An exploration of the perceived extent and quality of clinical and academic support provided to junior doctors working in peripheral hospitals in the Amathole Health district in the Eastern Cape Province, South Africa.

Dr Simon Comley

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University of the Western Cape

Supervisor: Nikki Schaay

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ABSTRACT

Background: By the end of 2022, approximately 2 500 South African doctors, having freshly completed their intern years, will have been allocated to hospitals across the country for 2023 so as to complete their compulsory year of community service training before becoming independent medical practitioners. This community service year aims to provide the first official experience of working mostly independently, and is the last phase of training for junior doctors. This programme also ensures that doctors are available in rural and under-resourced areas to supplement the existing staff complement of hospitals or clinics. Since its inception in 1998, the community service programme has had varied responses from the junior doctors and other stakeholders, but one aspect that features consistently in feedback has been the lack of clinical and academic support that they receive in their year of placement. This lack of support has implications for professional development, the retention of doctors in under-served areas, the mental health and wellbeing of junior doctors and, ultimately, for the quality of care provided to patients.

Aim: This study aimed to explore the perceptions of junior doctors placed in peripheral hospitals in a rural district in the Eastern Cape Province of South Africa about the extent of clinical and academic support they received in their community service year. It was hoped that exploring the context in which junior doctors function in rural areas, and the level of the support they receive during their community service, would assist in the development of a set of recommendations on how to improve structures that facilitate better development and support for junior doctors in the future.

Method: The study was a descriptive qualitative study. Individual interviews were conducted between November 2021 and August 2022 with nine junior doctors from various sub-districts in the district, as well as three key informants who formed part of the health system network in which these doctors worked. The interviews were semi-structured in nature and conducted telephonically. The latter means of communication was used in view of the restrictions on face-to-face contact that prevailed in South Africa at the time as a result of the Covid-19 pandemic.

Results: The responses indicated that clinical and academic support at the facilities in which the junior doctors worked was lacking or inadequate, although some junior doctors noted that they had received some useful practical supervisory and mentoring advice from a senior

doctor. The most frequently mentioned source of clinical support was visiting or on-site specialists and attendance of formal courses that bestowed a certificate or diploma. The most frequently mentioned source of academic support was regular meetings conducted via video-conferencing, specifically from a programme called the Buffalo City Amathole Medical Support Initiative (BAMSI), and various other online short diploma-based courses. Thus, it appeared that most support was provided by sources outside of the clinical facilities in which the doctors worked and much of it depended on the initiative taken by the individual doctor.

An unexpected finding was the strong need of all the junior doctors interviewed for a sense of connection with others, or a sense of community. This was provided to some extent through a network of caring doctors in the district and the tertiary hospital involved in the study. The key informants said that paying attention to the holistic needs of doctors – their clinical, academic and emotional support – helped to strengthen their resilience and played a significant role in their functioning. They believed that the provision of strong support would have direct benefits for the district hospitals and help to ensure the retention of more doctors. This aspect, though somewhat present, needed a great deal of improvement in the views of the junior doctors.

Conclusion: Given the study findings, namely, that the provision of on-site clinical and academic support to junior doctors in the study site was perceived to be poor, it is recommended that stronger collaborations be promoted between the peripheral hospitals and the tertiary hospital in the district. This would enhance the efficacy of junior doctors, strengthen their professional development and promote a sense of being supported by and connected to a wider community. It is further recommended that the feasibility of placing a family medicine specialist at each district hospital in peripheral areas be considered in the future.

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Declaration by student:
I understand what plagiarism is. This assignment is my own work, and all sources of information have been acknowledged. I have taken care to cite/reference all sources as set out in the *SOPH Academic Handbook*.

Signed by the student:  Date: 07 November 2022

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DEFINITIONS OF TERMS

Primary health care clinic: The first step in provision of health care, offering services such as immunisation, antenatal care, and treatment of common diseases. If they are unable to assist the patient they will be referred to the next level of care: the Community Health Care Centre

Community Health Care Centre: The second step in provision of health care but can also be used as a first contact for care. In addition to the services offered by the primary health care clinic the community health care centre also offers a 24-hour maternity service, an emergency centre and occasionally a short stay ward. If they are unable to assist the patient they will refer the patient to a district hospital

District Hospital: The third step in provision of health care. These hospitals support the surrounding primary health care clinics and community health centres. They have a more comprehensive collection of services such as: surgery, obstetrics and gynaecology (some including theatres to perform caesarean sections), medicine, paediatrics, mental health, clinical forensic services, and emergency centres.

Regional hospital: These hospitals provide specialist support to the surrounding district hospitals as well as more advanced treatments and investigation facilities.

Referring hospital: The hospital requesting assistance from a hospital of a higher level.

Referral hospital: The hospital that is being consulted to provide further advice or care for the lower-level hospital.

Peripheral health facility: A facility that is situated away from a large city and that is either a district level hospital or lower.

Internship: Medical internship is designed to bridge the gap between the theoretical knowledge learned as a student and the skills required as a competent medical practitioner. In South Africa it is a 2-year structured programme incorporating experience in key domains of medicine selected by the Health Professions Council of South Africa (HPCSA). HPCSA guidelines state that the clinical experience should include teaching, supervision, and competency in selected logbook procedures (Bola, Trollip and Parkinson, 2015).

Community service: A compulsory year of practice between being signed off as an intern and being registered as an independent medical practitioner. The objectives were described in a speech by the director for health in 1998, Dr Ntsaluba, as: provision of health services to all citizens of the country with a priority on underserved areas, and to provide the doctors with opportunities to develop their skills, thinking, and behaviours to enhance their future practice (Reid *et al.*, 2018a).

Academic support: The provision of medical education including face-to-face tutorials, presentations, courses, and Zoom or Skype meetings for online teaching.

Clinical support: The provision of a senior doctor physically present assisting with practical procedures or patient advice or and hands-on learning.

Junior doctor: For the purposes of this study, doctors that are either community service doctors or one year after having completed their community service.

CHAPTER ONE: INTRODUCTION

1.1 Background

South Africa is an upper middle-income country which in recent years has shown remarkable economic growth, expansion of the previously disadvantaged middle class, and increased social aid to the poor, and thus a reduction in absolute poverty (Mayosi and Benatar, 2014). This progress is important to acknowledge, especially in light of its impact on healthcare in South Africa. However, recent and longitudinal analyses of poverty trends, while showing notable improvements in many poverty indicators, also show that the inequality gap in South Africa has widened over the years (The World Bank, 2018). It has been noted that the health indicators of life expectancy and years lived with disability perform poorly compared to other middle-income countries (Mayosi and Benatar, 2014; The World Bank, 2018). Continuing poverty, discrepancies in relative poverty, disparities in the quality of healthcare, along with management issues and changes in the composition of the quadruple burden of disease, are factors that contribute to this poor performance (Mayosi & Benatar, 2014; Pillay-van Wyk *et al.*, 2016).

Some encouraging factors are advances in disease-specific treatments such as TB and HIV/AIDS, leading to improved overall life expectancy owing to reduced strain on patients with comorbid conditions. Improved life expectancy may also be attributed to an increase in the numbers of new and graduating medical students and nurses and attempts to distribute medical practitioners more equitably through the public sector (Karim, 2004; Mayosi & Benatar, 2014; SANC, 2014).

An unforeseen impediment to the growth of the economy was the advent of the Covid-19 pandemic. Globally, the pandemic has led to the deaths of over 6.5 million people to date and has widely disrupted almost every aspect of society (WHO Covid Dashboard, 2022). The effects of the pandemic in already vulnerable economies of the Southern African Development Countries (SADC) led to as many as 35.5 million people losing their jobs and a loss of roughly R1.5 billion from lower than expected growth – a setback which will take at least a decade to reverse (Oxfam International, 2022).

One of the key aspects to address in order to enhance the equitable distribution of healthcare is to improve access to healthcare (International Conference on Primary Health Care, 1978; Kautzky & Tollman, 2008; World Health Organisation, 2017). Arguably the most well-

known model for improving access to healthcare is the Primary Health Care (PHC) model, defined as follows by the Alma Ata Declaration on Primary Health Care (WHO-UNICEF, 1978):

> Primary Health Care is essential healthcare based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.

As early as 1942, the then the Minister for Health, Henry Gluckman, proposed the provision of universal free healthcare which would serve the population well; however, government policies prevented its widespread roll-out (Digby, 2012; Grant *et al.*, 2018). Interestingly, more recently, the proposal of a National Health Insurance (NHI) policy has gained momentum and has already been trialled in some areas. The NHI promises to achieve universal health coverage for all South Africans, ensuring that everyone has access to comprehensive healthcare irrespective of their socio-economic status, and promising to overturn exorbitant private sector healthcare costs (Naidoo, 2012; SA Department of Health, 2022). The proposed bill has reignited debate about the implementation of universal healthcare, what changes to the current healthcare system would be required, and whether in fact NHI is feasible with the current discrepancies in structures between the private and public health sectors (SA Department of Health, 2022).

While the country awaits progress on the NHI, great strides have been made in improving healthcare policy in the country to allow for better implementation of the Primary Health Care (PHC) model – a model that in South Africa had its beginnings in the proposal for universal healthcare (Kautzky & Tollman, 2008; World Health Organisation, 2017; Grant *et al.*, 2018).

Formalisation of the PHC model started in 1996 with a noticeable shift in emphasis away from hospital-based curative care to a more comprehensive and district-based approach to the provision of services. The PHC model was elaborated on in 2001, when guidelines were released on a PHC package along with set of norms for the provision of comprehensive PHC. The PHC model was again highlighted in 2010 with the PHC re-engineering strategy, which

aimed to reassert the comprehensive PHC approach as a central aspect of the health service, along with the district health system (World Health Organisation, 2017).

In South Africa, while the PHC approach or model was being formalised, there was concomitant development of the system through which to deliver the envisioned care – that of decentralised healthcare and a district health system (DHS) (Pillay, McCoy and Asia, 2001).

1.2 Peripheral health facilities in South Africa

Peripherally placed health facilities serve a wide swathe of the population in South Africa, providing healthcare to the most rural patients and a link to higher levels of care (Massyn *et al.*, 2020). There is no formal definition of a peripheral health facility in South Africa; however, the Rural Health Advocacy Project has suggested that such a facility is characterised by the following factors: geographical remoteness, conditions that affect ease of access, low population densities, high costs of service delivery owing to the poor surrounding economy, high cost to patients of travelling to the facility, and greater difficulty in recruiting and retaining healthcare workers because of the distances from amenities (Rural Healthcare Advocacy Project, 2021). Often the doctors staffing these peripheral health facilities, the majority of whom are based at district hospitals, are junior doctors – a term that is used regularly in South Africa to refer to either community service doctors or doctors who are working one year after their community service year.[1]

1.3 Isolation and stress, and their effects on healthcare workers

Healthcare workers stationed at such peripheral health facilities often feel isolated, professionally, academically and personally (Rajapakse, Neeman & Dawson, 2013; Grant *et al.*, 2018; Jaeger *et al.*, 2018). Studies in South Africa have shown, for example, that they feel far from urban amenities and comforts, and that they struggle with poor funding, resource limitations and, at times, poor teamwork (Longman, 2013; Rural Healthcare Advocacy Project, 2021). These experiences tend to lead to increased levels of frustration and the likelihood of these healthcare workers leaving the underserved areas (Ross & Reid, 2009; Hatcher *et al.*, 2014; Labonté *et al.*, 2015).

[1] A community service doctor is someone who has finished their six-year medical school training and has also completed their two-year internship. They are then registered as medical practitioners and are expected to complete one year of community service in a public health facility before being eligible for registration with the Health Professionals Council of South Africa as a fully independent healthcare practitioner.

A sense of isolation in any job can lead to increased stress and the risk of mistakes being made through impaired job performance (Bakker & Demerouti, 2017). Among doctors, it has been noted that with decreased levels of support there tend to be lower levels of academic competence and ability (Marais *et al.*, 2007). Multiple studies have shown the effects of isolation and stress on a variety of healthcare workers and the resultant consequences (Ross & Reid, 2009; Mills *et al.*, 2011; Labonté *et al.*, 2015). For example, when doctors make mistakes they experience a subsequent decrease in quality of life, have a higher chance of depression, decreased cognitive and emotional empathy, exhaustion and burnout (West et al., 2009). In a local South African study exploring the experiences of community service doctors, it was found that community service doctors generally felt that they grew professionally and benefited from the community placement; however, only half of them felt appropriately clinically[2] and academically[3] supported during their one-year period of community service (Reid *et al.*, 2018a).

In a comprehensive review of burnout amongst healthcare workers, particularly in critical care environments, Moss *et al.*, (2016) found that there was a 'bidirectional' flow between stress and mistakes. Their review outlines the many causes of burnout and lists its effects as posttraumatic stress disorder (among other psychological symptoms), increased rates of job turnover, and decreased patient satisfaction and quality of care. It is possible that these consequences would be felt more intensely in the context of a peripheral health facility, where the team may be small, the patient volume high, and the support minimal.

1.4 Support in peripheral facilities

Several qualitative research studies have explored the experiences of junior doctors (mainly community service doctors) in peripheral health facilities in South Africa, specifically focusing on their feelings of support, impressions of the work environment, and experience of working in such a setting (Willis-Shattuck *et al.*, 2008; Hatcher *et al.*, 2014; Jenkins *et al.*, 2015). Reid *et al.* (2018) reviewed these aspects longitudinally. Many researchers have found that support from senior doctors is a significant factor that prompts junior doctors to choose to remain in peripheral facilities (Reid *et al.*, 1999; T. Kotzee & Couper, 2006; Willis-Shattuck *et al.*, 2008; Goma *et al.*, 2014; Hatcher *et al.*, 2014; Jenkins *et al.*, 2015). In addition, the loss of one member of a small team through non-retention can have a far greater effect on the quality of service and the morale of remaining team members than in a larger facility. This is partly

[2] Referring to practical support in patient treatment and care.
[3] Referring to teaching and support with regard to the theory of patient management.

because of the many roles that peripheral facility doctors have to play (Reid *et al.*, 1999; Kotzee & Couper, 2006).

1.5 Effects of support on junior doctors

Many articles examining the support of junior doctors focus on the consequences of lack of support rather than on the positive outcomes of support. It is important to note that lack of support, dysfunctional management and poor working conditions constitute a large proportion of the reasons that up to 70% of newly qualified doctors leave the public sector, either for work in the private sector or to emigrate (Bateman, 2014). For this reason, it is highly likely that the provision of better support to junior doctors would result in better retention of doctors, better teamwork, better patient care with team collaboration and continuity, and better overall conditions of work, which would attract more doctors into the areas that are otherwise the most underserved (Manongi, Marchant & Bygbjerg, 2006; Ross & Reid, 2009; Hatcher *et al.*, 2014; Goetz *et al.*, 2015; Labonté *et al.*, 2015; Reid, 2018).

There is a lack of research on this topic specifically in the Eastern Cape Province, one of the most underserved of the nine provinces in South Africa, with very low response rates to the surveys (Reid *et al.*, 2018a; Massyn *et al.*, 2020). As the Rural Health Advocacy Project (2019) noted, less than 50% of the community service doctor posts in peripheral health facilities were filled in 2017 in the Eastern Cape Province.

The Eastern Cape province therefore occupies a gap in knowledge relating to junior doctors' experiences. This province is well worth investigating as it is consistently one of the poorest provinces, there are large underserved rural areas and it has the highest number of vacant community service doctor posts of all provinces in South Africa (Mccann, 2005; Ross &Reid, 2009; Massyn et al., 2020). Hospital managements strongly rely on these posts being filled, since many peripheral hospitals are woefully understaffed without the assistance of these junior doctors (Mccann, 2005; Ross & Reid, 2009; Massyn et al., 2020).

This study was conducted in one district of the Amathole Health District, one of the four health districts in the Eastern Cape Province, South Africa. The Eastern Cape Province has a high level of inequity of income and low doctor: patient ratios, especially in the areas regarded as rural (Mccann, 2005; Municipalities of South Africa, 2018). More than half the population reside in rural areas where there has historically been a human resources shortage, with

recurrent failures to fill doctors' posts (Rural Health Advocacy Project, 2019). The reason for this particular district being chosen as the site of the study is that there is a large regional hospital, Cecilia Makiwane Hospital, in Mdantsane, just outside East London. This hospital serves as the referral site for eight of the 17 district hospitals in the province, and has already started to become more involved in the support and supervision of junior doctors working in the district and is therefore well suited to use as the central hub from which to recruit participants.

The purpose of the study is to explore perceptions of the quality of clinical and academic support received by junior doctors in this district. The study aims to examine the lived reality of working in a health system with many challenges, providing care for the underserved rural population.

Globally, many studies have assessed the perceptions of support for junior doctors (Gruen, Weeramanthri & Bailie, 2002; Kendall, Hesketh & Macpherson, 2005; Stevenson, Phillips &Anderson, 2011). Similar studies have been conducted in South Africa (De Villiers & De Villiers, 2004; Kotzee & Couper, 2006; Stodel & Stewart-Smith, 2011; Reid, 2018). Reid (2018) conducted several iterative studies providing substantial data on the topic. There has also been much research into how different types of support affect junior doctors in multiple domains, including prevention of burnout (Stevenson, Phillips & Anderson, 2011; Mutale *et al.*, 2013; Rossouw *et al.*, 2013; Dubale *et al.*, 2019). However, no research on the topic has been conducted in the Amathole Health District, so that it remains a knowledge gap. This mini-thesis makes use of a qualitative approach to examine the experiences of junior doctors in peripheral health facilities in the district. It cover the details of their day-to-day responsibilities, the challenges of functioning in this context, and their ideas of what would constitute effective support. The objective is to gain deeper insight into the lived experiences of these doctors while serving vulnerable patients.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

South Africa is made up of nine provinces with widely differing compositions of rural and urban areas, population densities, and economic conditions (Municipalities of South Africa, 2018). One of the priority policy goals of healthcare both globally and in South Africa is that the health services will be distributed equitably throughout the country and will serve all people equitably (International Conference on Primary Health Care, 1978; Section 27 South African Constitution). However, many challenges have to be addressed before this goal can be realised; these include short staffing owing to inadequate posts being available, unequal access to healthcare owing to location and the low number of facilities in rural areas, and the need for targeted strategies to reduce the quadruple burden of disease (Daviaud, 2012; Le Roux, 2014; Massyn *et al.*, 2020). Further socio-political-economic concerns are: the inequality of the distribution of wealth and people in South Africa, the changing expectations of healthcare, the increasing burden of disease, the migration of healthcare workers, and the added financial pressures on the health system for multiple reasons, including medico-legal expenses and a health budget not increasing in line with requirements (Mills *et al.*, 2011; Stats SA, 2015; The World Bank, 2018).

