The Clinical Associate Programme is unique because it puts focus on the training of Health Care Professionals for the public sector and for rural areas within the education process in comparison to other programmes such as the Rural Allowance Programme or the Occupation Specific Dispensation (OSD). In fact, further strategies are needed for

doctors and nurses to increase the number of those who are working in rural areas and in the public sector. Potentially, it could be an idea to put emphasis on this also already in the education process. The existing problem of the shortage of Health Care Professionals which is especially present in rural areas cannot be completely solved by the training of Clinical Associates. Currently, there have been almost 1000 Clinical Associates been trained in South Africa. According to estimations 14000 are needed to improve the shortage of Health Care Professionals significantly in South Africa.

This study shows that the number of Clinical Associates working in the public sector and in rural areas could be higher if the recognition of the practice would be increased and the management within the healthcare system improved.

Further research projects could increase the sample size and the scope of research to more than just one university. Further studies could focus more on similarities or differences between groups of Health Care Professionals, including how they work together with Clinical Associates. This study aims to demonstrate the necessity for further development of the Clinical Associate Programme and also for further comparative research. The results demonstrate the significant potential of the programme not only for the participants but furthermore for the South African healthcare sector, as it seems on the basis of the data presented to be a successful instrument to find and train Health Care Professionals for South Africa’s public sector and for rural areas.

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Appendices

Appendix 1 – Registrar Approval

TO WHOM IT MAY CONCERN

"Shortage of Health Care Professionals in South Africa's public sector: an exploratory study of the Clinical Associate Programme regarding the encouragement of internal labour migration to rural health care facilities "

This letter serves to confirm that the above project has received permission to be conducted on University premises, and/or involving staff and/or students of the University as research participants. In undertaking this research, you agree to abide by all University regulations for conducting research on campus and to respect participants' rights to withdraw from participation at any time.

If you are conducting research on certain student cohorts, year groups or courses within specific Schools and within the teaching term, permission must be sought from Heads of School or individual academics.

No research can commence before ethical clearance has been obtained. Kindly forward a copy of the clearance certificate to this office.

Nicoleen Potgieter
University Deputy Registrar

Appendix 2 – Ethics Clearance Certificate

school of SOCIAL SCIENCES

SOSS Human Research Ethics Committee

Clearance Certificate

Protocol Number:	**ACMS/18/02**
Project Title:	**'Shortage of healthcare professionals in South Africa's public sector: an exploratory study of the clinical assocate programme regarding the encouragement of internal labour migration to rural healthcare facilities'**
Investigator's Name:	**Mr Thorsten Loeffler 1760720**
Department:	**African Centre for Migration Studies**
Date Reviewed:	**November 2018**
Decision of Committee:	**Approved**
Expiry Date:	**December 2020**
Date:	**07 November 2018**

Head of School _____

Professor Mucha Musemwa

Appendix 3 – Approval from the Faculty of Health Sciences

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

WITS SCHOOL OF CLINICAL MEDICINE

8 November 2018

To whom it may concern

Dear Sir/Madam

RE: RESEARCH STUDY – THORSTEN LOEFFLER

I hereby give Thorsten Loeffler (student number 1760720) permission to conduct the following research study in the School of Clinical Medicine:

Research Topic: 'Shortage of healthcare professionals in South Africa's public sector: an exploratory study of the clinical associate programme regarding the encouragement of internal labour migration to rural healthcare facilities'

Research Supervisors: Professor Jo Vearey (School of Social Sciences)

Yours sincerely

SCHOOL OF CLINICAL MEDICINE
7 York Road Parktown 2193
Tel: +27 11 717 2038
Fax: +27 11 717 2486
Faculty of Health Sciences / University of the Witwatersrand

Professor D. Ballot
Head of School - Clinical Medicine
Faculty of Health Sciences
University of the Witwatersrand

Appendix 4 – Participation information sheet

Participant Information Sheet (sample for students)
for students of the Clinical Associate Programme (Bachelor) at Wits University Johannesburg (Faculty of Health Sciences)