Doctors and other healthcare workers are an essential part of the healthcare system, and their proper distribution and empowerment is vital to enable them to function effectively in the health system and serve the needs of the population (Daviaud, 2012; SA Department of Health, 2022). The human resources aspect of the health system has had a varied course over the years, with some provinces continuing to experience slower adaptation to increased pressures than others (Coovadia *et al.*, 2009; Mburu and George, 2017; Gile, Buljac-Samardzic & Van De Klundert, 2018; Kruk *et al.*, 2018; Massyn *et al.*, 2020). For the National Health Insurance policy to be effective, the gap in human resources for health needs will need to be filled; for this the Department of Health needs to know not only the number of doctors required, but the specialities needed in each area and facility (SA Department of Health, 2022; South African Academy of Family Physicians, 2022).

2.2 The distribution of doctors in South Africa

In terms of the doctor to person ratio, there are differences between the private sector and the public sector and between urban and rural areas. In the public sector, 30% of the doctors

serve 84% of the population, and in rural areas, 12% of the country's doctors serve 46% of the country's population (Mburu & George, 2017).

The Department of Health is responsible for creating positions for doctors in the various facilities to ensure the equitable distribution of skills and to render the best services for the areas being served (Daviaud, 2012; Reid *et al.*, 2018b). The two key points at which the Department of Health has the most influence in terms of allocating doctors according to need are when placing newly graduated doctors for their internship year (the first year after they have graduated from medical school) and when placing junior doctors who have just finished their internship and need to complete the compulsory community service year (Reid *et al.*, 2018b).

The long-standing concern about the disproportionate allocation of community service doctors to rural and urban posts was raised publicly again following the 2017 round of allocations, when it was noted that urban sites had received 'the lion's share' of doctors while rural areas got 'the leftovers' (Rural Health Advocacy Project, 2019). Following this report, the then Health Minister, Dr Aaron Motsoaledi, explicitly stated that rural areas would receive higher priority from 2018 (Rural Health Advocacy Project, 2019). Indeed, when analysing the density of medical practitioners per 100 000 of the population from 2018, one notices that there was a significant increase in the number of doctors in rural provinces such as the Eastern Cape, KwaZulu-Natal and Limpopo after that date. Closer analysis of the data, however, reveals that while the ratio of doctors in these provinces had improved overall, the placement of doctors in the province still did not fully represent a *majority* rural allocation. The urban: rural ratio was 49:35, showing that despite there being possibly a more equitable availability of posts, urban posts were filled more than rural posts (Rural Health Advocacy Project, 2019).

Analysis of the reported distribution of doctors in relation to South Africa's population size and density across districts and over time yields insights into the changing landscape of human resources for health in the country. All provinces experienced a growth in the numbers of doctors per 100 000 of the population from 2008 to 2019, with the average ratio increasing from 31.3 to 32 across South Africa (Massyn *et al.*, 2020). Interestingly, the provinces with the lowest population densities experienced some of the highest growths in ratio of doctors to population; the Northern Cape, Free State, North West Province, Eastern

Cape, and Limpopo are the five least population-dense provinces but all barring the Free State experienced the highest increase in ratios of doctors to population (Massyn *et al.*, 2020).

Unsurprisingly, there is also large variability in the ratio of doctors to population not just between provinces but within provinces. For example, in the Eastern Cape there is a clear distinction when one analyses the difference between public sector doctors per 100 000 of uninsured people in Buffalo City Metropolitan district and Amathole district; there are 70.8 doctors per 100 000 in the Buffalo City district (the second-best ratio in South Africa) but only 10.8 doctors per 100 000 in the Amathole district (the third-worst ratio in South Africa) (Massyn *et al.*, 2020). In fact, the Buffalo City Metropolitan health district lies within the Amathole district, but is far more urban (Massyn *et al.*, 2020).

2.3 The role of the district hospital in South Africa

For the delivery of comprehensive primary healthcare services in South Africa, district hospitals were selected as the nexus or central point (Department of Health, 2002). The district hospitals offer integrated medical support, outreach and managerial input at a primary care level.

The rationale for this decentralisation of health services and related management is that the managers at district level hospitals would be well positioned to understand local needs and to advocate change using their own governing structures, rather than depending on central but potentially out-of-touch governing structures which may not understand the urgency of some requests (South African Department of Health, 2002). District hospitals thus play a critical role as the support structures for primary healthcare facilities in their referral region. They act as nodes for the care and oversight of many patients, even where these patients are situated in rural areas (South African Department of Health, 2002)

In the past, concerns were raised by some hospital managers that enhancing the staffing and functioning of district hospitals – by increasing their funding – would mean a decrease in the budget allocated to primary healthcare clinics, and thus impinge on their ability to provide primary level care (Pillay, McCoy & Asia, 2001). However, the contrary effect has been reported; Pillay, McCoy and Asia (2001) noted that strong district hospitals with improved

ability to perform outreach and support services to clinics results in better health indicators and more cost-effective care if measured in cost per disability adjusted life year (DALY).[4]

As district hospitals moved more into supporting both managerial and clinical aspects of healthcare in the districts, more doctors became necessary to assist with the clinical aspects of patient care and with new programmes to improve primary healthcare. The Department's approach to meet the increased need for doctors was to sign in a bill for mandatory community service – the Health Professions Amendment Act No. 56 (Reid, 2018). This Act made it mandatory for newly qualified doctors (i.e., those who had completed their internship) to perform a year of community service in a public health facility somewhere in the country, preferably in an underserved facility (Reid, 2018). Doctors are given a chance to motivate where they would prefer to be posted, but the final decision depends on a number of factors. Junior doctors are often posted to district hospitals or peripheral facilities rather than large academic hospitals (Reid, 2018).

2.4 The role of junior doctors in district hospitals

District hospitals play a pivotal role in supporting primary-level facilities, on the one hand, and being a gateway to more specialist care, on the other (Department of Health, 2002). They provide vital outpatient care, along with 24-hours-a-day, 7-days-a-week emergency services – all within a generalist medical framework (Mulligan *et al.*, 2003). The latter includes general medicine, paediatrics, reproductive and sexual health, surgery, psychiatry, family medicine, eye care, rehabilitation and geriatrics (South African Department of Health, 2002; Le Roux, 2014). Given that a large percentage of junior doctors are stationed at district hospitals, the wide range of services offered by the district hospital indicates how much responsibility falls on the shoulders of the junior doctor (Grant *et al.*, 2018; Reid *et al.*, 2018a; Rural Health Advocacy Project, 2019).

Junior doctors stationed at these hospitals are often expected to be able to provide patients with care in all of the aforementioned domains, and when on duty after hours are also expected to cover the wards and emergency cases in all departments. This may include performing Caesarean sections – an additional responsibility that can be experienced by a newly qualified health professional as truly daunting.

[4] Disability adjusted life years refers to the years of life lived while not at full health as well as years of life lost. Therefore one DALY represents the loss of the equivalent of one year of full health (WHO, 2021).

2.5 Challenges faced by junior doctors in peripheral district hospitals

Research on the experiences and challenges of junior doctors in peripheral hospitals has been conducted internationally and locally. A Tanzanian study exploring the perceptions of medical students working in peripheral areas in Tanzania found that they were more likely to apply for and remain in rural settings if they were satisfied with their experience of their rural medicine block, including the support and teaching they received at that time (Kapanda *et al.*, 2016). A qualitative study in the UK explored aspects of the junior doctor's experience, particularly the factors that promoted their personal and career development and those that were considered obstacles (Kendall, Hesketh & Macpherson, 2005). The factors identified as promoting development were: the presence and quality of formal and informal teaching, along with learning opportunities; feeling supported; being made to feel an important member of the team; being stretched but not over stretched; being exposed to a broad range of experiences; understanding the local health organisational system and having a clear expectation of its functioning, and being well organised (Kendall, Hesketh & Macpherson, 2005). Obstacles to personal and professional development were identified as: fractured working patterns and having insufficient time with patients and seniors (Kendall, Hesketh & Macpherson, 2005).

These factors are similar to those outlined in several South African studies, which mention lack of senior support, lack of learning or teaching for professional development, the risks of burnout, feeling that management is not empathetic, and a severely increased burden of work relative to the small number of doctors employed at their facilities (Kotzee & Couper, 2006; Rossouw *et al.*, 2013; Hatcher *et al.*, 2014; Reid, 2018; Reid *et al.*, 2018b, 2018a).

These challenges are not unique to district or rural hospitals. All healthcare settings experience a variety of challenges that negatively affect the support and retention of healthcare workers, with variations in different regions of countries as well as between countries (Mills *et al.*, 2011; Prytherch *et al.*, 2013; Fabienne N. Jaeger *et al.*, 2018a).

Qualitative research focusing on the work of junior doctors in South Africa highlights what these challenges are, especially in peripheral settings such as Limpopo, the rural district hospitals of the Western Cape, and the North West Province (Ditlopo *et al.*, 2011; Stodel and Stewart-Smith, 2011; Liebenberg, J. F. (Jr) Coetzee, *et al.*, 2018; Dubale *et al.*, 2019) Further challenges are distance from amenities; distance from family; lack of support; security

concerns; and a rural allowance that is not perceived as sufficient motivation for being based in a peripheral area (Ross & Reid, 2009; Hatcher *et al.*, 2014; Goetz *et al.*, 2015; Labonté *et al.*, 2015). A later study by Reid *et al.* (2018a) revealed that additional challenges experienced by junior doctors were concerns about accommodation, and not being provided with sufficient clinical supervision, facility orientation and managerial support.

A number of national quantitative studies have also assessed the experiences of junior doctors working in peripheral facilities in South Africa (Hatcher *et al.*, 2014; Jenkins *et al.*, 2015; Reid *et al.*, 2018a, 2018b) with these longitudinal studies examining aspects of the junior doctor's experiences as they changed over time. One such study, conducted in 2009 with 685 community service doctors and dentists, found that the participants were more likely to remain in the facility of their community service placement if they were satisfied with the level of support provided by their supervisor (Hatcher et al., 2014).

Among the many challenges highlighted by all of these studies, support from senior doctors appears to be a common theme. It is clear that newly qualified doctors highly value the support and guidance they receive from senior doctors and are more likely to remain in peripheral facilities if they feel supported. Yet Reid (2018) showed that only half of the roughly 1200 community service doctors surveyed after their community service year felt that they had received adequate support during their year of service. Reid's study was conducted nationally over a 15-year period and provides significant insights into the experiences of junior doctors in South Africa.

2.6 Tested ways of supporting junior doctors in peripheral health facilities

Research exploring the experiences of peripherally placed junior doctors is an important first step in finding solutions to the feelings of isolation and lack of support experienced by junior doctors (Labonté *et al.*, 2015; Reid *et al.*, 2018a). Interventions to provide support to junior doctors in peripheral facilities have included: the provision of specialist outreach from a nearby teaching hospital for teaching and patient care (Gruen *et al.*, 2003; Grant *et al.*, 2018); inviting peripheral junior doctors to larger centres for skills training that they in turn can pass on to others at their facility (Rajapakse, Neeman & Dawson, 2013); providing further financial and housing incentives (Hatcher *et al.*, 2014); and the formation of core groups and self-supported training (Le Roux, 2014; Gaunt, 2020).

2.7 Reflections from the time of the Covid-19 pandemic

The need to improve support for junior and rural doctors, as well as medical students situated far from urban centres, has long been an area of concern. The issue was raised with particular intensity during the Covid-19 pandemic, which had the effect of fast-tracking plans to overcome the problem (Wheatley *et al.*, 2020; Venkataraghavan *et al.*, 2021, 2022; Cox *et al.*, 2022; Ramsden & Lincoln, 2022). Several studies conducted in a variety of locations such as KwaZulu-Natal (Grant *et al.*, 2018), Australia (Gruen, Weeramanthri & Bailie, 2002; Johnsson *et al.*, 2022), Brazil (Bracco *et al.*, 2016) and many others have explored solutions for overcoming the problem of delivering medical teaching to decentralised locations. Here the emphasis is more on academic support than on clinical support, but the proposed solution of well-structured and supported online teaching has implications for the support of junior doctors in remote areas.

Existing online programmes provide 'asynchronous' courses on a digital platform, where the material is available for use by the student or doctor as and when they are able to engage with it, or 'synchronous' courses, where the student or doctor has to attend classes or tutorials at set times over several sessions (Venkataraghavan *et al.*, 2021, 2022; Cox *et al.*, 2022; Ramsden and Lincoln, 2022). The feedback from doctors making use of online materials and courses was that they developed improvements in their abilities and knowledge, and that therefore it would be beneficial to run such programmes over the long term (Venkataraghavan *et al.*, 2021, 2022; Cox *et al.*, 2022; Ramsden & Lincoln, 2022).

In South Africa, the e-learning platform Knowledge Hub was developed by the National Department of Health and Human Resources Development for South Africa (HRD-SA). The platform hosts a variety of e-resources including research reports and up-to-date guidelines and protocols on relevant aspects of medical practice. Short presentations and training courses on various topics and competencies provide the practitioner with continuing professional development opportunities through this online platform (Department of Health – Knowledge Hub, 2021).

Rural Seeds, an international group forming part of the World Organisation of Family Doctors (WONCA), recognises rural doctors' need for social support and a sense of community. They initiated an innovative programme to address this need through their first 'meeting', held online in 2015 (Rural Seeds, 2022). This idea culminated in the creation of

The Rural Family Medicine Café, a social media platform that fosters networking and a sense of community among rural doctors through various virtual platforms such as Google Groups, Facebook, Twitter and YouTube videos (Wheatley *et al.*, 2020). The project was started with the aim of decreasing feelings of isolation among doctors placed in rural or significantly peripheral settings. Wheatley *et al.* (2020) found that there was enthusiastic engagement with the platform and its networking opportunities, and that participants valued the positive discussions, shared anecdotes, and inspiration they gained from one another. The initiative hosted panel discussions on topical rural medicine issues, thus also increasing knowledge among the participants (Wheatley *et al.*, 2020). Furthermore, the Rural Family Medicine Café has created in-person spaces where members can gather to share their stories and further enhance their sense of community in an environment very like a relaxed café (Wheatley *et al.*, 2020).

Innovations like these, which provide health professionals working in peripheral areas with relatively easy access to training opportunities and a professional support network, thwart, as one study puts it 'the tyranny of distance' (Ramsden & Lincoln, 2022: 122). They do, of course, depend on access to internet connectivity.

This literature review has covered the national context in which junior doctors work, characterised by budget cuts, human resources shortages and unequal distribution of doctors. The district health system was also explored, along with the heavy burden of duties that fall on junior doctors. The literature shows that junior doctors feel unsupported both academically and clinically and that more support would probably lead to greater retention of junior doctors in rural settings. It was found that junior doctors in different countries experience similar challenges with regard to a sense of isolation and lack of support. Various interventions to overcome the lack of support were discussed. It was shown that the Covid-19 pandemic accelerated some aspects of support to rural doctors and that as part of a worldwide move to online communities, innovative online ways to support doctors, both academically and socially, have been initiated.

The following chapter discusses methods employed in exploring this topic among junior doctors in the Amathole Health District.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter explains the methods used to conduct the study and the reasoning behind the choices made. The study population and sampling procedure are described in order to introduce the connection between the researcher and the study participants. The qualitative research methodology, used to elicit the experiences of the doctors, is discussed, as are the measures taken to obtain research rigour. These include means to ensure the validity, credibility, and transferability of the findings. Lastly, the ethical considerations and the limitations of the study are discussed.

3.2 Study aim and objectives

The aim of this study was to explore the perceived extent and quality of clinical and academic supervisory support currently provided to junior doctors working at peripheral district hospitals in the Amatole Health District in the Eastern Cape Province, South Africa. This involved interviews with junior doctors as well as key informants to add further to the narrative.

The specific study objectives were:

- To describe the physical context and working environments in which junior doctors, based at peripheral district hospitals in the Eastern Cape Province, work.
- To describe the typical or day-to-day experiences of junior doctors working in these peripheral health facilities in relation to their key responsibilities, their access to resources (including human resources) and supervisory support.
- To explore the key professional and personal challenges faced by junior doctors working in such peripheral health facilities.
- To explore the perceptions of junior doctors of the extent and quality of the clinical support they receive while working in peripheral health facilities.
- To explore the perceptions of junior doctors of the extent and quality of the academic support they receive while working in peripheral health facilities.
- To explore junior doctors' ideas and recommendations about how clinical and academic supervisory support could be improved.

These objectives guided the research, and helped to ascertain whether the junior doctors interviewed were likely to remain and try to improve their situations or whether they wished to leave as soon as possible.

3.3 Research design

This was an exploratory, descriptive study. The study followed a qualitative research approach as this approach yields deep insight into the experiences and situations of the study participants (Pope & Mays, 1995). The participants were interviewed based on a set of pre-determined questions; however, the nature of qualitative research allows for deviation from the interview guide and the exploration of participant's responses by means of probing questions. In this sense, interviews were semi-structured (Robson & McCartan, 2016).

The study aimed to gain insight into a topic that has yet not been explored in the study setting, namely the Eastern Cape Province, South Africa.

3.4 Study population

The study population consisted of the approximately 22 recently appointed junior doctors who were placed in the 17 district hospitals of Amathole District, Eastern Cape Province in 2021 (Personal communication: member of theDistrict Clinical Specialist Team, July 10, 2021). It is important to bear in mind that at these district hospitals there might be doctors who have remained in their posts from the previous year, and there are inevitably slight changes in the number of doctors present in any one facility during the year, with doctors arriving or leaving as the year progresses.

The study population is thus an approximate number and was comprised of the following:

- newly appointed doctors in their community service year (approximately 11), and
- those doctors who had remained from the previous year (approximately 10 – 12).

Therefore, the total population for this study was approximately 22.

Eight of the 17 district hospitals were of interest in this study as they have an existing working relationship with the regional hospital, Cecilia Makiwane Hospital, which acts as a regional referral site for these eight district hospitals. As such, it also operates as a supervisory resource

for the peripherally based junior doctors at the eight district hospitals. It is also the site at which the researcher is based.

The inclusion criteria were as follows:

- Doctors stationed at the eight district hospitals associated with Cecilia Makiwane Hospital, working either as community service doctors with more than three months experience at the facility, or as community service doctors working in the year following their community service year.

The exclusion criteria were the following:

- Doctors who are not working in one of the eight hospitals of interest, and doctors who had worked in the same facility for more than a year after their community service year.

3.5 Study sample and sampling process

Initially it was intended that one or two doctors from most, if not all, of the eight district hospitals would be sampled, in addition to one key informant in a more senior position. Ultimately nine junior doctors spanning seven hospitals and one clinic as well as three key informants were interviewed. Given that this research is qualitative in nature and focused on a fairly homogenous group (all junior doctors working at similar levels in the same district), the proposed sample size was 10 – 12, plus key informant. This number, it was felt, would be sufficiently representative of the population to yield the data needed (Liamputtong & Ezzy, 2005; Boddy, 2016). Another consideration is that the researcher aimed to collect data from at least one doctor per hospital, which would allow for data saturation with a group size that is representative – an important aspect when considering appropriate sample size as well as the trustworthiness of the results (Boddy, 2016).

The study participants were sampled using non-probability sampling, specifically convenience sampling, a sampling method that provides a researcher with ease of access to potential study participants (Robson & McCartan, 2016). This sampling method was chosen for its convenience, given that the study population is geographically dispersed across rural regions of the Eastern Cape Province, and also in view of the Covid-19 restrictions that were in place at the time of the fieldwork. Fieldwork began in November 2021 and ended in August 2022.

The initial restrictions placed limitations on physical contact and meetings amongst colleagues in the Health Department and on the travelling distances allowed.

Sampling was initiated through the researcher's interactions with junior doctors working in the eight district hospitals associated with Cecilia Makiwane Hospital, who were in Cecelia Makiwane Hospital on certain days to discuss patient care plans. They were selected because they were able to provide in-depth responses to the questions within the interview guide and were thus most likely to assist with meeting the study objectives (Sargeant, 2012). Following the completion of their medical consultation, the researcher would introduce the study to the junior doctor and request that they consider voluntarily participating in the study. If they agreed to participate, the researcher e-mailed them an information sheet explaining the purpose and nature of the study, together with a consent form which they were required to read, sign and return. Arrangements were then made for a date and time on which the researcher could contact them to conduct a telephonic interview.

The researcher aimed to continue sampling in this manner until a sufficient number of junior doctors had been recruited into the study. The intention was to ensure representativity by having at least one doctor from each hospital, both male and female junior doctors, and a diversity of doctors in terms of work history, language, race and familiarity with the local Eastern Cape context. The researcher compiled a spreadsheet containing descriptions of the study participants recruited into the study to ensure that as the study proceeded the sample achieved some degree of heterogeneity.

Eleven months into the fieldwork, the researcher had managed to recruit a total of nine doctors from facilities in the Amathole District: six district hospitals and one clinic. They spanned five sub-districts and were heterogenous with regard to sex, first language, university at which they had studied, and time spent at the facility. At this point another sampling technique was employed – snowball sampling. Snowball sampling or chain referral sampling is a 'sampling method that involves a primary data source nominating other potential data sources that will be able to participate in the research studies' (Goodman, 1961). This form of sampling was used in order to expand on the initial set of doctors, and to ensure that, with higher participant numbers, data saturation could be reached.

The decision as to whether or not data saturation had been reached was monitored continuously during the data collection process. Once the data started to show several of the key features of saturation suggested by Buckley (2022), the researcher felt satisfied that the data would be of benefit and was ready to undergo analysis. Buckley's (2022) indicators of data saturation are that certain themes occur frequently and that the set of emerging themes and sub-themes have stabilised from one interview to the next.

To contextualise and complement the interviews with the junior doctors, the researcher conducted key informant (KI) interviews. Initially, one key informant (KI 1) was felt to be sufficient – a health professional involved with the placement of junior doctors in the district and the provision of supervisory clinical support to the eight district hospitals. This KI is a member of the district clinical specialist team (DCST), comprised of a family medicine specialist doctor, an obstetrics specialist doctor, an advanced midwife, a primary healthcare nurse, and a paediatric nurse who support the facilities in the district in a variety of significant ways (Personal communication: Member of District Clinical Specialist Team, July 31, 2021). The proposed KI fit many of the requirements of a key informant: namely, able to give information about an issue from their experience (in this case as a member of the committee for district management); able to provide in-depth information not available to the researcher; and able to provide an objective overview without being influenced by outside forces (Cossham & Johanson, 2019; UCLA Center for Health Policy Research, 2021). As a senior doctor in their field this KI was trained to consider the clinical aspects of patient care, and also the best ways to engage with the community and health teams that support public health in the catchment area of the district hospital.

However, as the study progressed, it became evident that there were other important individuals in the health system working in the Amathole District who would be excellent additions to the key informant group. Importantly, their inclusion would add to the triangulation of the data being collected. Therefore, the researcher recruited two further key informants (KI 2 and KI 3) roughly ten months into the data collection process.

3.6 Data collection procedures and instruments

The data was collected by the researcher through telephonic interviews that were recorded and transcribed by the researcher. Once the information sheets had been read and the consent forms

signed and returned, the interview scheduled a date and time convenient to both the participant and the interviewer. It was felt to be likely that interviewees would be comfortable being interviewed in English (the home language of the researcher and the language that is predominantly used in clinical/medical meetings amongst doctors in the district). However, when setting up interviews, the researcher asked each interviewee whether they would be more comfortable conducting the interview in their home language, explaining that if necessary, an appropriately qualified interpreter would be sought to assist with translations. All declined the offer and interviews proceeded in English.

A semi-structured interview guide was used to explore specific aspects of the main research question, namely: 'What is your experience as a junior doctor working in a peripheral district hospital with being able to access the supervisory support that you require?'.

The interview guide included questions on the setting of the district hospital, the working environment, the size and structure of the health human resources team, the specific position and role of the junior doctor in this team and, most importantly, their perceptions of the support and supervision they had received while at that peripheral facility.

3.7 Steps to ensure research rigour

To achieve rigour in this qualitative research study, the researcher specifically used the methods of credibility, transferability and dependability (Korstjens & Moser, 2018). A brief description of each is provided below.

3.7.1 Credibility

Credibility was enhanced in this study through the use of the following three strategies:

First, researcher *reflexivity*. This means that the researcher needs to acknowledge that their own views, perceptions and attitudes are subjective. This was done, and, in line with Malterud (2001), the researcher declared his own position in relation to the study participants (junior doctors) and his role in the district health system in which the study took place. In addition, the researcher reflected on his thoughts and emotions during the data collection and analysis process (Cresswell & Miller, 2000). At times this meant noting, in the transcripts, certain thoughts or feelings that came up. In addition, the researcher occasionally shared anecdotes and empathised with the participants.

The position of the researcher in the district health system is that of senior medical officer, tasked with providing medical advice to junior doctors. The junior doctors included in the study had all had interactions with the researcher with regards to discussing patient management prior to the study commencing. This was acknowledged as the study progressed and was included in the report of the research. The researcher also kept in mind throughout the study, through reflective practice, that there were differences between him and the study subjects; he is a white male senior doctor in a specialist hospital, factors that might have influenced participants' responses.

Second, *triangulation*. Credibility was enhanced through triangulation of sources, as described by Korstjens and Moser (2018). The technique of triangulation of sources is the method of using multiple data sources to obtain a more complete understanding of the topic of interest (Robson & McCartan, 2016). This study involved multiple junior doctors as well as key informants; as themes arose during data collection, they were recorded in one document under separate headings guided by the study aims and objectives, and also by the implied emotions of the participants as they raised particular issues. These were then also compared to insights from the key informants and grouped where they overlapped. The degree of triangulation was helped by the fact that key informants' interviews occurred at different times during the data collection process; this meant that for some, themes had already been identified, and new data given by the key informants could be compared with existing themes.

Third, *member checking*. Member checking or participant validation is another means of enhancing the trustworthiness of a qualitative research study. It entails providing the participants with the transcripts and/or themes from their interviews and asking them to read through and check that what has been written is an accurate reflection of what they said (Robson & McCartan, 2016). The researcher forwarded a copy of each of the junior doctors' transcribed interviews to them to review, along with a brief summary of some of the researcher's key interpretations from that interview. The researcher requested that each interviewee check the accuracy of the interpretation and whether it resonated with their perceptions and experiences of the supervision they had received in their current work setting. The participants who responded were satisfied that the transcripts accurately reflected their input as well as some of the themes mentioned. The interviewees were later sent the completed research and asked for their opinions on the accuracy and relevance of the findings to which those who responded were satisfied and felt positive about the research.

3.7.2 Transferability

Transferability means the degree to which the research may be understood and related to. It is achieved by providing thick descriptions (Korstjens & Moser, 2018). Malterud (2001) states that no research can provide findings that are universally transferable; however, Cresswell and Miller (2000) suggest that building a thick description – a highly detailed description of the study setting, the study participants and their contexts – assists readers by giving them sufficient information to consider the transferability of the findings to another similar context. In this study, the researcher described the physical setting in some detail, and gave information on the context of each participant, to provide sufficient information for transferability.

3.7.3 Dependability

Dependability refers to the ability of an external researcher to read through the steps and methods used and to understand them from start to finish; this enables the reader to determine how the findings were derived (Korstjens & Moser, 2018). To achieve this, the researcher provided a thorough description of the background to the study, reasons for the questions chosen, and the methods used.

3.7.4 Confirmability

A vital aspect of research validity is to ensure that the collected data is captured as accurately as possible (Cresswell & Miller, 2000) and that this data can be confirmed (Robson & McCartan, 2016). To achieve this, the researcher recorded and transcribed each interview, noting in writing personal feelings and insights that arose in response to the input given. In addition, the researcher listened to the recordings several times, adjusting the transcripts where necessary. Another important aspect of confirmability is to ask probing questions that elicit further details on a particular response given during the interview. While bearing the research questions in mind, the researcher allowed the interviews to flow naturally, asking probing questions to elicit clarification where necessary. This is regarded as preferable to confining oneself to a rigid sequence of questions (Baillie, 2015). A further method to improve confirmability is to frequently refer to the study topic, question, objectives and data to assess whether the emerging themes fit into a sensible and credible narrative (Cresswell & Miller, 2000).

3.7.5 Data analysis

An interpretivist analysis was used, consisting of deconstruction, interpretation and reconstruction (Miles & Huberman, 1994; Sargeant, 2012). The transcribed interviews were analysed for key themes using the process of thematic coding, allowing for the comparison of themes across the different participant responses (Robson & McCartan, 2016). The responses were coded by examining the data inductively, a process which served as the basis of further data analysis (Robson &McCartan, 2016). After units of data in the transcripts had been coded, key themes were identified and compared across the different interviews. Relationships between the themes were sought and the data was further analysed on the basis of themes and sub-themes that emerged. Such a method of analysis is well suited to an explorative study because it allows themes to emerge from the data that might not have been considered by the researcher initially (Braun & Clarke, 2019).

3.8 Ethical considerations

Potential participants were invited to participate in the study voluntarily. If they expressed willingness to do so, they were sent an information sheet and consent form (see Appendix A and Appendix B). The information sheet and consent form described the nature of the study, assured them that the information they shared would be kept confidential, and that their identities would be protected in the reporting and dissemination of the study findings. These two documents reiterated that the junior doctors were under no obligation to participate in the study, and that declining to take part at the outset or withdrawing at a later stage would not alter the working relationship they had with the researcher, or their ability to access health information and resources from the regional hospital.

Appropriate measures were taken to safeguard participants' anonymity and the confidentiality of what they shared. Mechanisms to ensure this included the use of a coded identifier (rather than the name of participant) on each transcript and in any quotes used in the final report. In addition, all data collected during the study, including the list of coded identifiers that linked each participant to their identifier, was kept on a password-protected computer accessible only to the researcher. Paper versions of the data were stored in a locked filing cabinet and will be retained for five years, after which they will be destroyed.

An important ethical consideration in this study was the nature of the relationship between the researcher and the participants. The researcher works at the regional hospital and is responsible for providing some clinical support to the junior doctors when they call (i.e., phone) for specific medical or clinical advice, or when they refer patients upwards to the regional hospital. Importantly, the medical advice that the researcher provides to the junior doctors via telephone is different from what was being investigated, which was the nature of *on-site* support provided in the peripheral district hospitals. The study participants were informed that there would not be any change in the support provided to them by the regional hospital if they decided not to take part in the study. The fact that the researcher had a professional relationship with most of the participants and shared a similar job description was in fact deemed a positive aspect, as it meant that the researcher and participants were able to relate to one another easily. The researcher had been in situations similar to theirs, which enabled him to understand their experiences and ask appropriate questions (Hsiung, 2010). At the same time, the researcher took care not to let his personal experiences and views colour the responses given by the participants.

With regard to concerns about traumatic stories that may have come up during the interviews, the researcher advised participants that there was easy access to a free counselling hotline that could assist should the need for this service arise. The contact details were provided to all participants on the information sheet (see Appendix A).

Ethical approval for this study was obtained from the university's Biomedical Research and Ethics Committee and thereafter by the Senate Research Committee of UWC before the study commenced (Ethics code: BM21/8/12). Subsequently, permission to conduct research in the facilities in which participants were recruited was gained from the respective clinical managers or CEOs by email.

3.9 Limitations

One of the key limitations of this study is that the researcher was not able to physically visit the peripheral district hospitals to interview the junior doctors face to face in their work setting. The Covid-19 pandemic placed restrictions on such engagements and for this reason, interviews were conducted telephonically. This reduced the researcher's ability to observe the geographical contexts and physical work environments of the study participants. These are

important aspects of peripheral health facilities. However, the inability to be at the various sites motivated the researcher to pursue a richer description of the settings from the participants.

As discussed above, a further limitation might have been that the researcher works at the referral site for the eight district hospitals from which all the participants were drawn. Although this was obviously advantageous in terms of introducing the study to potential participants and being able to understand references they made to aspects of their work environment, it had the potential disadvantage of influencing participants' responses. The limitation here would be that they might have exaggerated or downplayed their responses, depending on how they felt about revealing certain thoughts and feelings to someone with whom they had a working relationship. This could be considered a type of social desirability bias, a situation that arises when participants feel they have to answer in a certain way because that was what was expected of them – a type of social desirability bias (Robson & McCartan, 2016). To counter the possibility of this bias, the researcher did his utmost to inform and reassure the participants that their responses would be kept in strict confidence and that they could withdraw from the interview or the study at any time.

Despite initial concerns about this aspect, the researcher found that the participants were very forthcoming with information, opinions and accounts of their experiences. It was only on one or two occasions that a participant hesitated before responding to a question. In such cases, it was to allow them time to come up with a euphemism for a situation, rather than because they were reluctant to speak or out of concern for any consequence.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter presents and discusses the results of the interviews with junior doctors and key informants, showing extracts from the interviews to illustrate points made. The discussion is organised according to the themes that emerged from the interviews, and are of relevance both to the participant' experiences and the study aims and objectives. The chapter begins with a brief description of the participants and key informants.

4.2 Description of the junior doctors

The participants were drawn from five sub-districts in the Amathole Health District. They all came from different facilities except for Doctors 1 and 2, who worked at the same hospital. All the doctors were South African citizens who trained in South Africa except for Doctor 3, placed at a clinic, who was a South African but trained in Poland who had spent most of his medical career in South Africa. The clinic doctor was included as he had earlier experience of working in a hospital and was also doing after-hours work at the district hospital to which the clinic referred their patients. Eight of the nine junior doctors were between the ages of 26 and 31 years, and one was in their mid-30s. Their ages were recorded but have not been placed in the table below to ensure their anonymity. Table 4.1 shows the sex, length of time at the facility, home language, and institution of higher learning of the junior doctors, together with the distance of their rural facility from the nearest referral hospital.

Table 4.1: Details of the junior doctors included in the study

	Participant Code	Sex	Length of time at facility	First language	Studied	Distance of facility from higher level hospital / estimated driving time
1	Dr 1, Hospital 1	M	1 year	English	UCT	143 km/ Two hours
2	Dr 2, Hospital 1	F	1 year	English	UCT	143 km/ Two hours
3	Dr 3, Clinic	M	1 year	English	Poland	106 km/ One hour 30 min
4	Dr 4, Hospital 2	M	9 months	Afrikaans	University of Stellenbosch	105 km/One hour 14 min
5	Dr 5, Hospital 3	M	5 months	siSwathi	University of Stellenbosch	102 km/One hour
6	Dr 6, Hospital 4	F	1 year	Afrikaans	UCT	95 km/One hour 10 min
7	Dr 7, Hospital 5	F	1 year, 11 months	English	University Free State	80 km/One hour
8	Dr 8, Hospital 6	M	11 months	English	University of Pretoria	66 km/One hour
9	Dr 9, Hospital 7	M	1 year	isiXhosa	Walter Sisulu University (WSU)	64km/One hour

4.3 Description of key informants

The key informants were three knowledgeable doctors serving in the health system in the Amathole Health District. Table 4.2 shows their primary areas of expertise to justify why they were important to include in the study.

Table 4.2: Details of the key informants included in the study

Code	Expertise and position within the provincial health system
KI 1	Consultant with an interest in clinical care as well as resource distribution, staffing and mentoring
KI 2	Consultant and lecturer teaching a wide variety of topics and advocate for mentoring and rural doctors
KI 3	Consultant specialist, trainer, mentor, head of many clinical training courses

The key informants all had extensive experience in the district and some interaction with the junior doctors and the tertiary hospital most involved with the district hospitals. They were chosen because of their interest in the functioning of the system and the wellbeing of the junior doctors in the district. Initially only key informant 1 was interviewed, in July 2022; however, as more data emerged from the interviews with the junior doctors it became clear that further triangulation of the data would be beneficial. Two additional key informants were therefore asked to participate in the study, in August 2022. The enrolment of two more informants allowed deeper insights to emerge about the situation and challenges facing junior doctors, revealing several new themes and raising interesting points that supported existing themes. All key informants were female and all were specialists in their fields, employed by the National Department of Health. Key informant 2 was further affiliated with the local university's medical school.

4.4 Themes from interviews: Junior doctors

The themes that emerged from the interviews with junior doctors have been organised in line with the aims and objectives of the study in order to provide a coherent narrative and to ensure that all areas of interest are included. Seven themes were identified, several with sub-themes that yielded further insight.

4.4.1 The physical context in which the junior doctors worked

4.4.1.1 The surroundings of the hospitals

The overall impression gained was that junior doctors in district hospitals could find themselves in a wide range of settings; setting included the slopes of a mountain alongside a river (Hospital 1), a rural area characterised by villages and farms, a small town where cattle roamed the major highway (Hospital 4), and a mid-sized town with problems of crime and concerns for safety (Hospital 2). The various settings are highlighted below through participants' responses, starting with a description of the most rural hospital.

> *So, it's a hospital in a small town that is surrounded by farming communities on the one hand, and then like, rural, sort of previous homeland communities on the other… the whole hospital is on land that runs down to the river and then if you look, it kind of goes back up towards the mountains.* *Dr 1, Hospital 1*

It's in a small town … it serves mainly lots of little villages around the area but it's quite remote and we have the bare necessities when it comes to town things. It is a small rural town in the mountains. *Dr 5, Hospital 3*

[Hospital 4] is like a small rural town in the Eastern Cape … with very busy streets, always busy with people. Normally you would have cattle roaming on the tar roads as well. But for some strange reason they also have a Home Affairs or a Traffic Affairs and some other official places as well, which you don't normally get in rural towns. *Dr 6, Hospital 4*

The town has a nice infrastructure and is quite well organised – I like it. *Dr 9, Hospital 7*

I'll say living in [city of Hospital 2] is not nice – in general for people to go and, you know, walk the streets or go for runs or go to the shops and leave their cars on the streets because it's just not a nice town … Guys that are living in the area have had break-ins … grabbed jewellery through burglar bars … I never park my car that's not in hospital grounds. *Dr 4, Hospital 2*

Similar impressions were given by the key informants, who highlighted how different the areas could be.