Dear (potential) participant,

my name is Thorsten Loeffler and I am a Master student at the University of the Witwatersrand, Johannesburg. I am studying "Migration and Displacement" and I am conducting a research project with the title "Shortage of Health Care Professionals in South Africa's public sector: an exploratory study of the Clinical Associate Programme regarding the encouragement of internal labour migration to rural health care facilities". It is a very important topic because most of the South Africans are dependent on the public health care system and that system is in a severe crisis – especially in rural areas. You, as a student, will also become an important part of that system soon. **One major objective of my research project is to explore the main reasons for participants of the Clinical Associate Programme to move to a rural area for work or not to mov. I also want to explore incentives that could convince Clinical Associates to change their opinion to move if they do not want. Finally I want to explore current challenges of the Clinical Associates Programme. You see that your participation does not have an immediate effect but maybe there is one in the long run.**

PLEASE NOTE THAT

1. Your participation is **VOLUNTARY** and you can **WITHDRAW** your participation at any time
2. You do not have to answer any questions that you do not feel **COMFORTABLE** with
3. You do **NOT GET PAID** for the participation and your participation has **NO INFLUENCE** on your grades or marks.

DATA COLLECTION PROCESS – What's next

You can register for individual semi-structured interviews on (date) **on campus**. These interviews are relatively open, flexible and short (only 10-15 min). I invite you to fill out a consent form if you agree that the interview is recorded.

WHAT HAPPENS TO YOUR DATA AFTER DATA COLLECTION?

After data collection the recorded interviews will be transcribed into text. Only me (the researcher) will access to the recordings and the transcribed text. I will try my best to secure anonymity and confidentiality of your data. The data will be analysed and used for the final research report.

WHAT HAPPENS NEXT?

If you decide to participate in this research project you can keep this participation information sheet and you are asked to sign a consent form for your participation and a consent form for the recording of our interview (see above).

PLEASE DO NOT HESITATE TO CONTACT ME OR MY SUPERVISOR

If you have any questions please contact me by phone at 66 310 3540 or email thorsten.loeffler@gmx.net. Of course, you can also contact my supervisor, Prof. Jo Vearey (email: jo.vearey@wits.ac.za). For questions regarding ethics contact the University REC Shaun Schoeman (shaun.schoeman@wits.ac.za; phone 011 717 1408).

Kind regards,



Thorsten Loeffler, Master Student
African Centre for Migration and Society / University of the Witwatersrand, Johannesburg

Appendix 5 – Participant Consent Form

Participant Consent Form (sample)
for students of the Clinical Associate Programme (Bachelor) at Wits University Johannesburg (Faculty of Health Sciences)

Title of research project: "Shortage of Health Care Professionals in South Africa's public sector: an exploratory study of the Clinical Associate Programme regarding the encouragement of internal labour migration to rural health care facilities"

Name of researcher: Thorsten Loeffler
Telephone: +27 66 310 3540
Email: thorsten.loeffler@gmx.net

Name of participant:

I acknowledge the following:

- I agree to participate in this research project.
- I have read this consent form, the participant information sheet and the information it contains and had the opportunity to ask questions about them.
- I agree to my responses being used for research on condition that my privacy is respected, subject to the following:
  - I understand that my personal details will not be included in the research
  - I understand that I am under no obligation to take part in this project.
  - I understand I have the right to withdraw from this project at any stage.

Name of the participant	Date	Signature
Name of the researcher Thorsten Loeffler	Date	Signature

NOTES:

- This consent form will remain with the researcher and locked in a cabinet
- If the participant agrees that the interview is recorded an additional audio consent form needs to be filled out

Appendix 6 – Participant Consent Form for Audio Recording

Participant Consent Form for Audio Recording (sample)
for students of the Clinical Associate Programme (Bachelor) at Wits University Johannesburg (Faculty of Medical Sciences)

Title of research project: "Shortage of Health Care Professionals in South Africa's public sector: an exploratory study of the Clinical Associate Programme regarding the encouragement of internal labour migration to rural health care facilities"

Name of researcher: Thorsten Loeffler
Telephone: +27 66 310 3540
Email: thorsten.loeffler@gmx.net

Name of participant:

I acknowledge the following:

- I agree to participate in this research project.
- I agree that the interview will be recorded.
- I have read this consent form, the participant information sheet and the information it contains and had the opportunity to ask questions about them.
- I agree to my responses being used for research on condition that my privacy is respected, subject to the following:
  - I understand that my personal details will not be included in the research
  - I understand that I am under no obligation to take part in this project.
  - I understand I have the right to withdraw from this project at any stage.