Your district hospitals vary incredibly – they're in very different areas and the Amathole District is very large – crossing a whole lot of sub-districts with very different kinds of population. So, while it is all very rural, town x and town y are two very different kinds of villages. This changes the nature of the hospital and we see this when interns go and work at these hospitals; they get very different impressions. *KI 2*

In terms of their proximity to higher levels of care (where specialist doctors, more advanced investigation techniques, operating theatres and services are offered) the district hospitals were fairly isolated. All required at least an hour's drive to reach the main referral hospital, with the longest distance being 143 km – an estimated two-hours' drive.

All of the participants worked in areas that served mostly rural or semi-urban communities with mostly low socio-economic-status (SES) patients. All of the hospitals served as referral areas for surrounding primary healthcare clinics which accounted for the large area from which patients could be drawn. One doctor mentioned that the patients in their catchment area were

poor and underserved – they had poor health insights and were '… happy to take whatever medical care they can get'. (Dr 3, Clinic).

4.4.1.2 Hospital premises

When asked about the hospital premises, the doctors gave a variety of interesting descriptions. Many hospitals were in older buildings with some services being run in pre-fab buildings, some with their original dilapidated brick walls, or, in the case of one hospital, a stone-walled building dating back to the 1800s. In one hospital, the patients often complained about the cold because of holes in the roof and broken windows:

> *Most of the wards … they're generally quite rundown – quite a lot of broken windows and stuff. We have quite a few patient complaints, especially in winter, that it was very cold in the wards and when it rained hard the wards leak.*
>
> *Dr 1, Hospital 1*

Even in less rural hospitals there was the perception that the premises were dilapidated, as described by Doctor 4:

> *But my first impression of the building was like, you know, really needs a good paint job. There's a lot of plaster missing. The premises itself, I mean, the grass wasn't cut and there were like, one or two trees on the whole premise and that's about the sense of it. Definitely a bit rundown and definitely lacking in maintenance. I don't think there is a department or a building in that hospital that has been really recently redone where they've like, painted or like the windows – there are some of the wards that have windows missing.*
>
> *Dr 4, Hospital 2*

This stood in contrast to Hospital 3 where the buildings were described as intact, with renovations underway, Hospital 5, where private money had been provided for renovations, and Hospital 7, where the doctor said the infrastructure was good.

Hospital premises were one part of the impression. The other part was what one might encounter within their walls; here descriptions were quite emotive. The following was a description of scenes in Hospital 2, one of the biggest hospitals in the study:

> *I think first impressions are quite poor – I remember getting there, I think it was December last year, and when I found out I got placed there… I just wanted to go have a look at what I'm in for. And I walked through casualty and I saw that*

patients were sitting on the floor and there were some, you know, there were some people that didn't have beds, they were like sort of sitting against the wall with oxygen masks on. *Dr 4, Hospital 2*

At some of the doctors' quarters on the hospital grounds there were water supply issues with occasional power outages (Hospitals 4 and 6), and some doctors reported that while the rooms had recently been upgraded (Hospital 2), the accommodation was overcrowded, with more than the allocated number of people using the facilities, since in some cases, doctors' partners lived with them. Many doctors reported problems of power outages or problems with electricity supply affecting the functioning of the hospital (Doctors 4, 6, 7, 8).

One hospital (Hospital 2) reportedly had a problem where doctors were too nervous to park their car anywhere outside of the hospital grounds for fear of crime. Doctor 4, posted at this hospital, noted that a colleague had had two burglaries from their house in a year. The participant chose, therefore, to use the salary bonus that he received to rent a cottage half an hour's away from the hospital to ensure safety and to have more pleasant surroundings. He did not feel safe for himself or his new fiancé living in that town.

Interestingly, this same doctor had this to say about the hospital itself:

... but what surprises me is, you know, you look at it and you get appalled by what it looks like but it actually functions a lot better than you think. That is sort of the surprise that I got from it because I remember sort of prepping myself for this experience towards New Year and trying, remembering what it looked like when I'd walked through the first time. And I've just, like, had a different experience to what I expected it to be – people tend to pull their weight as much as they can. And the nursing staff have been amazing, like they really go above and beyond, I mean if you compare it to the tertiary setting, the nurses pretty much run this hospital. They really are amazing. And I think that that's made a difference for me. I think the quality of care that you're giving compared to what you'd expect just by looking at it, there's a big discrepancy between the two.

Dr 4, Hospital 2

Some of the hospitals (Hospitals 2, 4 and 6) had occasional water supply issues, with one hospital (Hospital 2), in particular, experiencing two separate occasions of having no water whatsoever over the course of a weekend. This led to an emergency meeting where the doctors were told that they had to discharge all the patients who did not absolutely need to be

in hospital because the hospital could not bath the patients, change the linen, prepare food or indeed give any water to the patients.

> *We've really struggled with water, like they cut off the water to the hospital and then for a weekend – I think it had to do with strikes as well. But like, for a weekend long we had no water in the hospital. We ended up having to discharge. On the Monday we had to have an emergency meeting to say that, like, everyone that can survive without admission needs to be discharged because we don't have the capacity to bath them, we can't flush the toilets, we can't make them food, we don't even have water to give them. So, we were not doing any elective surgeries. We were not admitting patients for observation if they were in latent labour but they can come when they are like in established labour. So even something as basic as water, we had lacking. It happened on two separate occasions now with the strikes and then early in the year because of an infrastructure failure. But they do tend to try to fix it as quickly as possible. So, it's not like it's a long-standing problem.* *Dr 4, Hospital 2*

Many of the hospitals had poor cell phone reception so that doctors could not always use their preferred mobile network. This made contacting referral centres unpredictable, unless the doctors were using the one mobile network that worked well in that area. One interviewee had to drive to the top of a nearby hill to be able to participate in the telephonic interview for this study:.

> *The network at [Hospital 6] has been so bad … I'm actually sitting in my car now because it's the only place I get signal now – I'm not moving from this spot! So, we are very far out … just basic things like your network towers, only one provider – MTN – is the one that works here. So I have an MTN router but even that now, then there is cable theft, and so there's a lot of things that are not in our control … challenges that we face from, like, water issues, the electricity issues, generators and all that.* *Dr 8, Hospital 6*

4.4.2 The typical day-to-day responsibilities and routines of junior doctors

Junior doctors are expected to function as fully fledged doctors, albeit with some room for growth or extra training in Caesarean sections for obstetrics cases. The following quotes illustrate the participants' responsibilities and the roles they were required to perform. It is evident that expectations of them were high.

Yeah, so I think coming in as a comm serve – there's two comm serves placed there – and there's really no distinction that I could see between the comm serves that work there, and the MOs that have been there for longer.

Dr 1, Hospital 1

So, my role is a medical practitioner is that when I started, I was in charge of an entire ward … basically any patient that needs admission including psych, internal medicine, surgery … So, I was the treating physician in that ward if that makes sense – referring all that need referring, and treating those that need treating and discharging. *Dr 5, Hospital 3*

Literally we arrived on the Monday [day of assumption of duty], on Wednesday you're doing a 24-hour call where you will be the only doctor stationed in the whole hospital and everyone else is sleeping. *Dr 5, Hospital 3*

As can be seen from the quotes, doctors are presumed to be able to diagnose most emergency, medical, surgical, paediatric and obstetric cases up to a certain point, where they could request some advice or support. They would have to know how to perform the initial stabilisation of patients encountered in the emergency unit and prepare them for transport, which may involve intubating the patient and performing initial advanced drug management. They would also be expected to manage most of these patients, within reason for their ability and resources. Many might not be able to send the patient through to a higher level of care if the referral doctor was unreasonable or there was a large delay in transport.

4.4.3. A typical working day for a junior doctor

Of the nine doctors interviewed, one worked in a clinic where the majority of work was outpatient, being a mixture of clinic work during the day and casualty calls at the nearby hospital at night. One worked in the hospital's obstetrics department and the rest worked in wards and outpatients departments (OPD), and did casualty calls.

As reported, typically a junior doctor would start their day at 8:00 or 8:30, when some would have a morning meeting on particular days. The clinic doctor had to start earlier – at 07:30. The doctors would then either receive a handover of the patients admitted during the night by the doctor who had been on call – as in some of the bigger hospitals – or encounter the patients in the ward, with, hopefully, a good management plan written in the notes. Then the doctors would move to the wards or their area of responsibility.

The doctors generally rotated through different wards and areas of responsibility throughout the year. Most hospitals had divisions based on sex of the patients, while some had separate wards for each speciality. So, for example, there may be a ward allocated only to female patients which would include patients with medical, surgical or psychiatric problems. The facilities would have separate areas for paediatrics and for maternity. The rotations would help to ensure appropriate exposure to the varieties of patients. Sometimes the doctors could request to be in a specific ward or speciality of interest but often they would just have to go through all the rotations as prescribed to make sure the hospital was adequately covered.

The numbers of patients being seen in the wards by the junior doctors varied by hospital and the rotation to which the doctor had been allocated, but on average, Doctor 4 in Hospital 2 saw between 16 and 25 ward patients per day, and Doctor 7 in Hospital 5 saw 15 ward patients in a day but stated that the number could go up to the 30s if there was severe absenteeism and they had to cover more than one ward. The doctors in Hospital 1 said they saw between 15 and 20 ward patients in the mornings before going to work in the OPD.

On ward rounds the junior doctors would have to make complicated management decisions such as adjustments to specific antibiotics for the various types of meningitis or respiratory tract infection, or optimisation therapy for cardiac failure, or on whether to refer a patient to higher levels of care. All of these critical decisions were made more difficult by the unavailability of up-to-date blood results, which would help them to motivate for referral or simply to discuss the case with referral centre doctors. As one participant described:

> *I'm trying to treat a patient with cryptococcal meningitis [severe meningitis that is often fatal]. He's got a low potassium and I can't decide if I need to increase or decrease the dosing because I can't get the results back even within two days … the other day I had a patient with cryptococcal meningitis but we only confirmed the diagnosis after five days because that's how long the test took to come back – he did not get [specific treatment] for five days because we didn't have the confirmed diagnosis.* *Dr 7, Hospital 5*

The junior doctors would often have to decide whether it was safe to discharge a patient, if a patient wanted to leave the hospital before their treatment was complete, if was a bed shortage, or if there was a rush to get to the OPD to help their colleagues. The junior doctors would have to make these kinds of decisions mostly on their own and would get advice or input only if they specifically sought help.

The sources for help in this regard would be discussion with their colleagues (usually also at the same level) or seniors at the facility, or a doctor on call at the referral hospital. Some doctors noted that they had to consult their guidelines often, to make sure they did not make mistakes, as sometimes they were not sure that their older colleagues were up to date with the information they gave. Most of the junior doctors would work in the wards as the sole doctor in charge. Sometimes they would have nurses accompanying them, to whom they could communicate instructions for ward care of the patients, but in general they would be alone.

> *But I would sometimes just talk aloud on ward rounds, because you're so on your own. I'd like, tell the nurses what I was planning to do, just because you're just so on your own. So you're sort of like [sharing] this plan [with them to see if it] is decent because I'm explaining to the nurse my rationale.* *Dr 2, Hospital 1*

At some facilities there was outreach support for assisting with the ward rounds by specialists, but because of the large burden on these specialists, this did not occur every day or at every facility, despite the specialists wanting to help as much as they could. Key informants 1 and 3 noted that they were often involved in visiting the facilities for which they were responsible, giving advice, and mentoring. For example,

> *... sort of a bit of mentoring, so I visit once a week and [KI 3] visits once a week. We try do ward rounds with the comm serves and the interns. The other hospitals don't get visited as frequently but they are smaller. But I think I just try mentor and sort of help answer questions.* *KI 1*

Some hospitals had very junior staff, with no one having more than five years of independent (post-community service) practice or experience owing to a high turnover of doctors. One hospital had no doctor more than four years senior to the community service doctors (Dr 6, Hospital 4). The other hospitals all had a complement of mostly young doctors – community service or one year post-community service. Only a few would stay on longer than that.

The interviewees noted that sometimes they would ask for help in their ward if the ward work was taking particularly long, in order to make sure that they could get to the outpatients' department (OPD) sooner. The doctors would usually complete their ward rounds and the associated ward work by around 10:30 (Dr 6, Hospital 4) to 12:00 (Doctors 1 and 2, Hospital 1). After the doctors had completed their ward duties, they would go to assist in the OPD, which may or may not include casualty patients. There, the doctors would see outpatients who had arrived for their follow-up appointments or who were new to the hospital system

and required consultation for ongoing conditions or diagnosis of new problems, changes in management, admission, or referral to a higher level of care. In the OPD, the focus was on performing these duties and trying their best to get through the queue of patients who had arrived for appointments.

The number of patients seen per doctor per day in the OPD also varied, depending on morning duties. For example, at Hospital 7, the junior doctor would see eight to ten patients after completing his ward rounds, whereas if he were placed only in the OPD for the day, he would see 25-30 patients. The doctors at Hospital 1 would see on average 10-15 patients in OPD per day. The doctor at the clinic saw 20-25 patients on average and the doctor doing mostly maternity would see between 15 and 30 patients on average.

One doctor spoke of making arrangements with other doctors, where they would take turns having time off after lunch at roughly 14:00 (while remaining on hospital property) or working in the OPD until the work was finished (Dr 6, Hospital 4). Some of the doctors mentioned lunch but no specific time was given, and the impression from some (Dr 3, Clinic) was that there was no time for lunch.

> *So, I stay on top of the problems, then [I see] patients from paediatrics, from the consultations, from TB, HIV, maternity, and emergencies to anything that the sisters found difficult. Some of the time even if they weren't, you know, complicated patients they had to follow guidance. They'd just send patients to me. So, I was running up and down all day dealing with emergencies as well as the patients waiting outside that were difficult.* *Dr 3, Clinic*

Several doctors stated that there was a lot of pressure to finish seeing the patients either in the wards or in the outpatient department which, they felt, resulted in hurried decision making and possible decreased quality of care. Sometimes this was attributed to the sheer volume of patients or to the lack of time to ask for help from other doctors, all of whom were busy:

> *A lot of the time there's no real help – you're on your own … you don't know what you don't know, if you miss the problem, because you miss them … and obviously you're working so hard all the time. You don't really get a break. You're overworked because there's so many patients you're trying to catch up and you know you don't have a lot of knowledge to begin with comm serve …*
>
> *Dr 3, Clinic*

There was also the impression that the OPDs in some hospitals were too short staffed to deal with the volume of patients:

> *I know the OPD is overflowing. I know that OPD really struggles to get to all their patients every day. So, if you spoke to me, if you for instance, spoke to one of the guys working as from a general comm serve point of view, they'll say that they are very understaffed. They're not getting through the patients the way they're supposed to.* *Dr 4, Hospital 2*

Some doctors felt that because of the chaos and the relative youth of the doctors, they were having to make hurried decisions on what they thought would help the patients in the least amount of time.

> *It sometimes feels like a free-for-all and you do what you feel is right … and as a result with a host of young doctors – comm serve and post comm serve – we're just trying to float; we're trying our best but sometimes it feels like your best isn't enough.* *Dr 5, Hospital 3*

At another hospital the same pressure was felt in terms of managing ward patients as quickly as possible and freeing up beds for new patients:

> *Also, I think the pressure from the management was too much, because we used to see a lot of patients. So, you will find that now, you are told that there is a patient who you must have to like, discharge. I mean, you have to go to the next patient so that you finish the line. So, I think that causes some problems because at times you could misdiagnose, you know, due to the pressure that you have.*
>
> *Dr 9, Hospital 7*

During OPD consultations, the junior doctors would sit by themselves in a consulting room seeing patient after patient, doing their best to manage the many conditions they encountered. Most would have colleagues in the OPD area from whom they could get advice or assistance, but the doctor working in the clinic was the only doctor stationed there and relied on a team of primary healthcare-trained nurses to see some of the more straightforward patients.

At facilities where there was a maternity section where Caesarean sections were done, doctors could be called at any time during the day to help with the operation itself or to assist with the anaesthetic. Where the facilities were short staffed, this would mean a doctor would have to leave their ward or the OPD, which put extra pressure on the team remaining in the ward or OPD area.

The work day generally ended at 16:00 but could run later if the OPD was too full. Usually, patients who had not yet been seen or who had arrived late for OPD would have to go to the casualty department and wait there to be seen.

After hours duties were commo sources for stress. All the junior doctors interviewed were regularly on call after hours, which would involve working in casualty and covering any issue that could arise in any part of the hospital. In some hospitals, there was only one doctor on duty at such times.

> *Literally we arrived on the Monday, on Wednesday you're doing a 24-hour call where you will be the only doctor stationed in the whole hospital and everyone else is sleeping.* *Dr 5, Hospital 3*

The doctor working at Hospital 1 reported seeing on average 20 patients in casualty after hours.

However, in the bigger hospitals there could be two or even three doctors in casualty if there was also an intern present (Hospital 2). In the hospitals that provided after hours Caesarean sections, a doctor might cover the maternity section exclusively, or one of the doctors from casualty would have to go and perform the procedure.

One participant (Doctor 4, Hospital 2) had been relocated to the maternity section where he worked most of the year, therefore having quite a different experience from the others. His duties were shifted away from general wards, OPD and casualty calls towards maternity wards, maternity OPD, the labour ward and maternity calls. This arrangement resulted in the doctor in question having much more responsibility for maternity care than is normal for a junior doctor, and for performing Caesarean sections (a procedure often cited as being a particular cause of stress). It also allowed him to focus on these duties and be part of the maternity team for ongoing support.

4.4.4 Key professional and personal challenges experienced by junior doctors

4.4.4.1 Staff-related challenges

Many of the junior doctors reported that the facilities were short staffed, not only in terms of number of doctors but also number of doctors who were reliable and actually came to work and performed their duties to an acceptable standard. Several doctors reported that the lack of oversight of junior doctors and poor discipline among some was disheartening, and would lead to feelings of resentment, and even a sense, on occasion, that if the other doctors could

get away with it, they need not continue to be so diligent and disciplined themselves. The lack of oversight of doctors and the complete absence of accountability, in some cases, decreased the likelihood that junior doctors would stay in the facility past their community service year. The problem of absenteeism and issues in doctors' personal lives that impaired their functioning and the efficacy of the team really affected some of the junior doctors. Some spoke of feeling resentful and of a negative impact on their own self-perception and motivation:

> *It's a small place but you have some people that are consistently coming to work and maybe trying their best and sort of doing what I felt needed to be done. And then other people that really, potentially wouldn't come to work for weeks at a time or wouldn't be contactable on their calls or come to work intoxicated. And it felt like there was really no oversight to stop that from happening, or to sort of deal with, basically, a discipline issue.* *Dr 1, Hospital 1*

With regard to concerns like these, where the local hospital management might be struggling to work through the correct discipline procedures, doctors on the district specialist team would sit in on the meetings or discuss with the hospital's senior management how best to proceed. The District Clinical Specialist Team, or DCST, is a team of doctors in a variety of specialities who assist with clinical and academic matters at various district hospitals, according to their individual sphere of interest.

One of the key informants (KI 1) echoed the concerns that the participants had expressed; namely that the composition of doctors needs to be considered, rather than just the quantity:

> *One component is making sure that you have the right people for the right number of people for the job.* *KI 1*

The key informant went on to explain the various aspects of managing human resource challenges in the hospitals:

> *We have had to deal with some discipline issues, substance abuse or when doctors are arriving late or not arriving for calls ... we have to sit in meetings with the management and the doctor ... even suspending doctors or removing overtime from them. There are loads of times actually – senior doctors acting inappropriately and … I guess it's part of the way I've tried to make sure the comm serves are given the support because it's very frustrating when you're*

having senior doctors who are letting the profession down … we need to see if there is any dead weight. *KI 1*

This key informant was involved in a variety of aspects of the district health system; in addition to clinical and academic support, she also helped with human resource management and, occasionally, discipline issues. KI 1 said that she tried to support the local management rather than telling them what to do, and in this way to strengthen the independence of the facility's management.

There were similar concerns about nursing staff not arriving and performing their duties in the wards, with one doctor saying:

So some days you would arrive at your ward and find that none of the nurses had come to work that day. So that was – the nursing challenges were pretty immense – just no accountability whatsoever in terms of nurses coming to work … so that was very much the attitude: it is just how it is, you know, maybe we'll have staff and maybe tomorrow we won't and we'll just see what happens.

Dr 2, Hospital 1

However, several doctors also reported that sometimes a matron or the clinical manager would assist with either performing clinical duties that were not their responsibility or would phone around and make a plan to get more support in the short-staffed sections of the hospital (Doctor 7, Hospital 5 and Doctor 2, Hospital 1).

4.4.4.2 Emergency Medical Services (EMS)

Emergency Medical Services (EMS), the ambulance service, was often cited as a challenge in the hospitals. Numerous strikes caused delays in the care of patients booked for specialist investigations, and affected emergency cases who had to be transported from casualty to a higher level of care. Two doctors explained:

And we currently have an EMS strike, so we can't refer patients anywhere, basically. So now we are sitting with DKAs [a diabetic emergency], we're sitting with HHS [a diabetic emergency], we're sitting with patients on ventilators … even women in labour and you can see the little foot sticking out!

Dr 5, Hospital 3

They [EMS] basically went on strike so regularly, like … I don't know if I'm exaggerating when I say 50% of the year they must have been on strike and not

like a proper strike … what they call a 'go slow'. So, everyone comes, they sign in to work, but the ambulances won't drive for the day. And because, you know sometimes patients have waited quite some time and you know, maybe they're finally going for their CT Abdo [a specialist investigation at a tertiary hospital] or whatever it is. And it feels like so many things have gone right for the patient to even get to that point: Like they were seen in OPD, they weren't sent away, someone appropriately saw that they needed something further and then just to arrange it the patient was willing to go or arrange to come back on the day … and then EMS wouldn't drive. *Dr 1, Hospital 1*

Key informant 1 said that she used her network of junior doctors on a WhatsApp group and her connection with EMS to liaise between the doctor needing to arrange transport and EMS to speed up transport time and ensure support for the doctor dealing with the emergency patient:

And then we set up a WhatsApp group for emergency services. As soon as they've got a transfer from their hospital to a different area they would post. So this is all the doctors; they would post a message about referring a patient. So, we can just help sort of speed up those things. We might send a message and say, 'Have you run IV fluids or have you done this?' and then we try and help with the liaising with EMS and try sort of help them with clinical decisions.

The doctors know they can phone me and if there's a problem with ambulance communications or a patient isn't accepted at a referral hospital, then they've asked us to get involved. *KI 1*

One doctor acknowledged that sometimes the EMS team would make a plan to arrange for an ambulance to drive all the way from East London – a journey of over 100 km – to fetch a patient who was an emergency and transport that patient to a higher level of care.

And also, I mean the EMS guys, like, for the most part, were decent guys. And you know, I think they had some real grievances and largely relating to not being paid and stuff. So, it was just a bit of a terrible situation. We were often helped out, to be fair, by the EMS guys in East London. They would maybe send someone all the way from East London to come pick up a patient or they would authorise, like, a private ambulance to take someone. So often, actually, for acute emergencies they would make a plan. *Dr 1, Hospital 1*

4.4.4.3 The referral system

The functioning and difficulty of facilitating referrals affected all the doctors. The difficulties mentioned mostly related to doctors at the referral centres not understanding the context in which the district hospital doctors worked or the referral doctor not knowing the referring doctor. Pre-existing relationships between referring and referral doctors seemed to help a great deal in facilitating referrals, as in the case of Doctors 1, 2, 4 and 7. Here the referral was facilitated partly because the referring doctors had prior experience of a similar situation, and because the referral doctor knew that the referring doctors had exhausted all other options before calling for advice or to send a patient. This was the case for Doctors 4 and 7:

> *The rest of referring patients has been easy. And I think what helps is the fact that I know quite a few, know most of the doctors, and I know the referral system through to [hospital] and I've got an idea of what the wards look like so I don't … I try my best not to be unreasonable and the patients I've sent, and because they know me, I tend to not get flak from them.* *Dr 4, Hospital 2*

> *I don't know if it was just me, but I feel like I can pick up the phone and phone MOPD and I thought it was just me because I had been an intern there.* *Dr 7, Hospital 5*

Other doctors reported that ease of referral seemed to hinge on which doctor was on call at the larger hospital. This aspect seemed to have to do with the individual doctor's understanding of the district context. Several doctors specifically mentioned referral doctors requesting a battery of tests or a more updated test panel to be done and to call back with these results. This would create a delay of sometimes two days for patients who might need help quite urgently.

One doctor in particular (Doctor 5, Hospital 3) spoke at length about the difficulties he had encountered, outlining certain interactions that showed how challenging referrals could be:

> *In terms of the referral itself, I just feel the tertiary hospitals need to understand the context of where we are. I think sometimes they might be a little out of touch …*
>
> *I would discuss with internal medicine, not because I want them to take the patient but because I don't know what to do. I don't know what to do. So, some of them will take it as 'Okay no, that's fine doc, I mean, let's – let's try and sort you out.' But that was just a few. For the most part the others would be like: 'Why are you calling me about this? You guys should be handling this yourselves and doing this*

and that.' They don't have the context of what we're working with, what we have what we don't have … and especially complex cases and complex internal medicine cases.

Some doctors would just order a battery of tests and then anything more than the basic blood tests would be sent to East London and would delay care. It felt like the doctors asking for a lot of blood tests were just trying to get the referring doctor off their back because then they would only be able to talk to the next doctor on call.

And so if you literally tell me to do a battery of tests, its off your case now because if I call again I'll be calling someone else as well. So it's just a nice way of getting rid of us. I think sometimes, I don't think they have a context … and that's why whenever you phone [the hospital] and say I'm doctor So and So from [Hospital 3] there's a sigh.

And any delay in referral may cause the patients to not return because they don't have the finances or lose trust – people don't have much. We are the district base – they have nowhere else to go. *Dr 5, Hospital 3*

The issue surrounding referrals to higher care often related to the availability of blood tests and whether they could be done timeously. Sometimes the referral doctors would not understand this:

So, yeah, the lab stuff [slow turn around – sometimes they would only get the result back the next day] makes life very difficult and probably one of our main challenges in terms of referrals was that we'd have a patient with a condition and they'd say, 'Well, just monitor the bloods six hourly.' *Dr 2, Hospital 1*

I feel like a lot of doctors haven't worked in rural, they don't know what it's like to work in rural where we don't have resources. I feel like a lot of doctors don't understand. When you're on call it's just you and its hectic. You can tell on the phone who is empathetic regarding your situation and who isn't. I think forcing doctors to work rural would change their perspectives – they would understand where they are coming from. *Dr 7, Hospital 5*

The key informants were aware of the problem of referral doctors not fully understanding the context:

I think it definitely, definitely improves relationships and referrals and ultimately patient care when you have an awareness of what is happening on the other side. And you would be less likely to say, 'Oh repeat the FBC at lunchtime and tell me what the results are' – but you as the referring doctor know they'll only be back tomorrow. *KI 1*

4.4.4.3 Resources: Equipment and availability of machines

Access to equipment, medicines and point-of-care blood gas machines seemed to be lacking at many of the hospitals. The concern with the blood gas machines (machines that run tests to detect abnormalities in the acid base balance in blood as well as other components within minutes) was common, being reported by all doctors.

The reason the doctors wanted access to the machines was probably because the machines could give information relevant to immediate management of patients and for making decisions about and motivating for urgent referrals; the referral doctors would often insist on very recent blood test results. The biggest problem with the machines, though, was that even if a facility had one on site, it needed consumables to run. These consumables are very expensive and depend on a reliable supply chain management structure. Therefore use of the machines needed to be planned rationally, depending on facility level and patient burden. KI 1 was aware of this challenge:

I think in the last year the financial situation has definitely affected things. We had blood gas machines at some of our hospitals and now we haven't been able to get, because of the financial situation, we haven't been able to pay for cartridges [a component of blood gas machines] … I think it's balancing all of these things – say we're going to get some money to buy cartridges, but we'll send them to [Hospital 2] first because they have a higher volume or turnover of patients. *KI 1*

Access to blood laboratories for tests was a problem at some of the peripheral hospitals (Hospitals 1 and 5 particularly), with one hospital having to send their blood samples off by 10:00 each morning because the laboratory was 200 km away. The transport for taking the blood samples also did not run on weekends. This led to severe stress and issues with blood test turnaround times.

[Talking about transport for bloods to off-site laboratories]. I'd taken bloods on a premi [premature baby] which was very difficult and the transport for blood

specimens had come early – at half past nine instead of 10. And I'd seen them and I said, 'Please, please wait for me. I've got this tiny premature baby, they're very sick, I need to do these bloods. Please wait,' and rushed to do it. I got the bloods and rushed back out. And the transport guy had left! I was so angry. I was so angry! And I made a huge scene and I eventually called him back when he was already on his way to [town] which is where we take our blood, which is about 200 k's away, so that was a real low moment. So yeah, the lab stuff makes life very difficult. *Dr 2, Hospital 1*

However, Hospitals 2, 3, 4, 6, 7 had on-site laboratories, although some of their laboratories had problems; for example, some could only do certain basic tests and for the rest, the blood had to be sent to a larger centre, as one of the doctors explained:

We have a basic lab. It does FBCs and U&Es and that's the main bloods they do, and then everything else is sent to East London. So, if you're going to order a whole set of, what's the word now, specialised tests, and then say I should discuss with you when I have the results of those tests back. That basically just means I must call you back in a month and for the most part, some of those patients will not be alive. *Dr 5, Hospital 3*

Other resource concerns mentioned included bed space shortages, consumables being stocked in incorrect areas, and a lack of space to provide a safe place for admission of patients for the mandatory 72-hour psychiatric observation period (Hospitals 2 and 7). The doctor reporting this issue (Hospital 2) said that there had been incidents involving mentally ill patients attacking nursing staff. In these cases, the doctors had no choice but to hold the patient in casualty to monitor them and ensure that they and the other patients were safe. This was a difficult situation because the psychiatric patient could become agitated, interfere with other patients, and impede the work of the doctors and nurses and be a danger to themselves.

4.4.4.4: No standardisation of care

Several doctors mentioned that there was no set standard of care for the patients presenting at the hospital. This would be frustrating, because one might admit a patient and devise a certain plan, but the care given would turn out to be entirely different from what had been planned. One doctor (Dr 1, Hospital 1) said it was 'luck of the draw what happens to you when you come to the hospital'. Others (Doctors 2 and 7) felt that the lack of standardised care was disheartening and even factored into their decision of whether or not to stay on at the

hospital. They reported that it felt that at times that whatever one had done for a patient initially was just overturned by the next doctor, so that there was no real direction in patient care. In many cases the next doctor might even discharge the patient.

Three of the doctors (Doctors 1, 2 and 7) spoke about the possible advantages of a facility-specific handbook. Such a handbook would be tailored to the resources available in that facility, and would guide care for specific pathologies, describing a standard of care for specific conditions. They compared this to the guidebook made for Zithulele Hospital in the former Transkei. This facility has a history of being very community oriented, with close mentoring of junior doctors by senior doctors who stay for years in order to provide ongoing support.

While the key informants did not mention facility-specific guidelines, KI 1 did mention that they tried to organise orientation with new junior doctors. At this orientation, they would give them general guidelines on treatment for the various conditions and advice on how the referral structure worked, providing further guidelines in an ongoing manner over the course of the year. KI 2 felt that facility-specific guidelines could be developed with a motivated team of junior doctors and a compatible, enthusiastic leader or clinical manager.

> *... you need leadership and I think that's where having a specialist in each hospital helps with – they understand systems and QIP [quality improvement projects] and all of that. That will help that to happen.* *KI 2*

4.4.5 Personal factors that affect junior doctors: Isolation

A few of the doctors reported feeling isolated in their district hospital, being far from friends and family. Doctor 3 had moved his family with him to the rural area and reported that they were under strain because of the isolation:

> *I mean, obviously, if you've got family, there's amenities in the bigger cities. There are all these things that you know – it's very difficult to answer that question because academics is not it's not the only thing. You have to think about your family, your kids, your wife, your extended family. But yeah, I mean, obviously, it allows a better environment to work.*
>
> *Don't get me wrong. I love rural medicine. I always wanted to go out, you know, even to the bush, it doesn't really matter to me, but within reason for the family.*
>
> *Dr 3, Clinic*

Another doctor had recently got married to a partner who worked in the nearby town, which helped alleviate feelings of isolation. There was a husband and wife pair who supported each other and had wanted to undertake the adventure of rural medicine together. Another two doctors (Doctors 4 and 5) were engaged to their respective fiancés who were second year interns who had yet to be placed in community service, and so they were still planning where to go. Again, the sense of connection with a partner was supportive, but in some ways sharpened the sense of isolation. One of the doctors who had recently become engaged said that he did not do much in the town outside of hospital duties, and when he did stay in hospital accommodation, he would get home, close his door, and remain in his room until the following day. This doctor highlighted how important a sense of community was to young doctors.

> *I wouldn't mind sticking around in a hospital like [Hospital 2] but I think it's just because of the town that it's in … so, my fiancé and I are planning on applying at [another rural hospital] where they have more of a sense of community, you know?* *Dr 4, Hospital 2*

The key informants acknowledged that the situation of staying in a rural area could be challenging, depending on where one was situated and at what life stage the person may be:

> *So, the biggest things that makes a difference in whether doctors stay is actually lifestyle. So can I live in this town is the question a doctor asks himself, too. For example, [Hospital 2] which has got quite a lot of crime incidents in the town itself is or has no movies. The malls are not that much fun to go to really, so you'll find young doctors who come there might actually* enjoy *doing quite high-end medical stuff for two or three years. But once you want to get married and settle down, unless you're from the area itself and you've got family and you live in one of the surrounding rural villages – then you might be tempted to stay. But other than that, that makes it difficult to retain.* *KI 2*

4.4.6 Clinical support available to junior doctors

4.4.6.1 On-site support through colleagues

Many facilities were short staffed even though the facility organogram was filled. Unfortunately, there was not enough funding to get more posts allocated. This was often cited as one of the reasons that junior doctors struggled with workloads and were sometimes left in charge of a ward; the facility could not afford to have more than one doctor in any one area,

besides OPD, casualty and maternity. This put a lot of pressure on the junior doctors, with one community service doctor reporting that he had been told by one of his seniors:

> *This is a district hospital – you either swim or you sink.* *Dr 5, Hospital*

Another doctor stated that their senior management tried to arrange that the first few calls for after-hours work for the year at the facility were done by doctors already working at the facility, thereby easing the new doctors into the workings of the hospital. A larger hospital also arranged that on most nights, there was a combination of a senior doctor and a junior doctor on call. One doctor said that they were thrown straight into the deep end and were even put on call the first or second day after arriving at the hospital.

Most doctors reported that their senior doctors were available to answer questions but one doctor, in particular, felt that there was an element of 'the old guard' among the senior doctors who were resistant to change and who would sometimes scold the junior doctors. He was told, 'You know nothing! You guys coming from your fancy internship hospitals think you know everything.' (Doctor 5, Hospital 3).

This junior doctor said that attitudes like this were really alienating. As a result, he felt he had to do everything, with no mentorship, under tremendous pressure. When he reached out because of having to run an entire ward by himself and care for critically ill patients, he got the feeling from the senior doctors that they were saying, 'Ah, you do what you must – if they demise, they demise.'

Other quotes regarding the lack of senior support in clinical decision making reflected the dire situation in which some junior doctors find themselves when, for example, working in the wards:

> *So, no oversight at all, no one would review your work. No one would review discharges. No one would review anything you did. Sometimes there was just a clinical associate running a whole ward by themselves.* *Dr 1, Hospital 1*

> *I would sometimes just speak to myself out loud while on ward rounds to see if my management plan made sense. Sometimes I would try to explain it to the nurses but they would just look at me confused.* *Dr 2, Hospital 1*

With regard to clinical support from their seniors:

> *Hey, to be honest man – there was none!* *Dr 9, Hospital 7*

The clinic doctor felt particularly isolated, exclaiming:

> *There was no clinical support – ah, man, I was alone.* *Dr 3, Clinic*

The theme of poor senior support at some facilities was noted in several interviews, with the junior doctors stating that the young doctors who moved away left a skills vacuum. The value of junior doctors remaining on at their facilities and the impact of their loss was mentioned by both junior doctors and key informants:

> *So that was, there's just a high turnover of the clinicians. So, a lot of the more experienced medical officers all left and so now there is no opportunity for upskilling from the current doctors that are there. So then obviously, as a result, now you lose a lot of skills. No one is there to try to teach you all, in fact, just to ask for advice so you end up using outside help. You call in favours from the previous hospital you were in.* *Dr 5, Hospital 3*

> *Because I think one of the worst frustrations for my job is every given year you start off with where people are from baseline, develop them to a certain level, and then they all leave and then the next year, you're back to square one.* *KI 3*

> *It's now three years, four years that, you know [Hospital 7] team is very stable, [a separate, not-studied Hospital Z] team is very stable, [Hospital 2] team sort of, you know – most people have been there, even though they're young. They have been there, you know, for the past three years or so, which really helps in terms of mentorship of the new interns that are now going to the district hospitals and it does transfer the skills.* *KI 3*

Some doctors said that the lack of clinical support from their seniors drove them to rely on favours from their internship hospital departments, or from friends in fields of interest, or, in one case, even calling their old university professors. Other doctors had slightly better experiences, where they felt that they functioned well as a team, albeit a fairly junior team, where they could bounce ideas off each other. Some doctors said that they felt there was always someone they could ask for help.