Name of the participant	Date	Signature
Name of the researcher Thorsten Loeffler	Date	Signature

NOTE: This consent form will remain with the researcher and locked in a cabinet

Appendix 7 - Interview guide for students (Version 1)

Where are you from? Are you coming from an urban or rural area?

What do you think why the Clinical Associate Programme has been implemented in South Africa?

What do you think about the public health care system in South Africa? If you had the option - what would you improve first?

What were the main factors for you to apply for the Clinical Associate Programme at Wits?

How did you get to know about the Clinical Associate Programme?

Did you make the decision mainly on your own to apply or did someone advises you to apply (e.g. your parents)?

What are your aims after the programme?

Would it be an option for you to work in a rural area in the public sector after the programme? If yes, why? If not, why not?

If you do not want to work in a rural area: what could be incentives to change your opinion?

Could it be an option for you to migrate to another country? If yes, why? If not, why not?

Appendix 8 - Interview guide for students (Version 2)

Where are you from? Are you coming from an urban or rural area?

What do you think why the Clinical Associate Programme has been implemented in South Africa?

What do you think about the public health care system in South Africa? If you had the option - what would you improve first?

What were the main factors for you to apply for the Clinical Associate Programme at Wits? How did you get to know about the Clinical Associate Programme? Did you make the decision mainly on your own to apply or did someone advises you to apply (e.g. your parents)?

What are your aims after the programme?

Are there a lot of Clinical Associates struggling to find a job after the programme?

Are there also jobs offered for Clinical Associates in the private sector? What do you think about that?

Would it be an option for you to work in a rural area in the public sector after the programme? If yes, why? If not, why not?

If you do not want to work in a rural area: what could be incentives to change your opinion?

Could it be an option for you to migrate to another country? If yes, why? If not, why not?

Appendix 9 - Interview guide for graduates (online survey)

Where are you originally from? Are you coming from an urban or rural area?
What do you think why the Clinical Associate Programme has been implemented in South Africa?
Do you think the implementation of the programme has been successful? If not, what is missing?
What do you think about the public health care system in South Africa? If you had the option - what would you improve first?
Where are you working now? Rural? Public? Private? Public? Urban? Other?
Do you think it is easy to get a job for Clinical Associates to get a job after the programme?
How long did it take for you to get a job after the programme? Did you get any support from the university or from other institutions?
What do you think about a compulsory community service (like for doctors and nurses) for Clinical Associates after the programme?
If you work in a rural area: what made you move there? If you not work in rural area: what could be incentives to move to a rural area for work?
Do you think applicants from rural areas should be favoured to get in the programme? If yes, why? If not, why not.

Appendix 10: Interview guide for staff members

What are your tasks regarding the Clinical Associate Programme?

What do you think why the Clinical Associate Programme has been implemented in South Africa?

What do you think about the public health care system in South Africa? If you had the option what would you improve first?

Do you think that the aims of the programme and the aims of the participants fit together? Why or why not?

How many participants are in the whole programme? How is the distribution of students who are from urban in comparison to rural areas? Are there more from urban or more from rural areas in the programme?

Do you consider where applicants for the programme are coming from in the recruitment process? How does the recruitment process look like?

Do you think it would be beneficial for the aims of the programme to favour applicants from rural areas?

Are there a lot of students who break up during the programme? If yes, why do you think so? It not, why do you think not?

Are there enough applicants for the programme? If yes, why do you think so? If not, why do you think not?

What are the main challenges of the programme? What could be improved?

Is there a cooperation between the university and hospitals from the public sector?

What do you think about Clinical Associates working in the private sector?

What do you think about Clinical Associates struggling to find a job after the programme? Could a compulsory community service (like for doctors and nurses) an option? Is there support from the university? Could a recruitment manager for graduates be an option?