> *When working in casualties there is normally one other person on call with you … so there's always someone at least to ask for help or to bounce ideas off. So I think in general, there is good senior support.* *Dr 4, Hospital 2*

But there were the other doctors as well. So, the doctor population actually is quite young or relatively quite young. So, if we had an issue with – so they don't really have old doctors, so they were all keen to help. So, if you did have an issue then at least amongst each other, we could ask as well try and guide each other through. And if something were to happen on call you can always ask your clinical manager. *Dr 6, Hospital 4*

4.4.6.2 Off-site support for the junior doctors or the hospital

The Amathole District has a very involved District Clinical Specialist Team (DCST) with two doctors (KI 1 and KI 3), in particular, making a special effort to visit most, if not all, of the facilities whenever they can, and some on a very frequent basis. Having specialist doctors physically present at the hospital, even if just for short amounts of time, gave the junior doctors opportunities to discuss difficult patients or even obtain assistance with some aspects of clinical care. This was a great help to the junior doctors. These DCST members went beyond this and in fact ensured that all of the community service doctors received some kind of special welcome to their district hospital experience; they also distributed guidelines, alerted the junior doctors about training courses to build their skills, and even ran some of the training programmes themselves.

KI 3 ensured that the junior doctors had opportunities practice performing Caesarean sections, running a variety of on-site drills to improve their skills and confidence in maternity emergencies. They also assisted with consultation on ward rounds for the maternity patients, facilitated training for the junior doctors' wanting to write their diplomas in obstetrics, and even went out of her way to upskill a community service doctor to the level where he could now run a colposcopy [a gynaecological investigation/intervention] clinic by himself. This junior doctor had been very involved in obstetrics over the year and had achieved a great deal in his nine months of community service. He spoke highly of his interactions with the obstetrician as part of the DCST:

(KI 3) is the specialist for obs and gynae and she's been an absolute superstar, man – she comes through once a week to do some colposcopy clinic, ward rounds, and then she'll want to spend some time cutting [Caesarean sections] with the comm serves … she has this thing where she wants all comm serves to be comfortable cutting Caesarean sections by the end of year.

And I can call her anytime day or night – she doesn't mind discussing these things with me, she'll rather let me call her if I'm not sure about something so that she can give me advice …

I don't think you can get specialists like that that are that passionate about district medicine … but I don't think it's a popular position because they [the DCST doctors] have a large burden of work and are maybe not always appreciated. I think that she really feels the weight of any poor maternal outcomes on her shoulders … I'm sure if you look, if you look at the numbers, I don't know, you'd see the improvement of maternal care in our district because of her.

Dr 4, Hospital 2

KI 1 was deeply involved in the human resources side of the district, engaging with community service doctors even before they arrived on site at their new jobs to ensure a smooth transition. She was able to re-arrange the placements of doctors to ensure that no hospital was particularly understaffed, she assisted with moving doctors to specific facilities as needed for personal reasons, and in one case had to transfer a radiographer to another hospital because they had been placed at a facility where the X-ray room had not yet been completed.

This doctor also visited facilities to do ward rounds and assisted with complicated patients in a variety of disciplines, helped with facilitating referrals to specialists, and, through the network of two WhatsApp groups, ensured that all the community service doctors were aware of upcoming training opportunities. Almost most usefully of all, she co-ordinated patients and EMS to speed up arrangements for the transfer of patients. Some of the quotes regarding this DCST doctor included:

And she came through and sort of met us newbies in like our first month there and sort of said that, you know, she was available to sort of give us some degree of support. She put me in contact with HOD of Paeds at Frere and she was willing to, like, supervise me as a remote diploma candidate … And then I was able to write the diploma which was, yeah, which was a very positive experience.

Dr 1, Hospital 1

She was always available to help with any of the general aspects of working as a comm serve doctor – she formed a close bond with me. *Dr 3, Clinic*

So, what does help, every now and again, KI 1 comes on a Tuesday. She's quite involved with asking, you know, 'Is there anyone in the ward that you want me to

see? Is there anyone in the wards you want advice on?' She goes to the paediatric ward for instance, and walks through the paediatric patients on the ward and does a ward round there and then she goes up to the medical wards and if you've got a few patients that you're unsure about, you discuss it with her. So that's cool, but on a day to day, they have very limited, very limited supervision up there.

Dr 4, Hospital 2

If there were any cases that I needed to talk to a specialist about I could call her to get advice and if she did not know then she could put me in touch with the right specialist … And then just from a general point of view, [KI 1] is amazing – I know I can pick up the phone and call her anytime. *Dr 7, Hospital 5*

KI 1 was passionate about her work, and described some of the aspects of her job:

We just try to do a welcome at the beginning of the year … give guidelines … keep in touch about courses that are coming up … try to be available for any concerns after hours, too.

We want them to have a really great year where they grow as clinicians and they learn to be good managers of resources as well as good clinicians … We definitely support and encourage them and I always say to the doctors even if you only ever spend one year in a district hospital, and you go the next year, and you go to specialise, hopefully the experience you've had in in a district hospital will open your eyes to the challenges and make you a lot more sympathetic when someone is phoning you. *KI 1*

4.4.6.3 The combination of on-site and off-site clinical and academic support

A programme called the Buffalo City Amathole Medical Support Initiative (BAMSI) aims to improve support, specifically for internal medicine, in the two districts. The programme was designed to cater for in-reach (where doctors from peripheral hospitals visit the tertiary hospital for a week and involve themselves in all activities and teaching in the Medicine Department) and outreach (where the doctors from the tertiary hospital visit the peripheral hospital to help with ward rounds and teaching). It is also engaged in the development of an online repository of resources for managing conditions at district hospitals.

As part of the programme, doctors from the tertiary hospital visited one of the district hospitals, with the ward round involving a lot of teaching. This bolstered the junior doctors' sense of

support in their clinical work; however Covid-19 interrupted plans for further on-site visits, and at the time of writing this study report, BAMSI was mostly involved in teaching through regular Zoom meetings. These meetings have been very well received, and are discussed further under 4.4.7.2, since they form part of the academic support of doctors.

4.4.7 Academic support available to junior doctors

The responses regarding academic support indicated that there were two types – on-site academic support and off-site academic support. The impression from all the participants was that there was very little in the way of academic support, particularly at facility level. Usually, if support was required, the junior doctors would call colleagues, try to attend courses for further enrichment, or do self-study:

> *I haven't had support from that point of view – it's sort of been up to me to make myself feel supported.* *Dr 6, Hospital 4*

4.4.7.1 On-site support

The feelings about on-site academic support were that there was little of it and, in some facilities, academic meetings had fallen away owing to Covid-19 restrictions and had not yet been 'resuscitated', as one doctor put it. A doctor who is particularly passionate about learning (Dr 8, Hospital 6) felt that he was stagnating with regard to academic input and stimulation. He said that he used to learn a lot by 'being grilled on ward rounds'. Another doctor said that while he had gained in clinical ability, he was losing critical academic skills:

> *... this feels like career suicide ... for my career it feels like this is time lost.*
> *Dr 5, Hospital 3*

Some facilities arranged teaching at patient hand-over times when a doctor was handing over their patients from the night before to the day team. This provided the opportunity for the team to discuss the case and for anyone with more knowledge than the rest to give input. In one facility they had managed to resuscitate their academic programme and held continued professional development (CPD) meetings every Friday with doctors (including interns), the allied health practitioners, and the radiographer. This helped a lot with academic stimulation and continued academic growth. One doctor said that at their facility it was really useful to have interns and medical students rotating through their hospital, because it meant that there was an extra emphasis on teaching and training.

One facility employed a family medicine doctor who would run academic meetings, support the doctors clinically and academically, and do teaching rounds every day.

> *And then the other thing is now with [family medicine specialist] we started these shared rounds where we just like on a Thursday, any interesting cases that we have just to learn from, just take like learning points out of what … something interesting just to share so that the next person also knows.* *Dr 8, Hospital 6*

Sometimes exposure to academic input would depend on the enthusiasm of the junior doctor. At some facilities the junior doctors tried to run morbidity and mortality (M & M) meetings to assess any correctable issues that may have arisen in a case with a poor outcome; at another facility, the doctor had to drive about half an hour away from his base hospital to attend an academic meeting, only to return later to an OPD overflowing with patients.

The visiting doctors from the DCST would also provide teaching and training on academic subjects and there were several facilities (not all) where the clinical managers would encourage junior doctors to go on training courses or do diplomas. This was for both the doctor's own benefit and for the value the doctor could bring to the rest of the team by imparting what he or she had learned. Some hospitals placed a big emphasis on this, ensuring that the doctors attending the courses received all the academic time they could. The understanding in these cases was that the doctors would pass on their knowledge.

> *When one [a training course] comes up, they choose one doctor and one comm serve to go, and I was lucky to be the comm serve. So, they do this assuming that they might stay on until the next year.* *Dr 4, Hospital 2*

4.4.7.2 Off-site support – BAMSI

Many of the participants spoke highly of off-site support programmes, particularly of Buffalo City and Amathole Medical Support Initiative (BAMSI), the Rural Onboarding Programme, and the K2 Obstetrics course. BAMSI will be discussed more fully below. Regarding the Rural Onboarding Programme - the initiative provided the enrolled doctors with free updated guidelines on all the medical conditions they were likely to encounter at district hospitals, webinars presented by senior specialists on pertinent topics. The K2 course is arranged by the district obstetrician and provides international-quality online courses on a variety of essential obstetrics-care topics – support that is invaluable in improving knowledge on maternity care.

The BAMSI course is run by doctors based at the main tertiary hospital in the district and comprises weekly presentations on relevant medical conditions and their management at the district level. The junior doctors felt that this course enhanced their knowledge and, importantly, gave them a sense of connectedness to the other district hospitals and to the tertiary hospital.

a) How BAMSI supports the junior doctors

The BAMSI programme was mentioned many times by the junior doctors. All commented on what an asset it was for their learning for their sense of being 'part of something bigger'. It gave them the sense that they were 'seen' as doctors in an otherwise vast and daunting environment:

> *We obviously had BAMSI … was also quite cool, actually. Just in in that our whole team sat down together in the morning, which was just good for sort of teamwork and team morale actually … and it was sort of, I guess, gave the impression that there's a whole district out there … felt a bit more like we were, I don't know, like plugged into something more than just our little tiny hospital and all its issues and that's obviously besides the, like … academic teaching and stuff was also cool and I learned a lot through the BAMSI tuts. But more like making it seem like there was a bit of a community in the district.* *Dr 1, Hospital 1*

> *So just academic support, we had BAMSI, which was wonderful, mostly in that it connected us to our referral hospitals and made them feel like, I don't know – we know them and they know us and there's some connection here … to get teaching was wonderful. So, I can't emphasise how good BAMSI was, in terms of that sense of like you're not on your own. And the hospitals that are taking our patients actually care about what happens to them before they get there. Again, like a sense of there are standards actually in place, and what those standards are, so that was very cool for academic support.* *Dr 2, Hospital 1*

> *If you if you have a problem – you kind of have to read up on it yourself. But what helped a lot with us as well was the BAMSI meetings which happened once a week, which was amazing, to try and like make sure that we follow guidelines and are up to date with what's happening. So that was kind of, I think, our main academic support, was the BAMSI meetings.* *Dr 6, Hospital 4*

> *Other than that like, academics, academics wise, like, it's something that that's what I'm missing, to be honest … at least that's why BAMSI is really helpful,*

because you're like, it feels like it's been a long time that we've been out of it.

Dr 8, Hospital 6

b) Experiences of the rural onboarding programme

KI 2 provided a good overview of the rural onboarding programme. It involved six weeks of a baseline provision of resources every week on important topics, and webinars to assist with more interactive learning. This gave participants in the course a repository of webinars available afterwards to use as needed. KI 2 noted an interesting fact about the rural onboarding programme:

So at the moment, that's a six week programme that runs at the beginning of every year, during February and March. It is aimed at and open for all new community service officers to join but the last one … we had 183 doctors that joined this year. And I think 83 of them were community service officers and about 70 were medical officers. *KI 2*

The rural onboarding programme comprised a set of lectures and electronic resources tailored to be relevant to rural hospitals as well as other levels of care. Those who joined the programme found it very useful:

The rural onboarding programme was absolutely fantastic and to see how the guest lecturers responded to questions from rural doctors regarding difficulties in managing specifically orthopaedic patients without X-rays, etc. The programme was absolutely fantastic and I really want to see it run again. *Dr 7, Hospital 5*

Here the doctor also mentioned that the orthopaedic specialist was taken entirely off guard when the doctor from this facility said that they did not have after-hours access to X-rays to assess fractures.

The input from participants on this topic suggested that there is indeed interest at all levels in ongoing learning and indicated the efficacy of online or off-site digital learning. Other off-site academic support boiled down to doctors attending courses, undertaking diplomas, calling colleagues or discussing academic aspects with referral doctors. All of these were ad hoc, while BAMSI and the rural onboarding programme were integral to the experiences of all junior doctors.

4.4.8 Junior doctors' recommendations to improve clinical and academic support

The suggestions for improving clinical and academic support mostly revolved around improving on-site support. Other recommendations made were: providing resources for guidance at facilities, improving incentives for rural employment, ensuring that appropriate doctors are employed, and preparing interns for the realities of working in a district hospital setting, with all the challenges that this entails.

4.4.8.1 Improve on-site support

Many doctors said that having more frequent visits from specialists would help a lot with support of both clinical and academic aspects. This support should not be limited to ward rounds; some doctors would like there to be outreach from the tertiary hospital to provide occasional elective operating days, where several patients all requiring the same operation could be prepared to go on the same day and the specialist would train the doctors on how to do the procedure. For example:

> *... you'd have outreach teams from the tertiary hospitals coming down to the district hospitals. Whether it is to do, maybe they, say, make a urology slate and then they're going to come and do those circumcisions and whatever they're going to do. So, outreach from the tertiary hospitals, ... because I feel that would be so invaluable. Because we don't learn enough stuck here. Also, I think it's also something that could aid already senior medical officers here who are very resistant to change. When someone actually comes from the tertiary hospitals we are constantly referring to [them] as they are more up to date in their knowledge, and then they can teach us. They can show us ... we can have rounds with them and stuff like that. So that's one thing I think that would definitely help a lot.*
>
> *Dr 5, Hospital 3*

Some doctors felt that more regular visits would assist with not just teaching new information but also with correcting incorrect ideas for management that may be prevalent in, as Dr 5, Hospital 3 put it, 'the old guard'. The visits would also assist the tertiary level doctors to understand the district context. The doctors said that the visiting doctors need not necessarily be consultants – even registrars (doctors training to become consultants) could assist with teaching and support by providing a different point of view and being on the ground with the district doctors.

Another suggestion discussed was that of having a dedicated family medicine doctor allocated to each hospital, where they would be responsible for most of the support at the

hospital. KI 2 mentioned that there may be a plan in progress for this, but that it had some way to go. When the idea was mentioned to one of the junior doctors, he said:

> *I think it would be really ideal to have a guy as a family physician come in and not be bound to a specific ward or specific kind of job. That shouldn't be – you shouldn't be doing a favour by coming to the ward or checking out these patients – the job should be on a Monday I do male medical and Tuesday the female medical on a Wednesday do paediatrics, like he does ward rounds, and then wherever they are needed from that point forward they go and help out, you know. That way you sort of know, that's the guy that's also involved in academic stimulus in the morning because he's obviously the most qualified and it's not to say that he has to run the academic programme, but he supervises it. So if someone wants to ask a question about a protocol, he's the one to know … that would be amazing, man.*
>
> *Dr 4, Hospital 2*

This idea was also strongly advocated by KI 2 who had recently been involved in discussions with the South African Academy of Family Physicians, who felt this would be a major benefit for district hospitals for many reasons. KI 2 was passionate about the topic and outlined many reasons why this would be of value:

> *… having a family physician in every district hospital, and you can make it the clinical manager post, must be a family physician so it doesn't change how much it costs for the government. And then you have a specialist in the hospital, which creates oversight for your junior doctors and your high turnover of doctors coming through. They're ensuring the quality of care, they do all the training in house, and it reduces massively the referral length, right? Because instead of having to use specialists outside the hospitals, like when, for example, to do ultrasounds or do sort of more specialised investigations, they can happen within the hospital without having to send the patient on, which is also cost effective. So that's one of the big things we're going to advocate for. Except we don't have enough family physicians for all these posts but we've got a plan. KI 2*

Also to do with permanent support in hospitals, some doctors felt that having DCST doctors in a variety of fields visiting the hospitals would be of great benefit – specifically for fields such as internal medicine and psychiatry. The experience with the two DCST doctors already mentioned really inspired the doctors, with one saying that what would make the biggest difference would be

… having leaders like that [KI 1 and KI 3], that are passionate about not just medicine in the district but also making sure that they are educating and supporting the junior staff. *Dr 4, Hospital 2*

4.4.8.2 Resources available to doctors

Some doctors mentioned that resources such as facility-specific handbooks would be useful. One mentioned that having some resource to ensure that no stock-outs of medication or equipment occurred would streamline the functioning of the hospital. Many doctors reported needing better and more equipment to provide care to patients, but acknowledged that the shortage was due more to a lack of funding than anything else.

4.4.8.3 Incentives for working in a rural place

According to the doctors, the rural allowance – a bonus on top of one's normal salary for working in a facility deemed rural – was sporadic and did not necessarily make sense. One doctor said that incentives needed to be in place because it is difficult to be a doctor in rural areas and to have one's family there, too:

Incentives. The problem is nobody wants to work in a rural area because it sucks, and so it's not the best place and there's lots of travel involved. *Dr 3, Clinic*

This doctor, along with others, felt that a large problem with working in peripheral facilities was that some doctors did the bare minimum. They seemed more interested in collecting their salaries than in doing the work.

… also a better process for choosing the right doctors – because if it's people coming just for the money then leaving, there will be no real structure in general but definitely no support. *Dr 3, Clinic*

In fact, some doctors were grossly unprofessional and required multiple disciplinary meetings. This led to low morale in the other doctors who were trying to maintain a good work ethic. One doctor articulated the problem as follows:

I also think another thing about exactly what you're saying, that you feel like someone else is fulfilling, should be fulfilling the same role as you, and they really aren't – it's then that you become quite resentful of work and there were a lot of days I felt like I didn't want to go to work. And it's not really because of the work or the patients or the hospital, but just because you know you feel like your colleagues are getting away with murder and you almost feel a bit entitled to do

the same yourself, which makes no sense because you know, you're also there being paid to do this job, you know. But if someone else can skip two weeks and there's no consequence, then you feel kind of like, okay, but if I go in an hour late then like, you know, I'm really entitled to that and actually you really aren't. But I don't know … you can get into quite a resentful and bitter space in your head.

Dr 1, Hospital 1

4.4.8.4 Prepare interns for the realities of district medicine

One doctor remarked that he noticed how interns he had previously met who performed well in courses almost had a change in their persona when faced with working in a district hospital:

So you can just see like, some like really sharp interns, but like, you can just see as soon as they are put in a situation where … as soon as that comfort zone is like breached, then it just becomes a different ballgame altogether … you can just see their whole persona change … Like, I really think something like these mentors and having someone to speak to about … that they're not alone that it's what happens to everyone, we all go through the same thing. It seems like some people just know how to manage it better or how to deal with it a bit better.

Dr 8, Hospital 6

KI 3 felt that having medical students rotate through the district hospitals as part of their training and interns rotating through the district hospitals improved their resilience and decreased their fear of district hospitals.

We're also hoping that the fact that your interns, the second year interns, rotate through a district hospital, that it lessens their fear of going to a district hospital without consultant in-reaches or support. We're hoping that through this exposure … it will be better and more of them will be keen. *KI 3*

KI 1 and KI 2 also spoke of the importance of empowering junior doctors through mental and emotional support in addition to the clinical and academic support. They felt that this would lead to more confident and competent doctors.

So, I think there's … I like to focus on what makes people thrive. So, what is it that makes somebody … feel like something is their calling? Like is it the job that they're doing is their calling, and then you're doing something that you feel is your calling, then you're actually fine. So that must overlap – the one is to feel

competent in what you do. Secondly, that you're adding value to the world out there, that you're making a difference. And thirdly, that you're appreciated for what you do.

And interestingly, if you look at good clinical mentoring, what happens is that doctors feel competent in what they do because there's always backup. So you're always learning, you always feel there's somebody that helps you … you never feel like you're out of your depth. You can manage a patient well because you've got this safety net. You know, you're making a difference – that's easy. And then the third one is this appreciation … of actually having somebody that sees what you do and giving you the thumbs up every now and then and patting you on the back and that emotional support of, 'You are adding value.' All of that creates conditions that can thrive in rural healthcare, making it more likely that they're going to be retained, more likely that they're going to stay in medicine and that they're not going to burnout. *KI 2*

I think if you have doctors who feel supported, they're definitely more likely to just be happy doctors. They work with the nursing staff, they work with the surrounding clinics, just on a very unmeasurable basis. It just feels that there are warm fuzzy feelings and things seem to go much better. I think doctors who feel that they can get involved, they can make some great changes. So I think it's always good to get people involved in what they're passionate about. *KI 1*

The findings in this section show that the junior doctors struggle overall with lack of clinical support, particularly on-site, but also when discussing patients with referral doctors at larger hospitals. The findings also show that the academic support available to them is more comprehensive than the clinical support, involving regular online meetings, online resources and formal courses.

As data collection and analysis proceeded, it became apparent that the mental or emotional component of junior doctors' placement in rural hospitals was relatively unexplored and yet critical for the success of the placement. Feelings of isolation, of being misunderstood, and the need for mentoring to improve mental health and enable better performance emerged as critical aspects of their placement.

A doctor reflecting on her year having been placed in one of the most rural hospitals of the doctors within this study provides some insight into the experience of working in a rural hospital and the bittersweet feelings that can accompany this:

"Yeah, our reception was incredibly warm. The nursing staff and patients were, we were welcomed with open arms. Almost slightly desperate, you know, like, 'please stay. You know, the doctors always leave you know, please stay.' you know, just so hard. So incredibly hard.

And feeling like in our year of community service, you know. We felt like we really were able to make significant impact. And it's quite amazing in the sort of, sort of district hospital space, you know, you sort of deliver a baby and then you do the Caesar and then in the paeds ward, when you follow them up, and then you know, you see the mum, you see the family, you know, you really get to know community. So there was quite great actual continuity of care in a lot of ways. Yeah, and it felt like actually the work we did there was very worthwhile - incredibly difficult, but it did feel like you were you were able to make a difference.

And we sort of felt like we would either need to commit, you know, for five to ten years, you know… it wasn't something that we could you know, this would have to be a career choice that we stayed. So there was that sort of feeling. But yeah, I was very sad. I was very sad to leave.

Yeah. Yeah… very sad and also very relieved…" *Dr 2, Hospital 1*

4.5 Themes from interviews: Key informants

Key informants gave valuable information that supplemented the information given by the junior doctors.

4.5.1 Perceptions of the functioning of the district hospitals over time

Key informant 1 explained that over the past five years, support for junior doctors in rural hospitals seemed to have been improving, and that it had taken a great deal of shuffling of people around, made trickier by the fact that funding was decreasing. She also said that the DCST had to ensure not only the right number of doctors in posts but also the right people for the right number of people for the job. She said that DCST would look at doctors in hospitals over time and fast track any disciplinary issues that arose. This would ensure that 'dead weight' was removed, giving new doctors the chance to be employed in rural settings to refresh the team.

The second key informant (KI 2) was also aware of the problem and said that delays in appointments could cripple a hospital if they were already under stress. The services a facility could offer depended on the number of doctors available – for example, after hours Caesarean sections.

The third key informant (KI 3) said that one way they have gone about trying to cover the call (after hour duties) rosters of the larger facilities has been to involve doctors from smaller facilities to do their calls there. This would free up doctors to assist with, for example, Caesars. However, she also noted that owing to the lack of theatre time, possibly owing to shortages of staff and/or Covid-19, there had been a decrease in the number of junior doctors able to confidently perform Caesarean sections, which, she said, was a pity and a problem for the maternity services.

With regard to her perception of the functioning of district hospitals over time, Key informant 2 said that this was difficult to comment on, specifically because each hospital had its own context and patient load. 'The one side is the burden that the hospital carries. And then the other side of it is how well the hospital is managing that burden.' She added that she felt that the district was performing remarkably well for the amount of resources that went into it – particularly with regard to consistent provision of services like ARV and TB programmes.

4.5.2 Support structures currently in place

5.5.2.1 On-site

It emerged from interviews with key informants that one of the main on-site support structures was the District Clinical Support Team (DCST). Key informant 1 provided a good overview of its role. The DCST visits facilities, does weekly ward rounds, promotes perinatal meetings, performs mini-audits to assess functioning of staff, and even gets involved with discipline issues. The DCST often has to assist as part of the discipline/rehabilitation processes for doctors who may have been having problems with professionalism, personal lives or substance abuse. The DCST also supports clinical managers, who in turn support the senior doctors. In this way, the DCST supports the doctors who support the junior doctors.

Another support structure was the rotation of registrars through the district for decentralised training. Several registrar types were mentioned, but there was a focus on family medicine doctors because their training prepares them to be competent in a variety of disciplines. Key informant 3 compared the practice of registrar rotation to the Western Cape, where all of the

various disciplines rotated through the district hospitals, which helped a lot with training of the on-site doctors. Key informant 2 felt passionately that having a family medicine doctor employed permanently in each district hospital would go a long way to improving clinical and academic support, as well as management of resources and networking with tertiary facilities.

The on-site support structures that are prescribed fall into two categories: managerial and clinical. The managerial side deals mainly with HR issues, while the clinical side is run by the clinical manager. A clinical manager can be anyone from a medical background with sufficient experience in a managerial role. However, the provision of support specifically to junior doctors depends a lot on the personality of the clinical manager. Key informant 3 said:

> *And then I think with the clinical managers, where the managers have been stable and mature and have good people skills, there was better retention in the institutions.* *KI 3*

Key informants 1 and 2 also said that support structures and supportive experiences for junior doctors was often better where the senior doctors and clinical managers were enthusiastic about such support, and where there were more frequent visits from the DCST.

4.5.2.2 Off-site

The off-site support structures mostly consisted of electronic resources, regular training webinars, online courses, and a large repository of online materials to enhance learning. The only issue with these resources is that the onus is on the junior doctor to access and interact with these materials. The other type of off-site support was discussions with seniors/colleagues at other facilities.

> *I guess I'm involved with BAMSI, trying to see what the needs are of the district doctors and then feed that back to the BAMSI group so we can have appropriate types of topics. We also we also have a 'Funda Friday' – I think you know about that. So we try to get information that is relevant. That's more at a training facility level, but we try and expose the comm serves to things like ESMOE, IMCI training, some of the diplomas and courses that they might want to get involved in.* *KI 1*

Key informant 1 also mentioned the WhatsApp group for junior doctors, which was useful in cases where a doctor had a patient needing emergency transfer, as they could seek help from

the DCST and get specialist advice on how to stabilise the patient while awaiting transferral. The DCST member would also help with getting transport more quickly.

All the key informants mentioned the regular courses or lectures that were made available to junior doctors, such as the Rural Onboarding Programme, Global Surgery, the K2 obstetrics course, and the Knowledge Hub. All of these provided participants with up-to-date knowledge. Some have self-assessment and CPD points attached for objective and recognised measurement of knowledge advancement.

The drive to encourage junior doctors to pursue diplomas on various topics is also a form of off-site support. Through these courses, district-level doctors supplement their clinical experience gained in the facility with input on more complicated cases at the tertiary level. The DCST helps to make it easier for clinical managers and junior doctors to attend these courses by providing study time when needed.

DCST also tries to run a community service doctor orientation in East London at the beginning of each year, lasting five days. It covers different programmes, how to refer patients, where to obtain guideline resources, and every other aspect that will prepare junior doctors for the year ahead.

4.5.3 The effect of good support structures on junior doctors

Key informant 1 felt that well-supported doctors are more likely to work as a team, more likely to engage with the rest of the hospital, possibly even initiate training programmes in the hospital, and more likely to stay on after their community service year ended. There was a lot of feedback about how community service doctors who were in a ‘good space’ mentally would improve the functioning of wards, largely through their improved relationships with teams and improved doctor-nurse relationships. The excerpt from KI 1’s interview given under 4.4.8.4 is relevant here.

> *I think if you have doctors who feel supported, they're definitely more likely to just be happy doctors … work with the nursing staff … work with the surrounding clinics, just on a very unmeasurable basis. It just feels that there are warm, fuzzy feelings and things seem to go much better. It's easier to trust when someone else is sick and do their call on the roster.* *KI 1*

Key informant 3 felt that better support for doctors in the district would lead to more support for interns rotating through the facilities, which would in turn lead to a lower level of fear

about being placed in a district setting for their community service year. This key informant went on to say that this kind of support to doctors would empower them to work confidently, even where few consultant visits were possible. Not only would it overcome the reluctance to work in rural settings, it would mould both the doctors and indirectly, the interns, with regard to their competence and critical skills for any career direction they might take. Ultimately it would strengthen and empower established doctors to support new junior doctors as each cycle of new doctors moved through their facilities. KI 1 added that well-supported doctors were more likely to stay on at their facilities

4.5.4 The effect of well-supported junior doctors on the health system

Key informants 1 and 3 said that when junior doctors felt supported, they were more comfortable and empowered to give of their best and work well with the rest of the hospital team. They may also want to start or revive training programmes for nurses and fellow junior doctors. They may be motivated to provide better resources for the education of patients and their families. When junior doctors are well supported, they develop the confidence and will to go further than the basics, which would ultimately improve treatment of patients, interactions with the community, and eventually, the district healthcare system.

> *We want them to have a really great year where they grow as clinicians and they learn to be good managers of resources as well as good clinicians, because you don't have a CT scan at your fingertips, so you've got to make that decision. And also communicate clearly.* *KI 1*

All three key informants said that well-support doctors interact better with all aspects of hospital life and leave the hospitals with an appreciation of the challenges of working at district level. If a doctor has been working in a supportive environment, they are also more able to develop empathy and understanding of the issues in and among facilities. Key informant 2 spoke specifically about doctors being able to develop independence where they receive some level of support; the knowledge that someone is nearby to help if needed gives them the confidence to exercise independence.

Key informant 2 highlighted that the goal is not just for junior doctors to survive their job but thrive in it – in other words, to gain a sense of calling through the experience of serving in a district facility. This is a concept aligned with the views of David Isay, who says that the three factors essential for performing well in any job are: feeling that one is making a difference, feeling competent in the job, and feeling appreciated for the work (Isay, 2016).

One can easily see how these factors could all be improved with good support structures and mentoring of junior doctors.

> *… doctors feel competent when there's good backup … you know you're making a difference – that's easy. And the third one is the appreciation of actually having somebody that sees you and giving you a thumbs up every now and then and a pat on the back – that type of emotional support that you are adding value. All of that creates conditions that can help a junior doctor to thrive in rural health care and more likely that they're going to be retained, that they're going to stay in medicine, and that they're not going to burn out by the time they're done.*
>
> *KI 2*

4.5.5 Key informants' recommendations to improve clinical and academic support

The recommendations for improving the support of junior doctors included HR aspects, in-reach and out-reach relationships, and a dramatic redesign of the functioning of the health system. The proposal was that the health system should be designed to enhance skills development and retention, improve the growth of junior doctors, and improve oversight of district hospitals. A focus on these aspects would result in better doctor support and ultimately in better patient care.

Key informant 1 recommended improved training and leadership mentoring. She stated that the skills of district hospital managerial teams could be improved if they were supported in all aspects of their responsibilities. She gave the example of a hospital that had three different acting CEOs over a two- or three-year period. In such a situation, the incoming CEO would need advice, and here the DCST could act as 'institutional memory', helping with continuity and guiding the CEO in the initial months of their work. Guidance could take the form of clinical assistance, assistance with HR processes, and leadership styles. Key informant 1 also suggested that junior doctors should follow the appropriate discipline and complaints processes at their hospitals if they had concerns, and only once they had exhausted these should they contact the DCST. This would allow for due process to be followed and strengthen awareness of their concerns.

The suggestion of having more frequent consultant visits to the district facilities came through strongly from all three key informants. KI 1 and 3 were particularly interested in fostering relationships between the district hospitals and tertiary hospitals, where in-reach for doctors would enable them to gain experience at the tertiary hospital and then return to

disseminate their new knowledge at the district hospital. The more advanced experience and training at the tertiary hospital could be incorporated into the doctors preparation for writing a diploma if they were interested.

KI 1 felt that an excellent idea would be to develop some form of financial support for doctors wanting to do diplomas, with diploma courses partially or fully paid for, depending on whether or not they passed. There could also be an agreement between the tertiary hospital and district hospital to 'absorb' a district level doctor after they had worked for a few months in a district. This would mean that the department receiving the doctor would get a doctor with some experience, while the doctor would gain valuable experience in their field of interest while preparing for the relevant diploma. They could then return to the district facility to complete their contractual obligations and impart their knowledge and skills. This would require the HR department to be more dynamic and would raise some logistical challenges, but these were deemed fairly easy to overcome. The idea holds great potential and could go a long way to breathing more dynamism and growth into the placement of doctors in district facilities.

Along similar lines, KI 2 felt that encouraging doctors to participate in the Knowledge Hub platform would result in much better knowledge and skills acquisition. Knowledge Hub is a repository of short courses that one can do online and earn certificates for. She added that awarding CPD points for completion of these courses would help improve the competence of junior doctors.

The idea of having family medicine doctors posted in the district hospitals came up strongly among the key informants. Not only could family medicine registrars rotate through the district hospitals, doing a large portion of their training at those sites, each district hospital could have a permanently posted family medicine doctor who acted as the facility specialist. KI 2 felt particularly strongly about this idea. The thinking was that a fully trained family medicine doctor could provide much of the clinical, academic and managerial support needed by doctors in these facilities. KI 2's words quoted under 4.4.8.1 are relevant here.

> *… having a family physician in every district hospital, and you can make it the clinical manager post … must be a family physician, so it doesn't change how much it costs for the government. And then you have a specialist in the hospital, which creates oversight for your junior doctors and your high turnover of doctors coming through. They're ensuring the quality of care, they do all the training in*

house, and it reduces massively the referral length, right? Because instead of having to use specialists outside the hospitals, like when, for example, to do ultrasounds or do sort of more specialised investigations, can happen within the hospital without having to send the patient on, which is also cost effective. So that's one of the big things we're going to advocate for. Except we don't have enough family physicians for all these posts but we've got a plan. *KI 2*

Continuing on the theme of family medicine, KI 2 also felt that if doctors were comfortable in their roles at district hospitals but did not plan on specialising, they could be encouraged to do the diploma in family medicine. This would equip them with skills and empower them to practise a more family medicine-oriented type of care. Doctors who passed their diplomas could qualify for an increase in salary – another plan that would require creativity from the HR departments.

4.5.6 Hopes for junior doctors

Key informant 2 said that she would really like to see more retention of doctors. This would mean better skills retention and teaching for the next group of doctors. She also wanted junior doctors to be more comfortable in asking for help, and to feel that they would be supported when they did so. She mentioned that sometimes when doctors are struggling, they do not want this to be known so they fail to reach out – this, she said, could lead to a cycle of depression, lack of growth and an increased sense of isolation.

Key informant 1 wanted community service doctors to enjoy their year in the district hospital and feel that they were in a good space for personal development.

The emphatic hope for junior doctors from all key informants was that they would be more prepared for their time in district hospitals, that they would not feel isolated, that they would receive support in a variety of ways, grow as doctors and thrive wherever they found themselves. This would result in their becoming strong, competent doctors who could then, in their own way, be the support for junior colleagues who later joined their team.

Yeah, so I think our aim is, from a professional point of view, we want to say to this group, we want the same quality of care given to our patients in rural communities as they do next door to Frere [the tertiary hospital in East London]. We want you guys to be advocates for that care. And delivering that level of care despite the different environment. *KI 1*

With regard to the initial study questions, the findings from the junior doctors and key informants yielded insights that answered the questions.

The following chapter discusses these findings in depth, linking them with theories about what it means to work in contexts such as these. The comments of both the junior doctors and the key informants are used to deepen understanding of the medical-social-mental environment in which these doctors practice.

CHAPTER 5: DISCUSSION

In this section the researcher expands upon the main themes discovered in the interviews and compares them with relevant findings in the literature. The major themes that emerged from the data were: the relationship between isolation, context, and team work; the roles of junior doctors and their experiences of workload, stress and burnout; key challenges experienced by the junior doctors; the lack of clinical and academic support for junior doctors; the positive effects of being provided with support.

5.1 Introduction

The purpose of the study was to explore the experiences of the junior doctors with regard to clinical and academic support, and in so doing to gain insight into their context and perceptions of life and work as junior doctors in rural or district hospitals. It is hoped that the findings will provide the public health service and fellow public health practitioners, human resource managers and other decision-makers with important insights into the reality of the work experiences of junior doctors in a district in the Eastern Cape Province of South Africa.

Overall, the findings with regard to the provision of clinical support were that there was little on-site support or it was not provided in a form that the doctors found useful – which resulted in their seeking support elsewhere. The support that junior doctors found most useful was that provided by visiting specialists. Unfortunately, since the specialists were stretched thin and their visits were few, they could not be the first port for the junior doctor who sought help. Hospital 6 had recently had a permanent family medicine specialist posted to the facility. This person was a strong form of support, appreciated by the junior doctor and generally felt to be of great benefit to him and to the facility.

The findings related to academic support showed that many on-site academic programmes had fallen away during the Covid pandemic and had not been reinstated at the time the interviews were conducted (November 2021 – August 2022). The academic support provided on-site consisted mostly of morning meetings or discussions with seniors and the visiting doctors who would do training sessions with the doctors. The bulk of the academic support provided to junior doctors was provided off-site through Zoom presentations by the tertiary hospital, through online webinars run by a variety of organisations (for example the Rural Doctors' Association of South Africa), through courses run over several weeks, and/or

through online courses that the junior doctors identified and enrolled in by themselves. In-person off-site academic support took the form of attendance of accredited courses such as Advanced Trauma Life Support, Paediatric Advanced Life Support and Advanced Cardiac Life Support. These were reported to be extremely useful, with diploma programmes on HIV, Paediatrics or Obstetrics and Gynaecology also being valuable sources of skills and knowledge advancement.

In the interviews with the key informants, novel ideas for improving on-site clinical and academic support for the junior doctors were shared with the researcher. These included the posting of permanent specialist positions in district hospitals – specifically family medicine doctors.

An important but unanticipated finding was the role that senior doctors, and especially the doctors on the District Clinical Specialist Team (DCST), played in providing not only academic and clinical support but also emotional support. This finding is an important consideration in our understanding of the needs of junior doctors and the kind of support they require when working in stressful situations. When one considers the context in which they work, it becomes clear that emotional support is essential. It assists them to manage their overall health and wellness, their efficacy in the workplace and their resilience over time, and can make the difference between staying on at the facility after their compulsory year ends or leaving as soon as they are able to.

5.2 The relationship between isolation, context and team work

It is important to bear in mind the geographical and physical context in which these junior doctors work in their year of community service, or shortly thereafter, for those who choose to stay. All the facilities were situated in rural or isolated towns, most were fairly run down, with leaky roofs, unpainted walls and broken beds, and many had water and electricity supply issues. Not unexpectedly, the geographical isolation led to delays in transport (sometimes for critically ill patients) and delays in receiving equipment and laboratory samples. The isolation also required visiting support teams to travel long distances to provide input and feedback to the junior doctors.

The sense of isolation experienced by the junior doctors was not only geographical in nature, but also emotional or social. Some reported feeling that they were literally working alone if other doctors in the team were felt to be giving less than their best. Several interviewees –

both the junior doctors and the key informants – reported problems with absenteeism, unprofessionalism and, in some cases, substance abuse by fellow doctors. One junior doctor described how unprofessional teammates affected him:

> *I also think another thing about exactly what you're saying, that you feel like someone else is fulfilling, should be fulfilling the same role as you, and they really aren't – it's then that you become quite resentful of work, and there were a lot of days I felt like I didn't want to go to work. And it's not really because of the work or the patients or the hospital, but just because you know you feel like your colleagues are getting away with murder and you almost feel a bit entitled to do the same yourself, which makes no sense because, you know, you're also there being paid to do this job, you know. But if someone else can skip two weeks and there's no consequence, then you feel kind of like, okay, but if I go in an hour late then like, you know, I'm really entitled to that and actually you really aren't. But I don't know ... you can get into quite a resentful and bitter space in your head.*
>
> *Dr 1, Hospital 1*

This interviewee noted that he was not the only one affected by unprofessionalism and the poor attitude of fellow doctors. It was clear that the entire team was affected, too:

> *... and I think for some guys that that actually just happened to them, you know, they were like totally decent clinicians and decent people and then they just felt like, okay, but if this [other] guy's gonna, you know, get away with this, then I should get away with something too. And yeah, I sort of felt like that some days – and that sort of undermines the morale of the team..* *Dr 1, Hospital 1*

Interestingly, the above observation describes the end point in the evolution of burnout in a senior doctor; the junior doctor himself noted that this unprofessionalism could have occurred as a result of having to work over a long period in a highly stressful situation with little support. Typical signs of burnout are depersonalisation, depression, a sense of emptiness and substance abuse (Freudenberger & North, 1986). The interviewee suggested that the poor approach to work may well have started with the kinds of feelings that he himself was currently experiencing at the end of his community service; namely, a degree of resentment and disillusionment with his work. Over time and under constant pressure, these feelings might evolve into an experience of becoming burnt out. Burnout is a very real concern in healthcare workers in any stressful postings, but more so in rural areas where low levels of

support and a sense of isolation exacerbate the feeling (Liebenberg, J. F. (Jr), Coetzee, *et al.*, 2018).

This same doctor highlighted the positive aspects of working as part of a well-functioning team, which he felt had not been the case during his year in Hospital 1:

> *So I really felt like you're just blazing your own trail and on your own mission. And I think I'm someone definitely who … I feel like I work well in a team and I'm quite energised by interacting with people, and I like working together with other people. So I think maybe if there had been a stronger team, without the mirror on everyone else, kind of blaming but like a more coherent community of people who were there, with some similar aims … I think that, for us, would have been quite sort of appealing. I think that's probably the main factor, I think, which would maybe have us in a rural space.* *Dr 1, Hospital 1*

Teamwork was a strong theme, coming up frequently in the interviews. The doctors who were able to slot into a positive culture of teamwork were excited about this aspect, and it seemed to improve their experience and productivity. Where teamwork was evident, team members would divide up ward work, helping each other with procedures or other aspects of practising as a doctor, and allowing each other small breaks.

In fact, in contrast to the feelings of isolation and in the face of dilapidated facilities and significant patient workloads, the effects of working in a strong team were remarkable. One doctor saw the teamwork in his hospital as the saving grace of his stay at one of the busiest hospitals in the study:

> *And I think even if I keep comparing it to [Hospital] which is a lot better maintained, you know, you can walk through [Hospital 6] and still feel like you're walking through a hospital but at [Hospital 2] you can see they haven't really put money into maintaining it … but what surprises me is, you know, you look at it and you get appalled by what it looks like but it actually functions a lot better than you think … I had a different experience to what I expected it to be – people tend to pull their weight as much as they can … and I think that that's made a difference for me. I think the quality of care that you're giving compared to what you'd expect just by looking at it – there is a big discrepancy between the two.*
>
> *Dr 4, Hospital 2*

The value of teamwork in rural spaces cannot be overemphasised, with several studies showing the difference it can make, even in the face of challenges such as the Covid pandemic. A study investigating teamwork found that in rural facilities the world over, the factor that kept doctors functioning was their ability to adapt to stressful conditions despite

resource constraints. This ability to adapt was made possible by a personal and regular recommitment to their job, their patients and their team (Couper *et al.*, 2022). The doctors in that study felt that being strong for their team members would lead to better care for the patients and the community, and were highly motivated by expressions of gratitude from patients and team members. In addition, all doctors in that study had times where they were able to offer support and times where they needed support, and received it (Couper *et al.*, 2022). The doctors commented that strong teamwork strengthened their personal coping strategies for the problems they faced. They experienced two kinds of coping; emotion-focused coping – where, for instance, they drew support from sharing experiences with fellow team members – and meaning-based coping, which entailed being able to derive personal meaning from their work in the context of their own values and goals (Couper *et al.*, 2022).

One of the doctors in the current study mentioned that even though working in an under-resourced setting was difficult, he found the challenge stimulating:

> *For me it's been like a blessing in disguise. I enjoy this because I really enjoyed having that extra challenge and trying to make the most of what we have, or trying new ways to go about it.* *(Dr 8, Hospital 6).*

The key informants also spoke about how strong teamwork helped doctors to function better and enabled the facility to run more smoothly.

5.3 The roles of junior doctors and their experiences of workload, stress and burnout

The junior doctors were expected to function independently for the most part, being put in charge of whole wards by themselves from the very beginning, seemingly because of the short staffing in the facilities. In the smaller facilities, the junior doctors often had to be on call by themselves, where they would be the only doctor on site after hours and therefore responsible for managing any emergencies that arose, whether in the wards or casualty. This was a significant source of stress and more than one doctor reported that doing calls was one of the most stressful aspects of their jobs. This was compounded by the fact that at times it was challenging to establish contact with team members, or that doctors at other hospitals whom they would phone for assistance were sometimes rude or unhelpful.

Several doctors reported that the number of patients they had to see was overwhelming and that this, coupled with the pressure to discharge patients to make space for new admissions,

could lead to rushed care and incorrect management of patients. The doctors who commented on this felt stressed by it, but acknowledged that the large patient burden necessitated that they just keep on working.

The risk of burnout is particularly high in rural or isolated areas and is exacerbated by heavy workloads (Liebenberg, Coetzee, *et al.*, 2018). Exposure to constant stress and emotional challenges are just some of the risk factors for burnout. In a large systematic review of burnout among healthcare workers in Sub Saharan Africa, it was found that the risk factors for burnout were: heavy workload, inadequate personnel, difficult work conditions, and low career satisfaction (Dubale *et al.*, 2019). The review study describes the 'bi-directional' flow of burnout and decreased patient care, while another study described the way that healthcare worker stress can trickle down to affect patient care (Bemker-Page *et al.*, 2019; Dubale *et al.*, 2019). The review study found instances of burnout being identified extremely early in the doctors' careers – even at the level of medical students (Dubale *et al.*, 2019).

The 12 stages of burnout first described by Freudenberger and North (1986) are: The compulsion to prove oneself, working harder, neglecting ones needs, displacement of conflicts, revision of values, denial of emerging problems, withdrawal, odd behavioural changes, depersonalisation, inner emptiness, depression and, ultimately, burnout syndrome. Burnout is described as a psychological syndrome involving: emotional exhaustion, feelings of helplessness, depersonalisation, negative attitudes towards work and life, and reduced personal accomplishment (Maslach & Jackson, 1981).

The prevalence of burnout was high in doctors posted in community and district-level hospitals in the Cape Town Municipality (Rossouw *et al.*, 2013). In their study assessing the prevalence of burnout among healthcare workers, Dubale *et al.* (2019) found that between 40 and 80% of doctors, nurses and other healthcare workers experienced burnout. This is of great concern as burnout is associated with many debilitating outcomes, including but not limited to depression, anxiety, substance abuse and suicidality (Dubale *et al.*, 2019). Some of these outcomes had already been observed by the junior doctors in Dubale *et al.'s* study as well as in some reports within this study.

The protective factors for preventing burnout were described as: better support from colleagues and management, addressing the risk factors for burnout, a higher degree of emotional intelligence and mindfulness support, and a greater amount of experience (Rossouw *et al.*, 2013; Dubale *et al.*, 2019). As is apparent from the findings in the current

study, support for junior doctors is paramount to ensure that they remain strong in the face of adversity, and to enable them to be receptive to other forms of support and career fulfilment that is offered to them. Doctors who do not receive support and begin to experience the effects of burnout are far less likely to take advantage of support such as online academic courses than those who feel supported and, as a result, motivated.

5.4 Key challenges experienced by the junior doctors

The doctors in this study reported a number of challenges that contributed to their stress levels.

5.4.1 Short staffing: Human resources for health and the budget challenges

One of the most serious issues underlying the challenges faced by almost every aspect of the health system is the lack of funding to secure resources and employ doctors. By analysing the budget speeches for the Eastern Cape Department of Health since the 2017/2018 budget year through to the 2022/2023 budget year (EC DoH Budget, 2017, 2018, 2019, 2020, 2021, 2022) one gains a rough idea of the extent of the problem. A large part of the short staffing of rural facilities is the unavailability of funds in the health sector in general.

Figure 5.1 shows that annual increases in the Eastern cape healthcare budget have been declining since 2018.

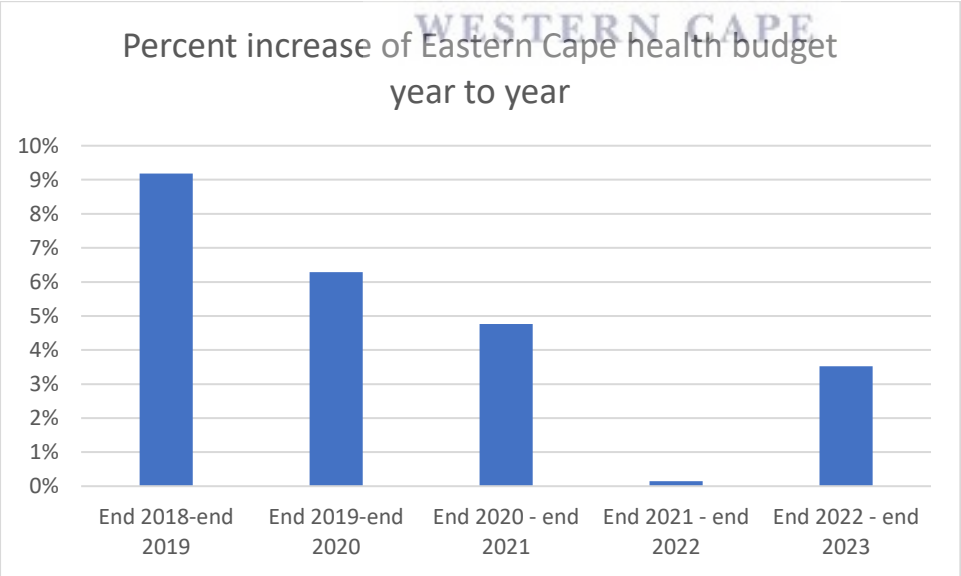

Figure 5.1: Percentage increases in the Eastern Cape health budget 2019 – 2023

The graph shows the slowing of increases in the budget over time, with a particularly sharp decrease between the 2020/2021 budget and the 2021/2022 budget (Budget speeches for the Eastern Cape DoH 2017/2018 through 2022/2023). While the factors affecting the allocation of the budget are varied and more complex than can be considered in this study, the graphic presentation of the trends provides a fair understanding of the budget challenges. For instance, the Covid pandemic may well have played a large role in the sharp decrease in the 2021/2022 budget. The aim of considering this graph is to demonstrate the challenges that health and human resource planners have to face and the challenges of employing healthcare workers. Key informant 1 mentioned that many promising young doctors who wanted to stay on at their peripheral facilities, and who may well have provided important support to the next group of community service doctors, were unable to find funded posts for employment.

The lack of funding for human resources in healthcare was alluded to by several participants, specifically key informants. One key informant (KI 1) was deeply involved in the human resources aspect of district planning and described how they often had to rearrange the placements of doctors to ensure that facilities with the highest burden of disease received the most doctors. Even with this reshuffling, staffing shortages remained.

This highlights the importance of ensuring that wherever doctors are stationed, they are supported well and empowered to be the best doctors they can be, because with the current budget trends there may well be no increase in the number of staff allocated per facility. In addition, in a study exploring what rural doctors felt would motivate them to stay in a rural setting, the finding was that changing only one aspect – for example salaries – would not be sufficient to keep these doctors in their rural settings (Kotzee & Couper, 2006). The overall feeling gained from key informants in the current study is that both the ‘pull’ and ‘push’ factors need to be considered. Keeping doctors in rural settings and preventing burnout requires a multi-pronged approach, in which clinical, academic and emotional support all play a role.

Analysis in 2019 by the Rural Health Advocacy Project noted that rural patients who are already disadvantaged in a multitude of ways bear the brunt of worsening staffing issues in the health system, with few doctors being allocated to posts in rural hospitals even if those posts have been funded (Rural Health Advocacy Project, 2019). Their concerns were related to the problem of medical officer post vacancy rates being as high as 50% in some rural facilities. This was a significant finding, since doctors form the backbone of rural hospitals

where they provide dynamic care, either general or specialist in nature, in the absence of formally posted specialists. They also mentor community service doctors and support other primary healthcare facilities associated with the rural facility in which they work (TAC and Section 27, 2013; Rural Health Advocacy Project, 2019).

Some of the reasons for these posts being empty could be addressed by: improving the support structures for junior doctors so that they remain in their rural placements, providing incentives for remaining in rural health facilities, and assisting with career development, among others. All of these aspects can be addressed if the health system develops stronger relationships with junior doctors, carefully observing and listening to their concerns (Dieleman *et al.*, 2003; Section 27, 2010; Ditlopo *et al.*, 2011; Reid, 2018).

This being said, improved support for these junior doctors would be more easily facilitated if there were more staff on the ground to ease the burden of work, thus giving the doctors some reprieve from their heavy workloads. More staff at rural facilities would enable junior doctors to consider other options or avenues which would strengthen their resilience, enabling less stressful working conditions. Improved relationships with concerned colleagues and managers would also help.

5.4.2 The lack of clinical and academic support for junior doctors

All of the junior doctors interviewed expressed concerns about the degree of clinical and academic support that they received at their facilities. This issue was the focus of the study. The challenges are summed up below, first in relation to clinical support and then in relation to academic support.

5.4.2.1 Clinical support

In general, seeking advice from other doctors at the same facility was the first port of call for the junior doctors interviewed. However, this depended on the reason for asking; in general, they would seek advice or assistance from their peers (even though they were at the same level of seniority) and then they would ask their seniors (particularly for clinical procedures or practical aspects). However, several participants mentioned that some seniors were not up to date in their practices, were occasionally resistant to change, and in some cases were apathetic (‘If they demise, they demise’, as reported by Dr 5, Hospital 3). Some were condescending (‘You just end up being scolded every day, being told you know nothing, “You guys coming from your fancy internship hospitals, you think you know everything,”’ as

reported by Dr 5, Hospital 3). The next level of help sought would be the clinical manager, depending on that clinical manager's area of speciality or interest.

The official primary source for off-site support is telephonic communication with the tertiary hospital referral doctors for the particular speciality in which the doctor needs advice. There were mixed feelings about the process of calling referral doctors for help. One doctor spoke of 'bad blood' between their facility and a particular department at the tertiary hospital. Others said that tertiary level doctors often did not understand the context in which the district hospital doctors worked. The doctors who reported having good interactions with the referral doctors attributed this to their having worked in those departments during their internships.

The fact that referral doctors were not always supportive was noted by the key informants. They particularly noted that that doctors who had not experienced rural medicine were more likely to give the rural doctors a difficult time with referrals – a similar observation to that of the junior doctors.

Other sources of off-site support were guidelines on the internet, friends who could help or, in the case of one doctor, a professor under whom he had studied when he was at university. In such instances, telephone calls were their link to the source of help.

A very important and much appreciated form of support for the doctors in this study was the input of visiting specialists. The doctors appreciated the visits from the specialists because not only could the specialists assist with difficult cases, they could act as a sounding board for concerns the junior doctors may have had. Further advantages of visiting specialists were that the senior doctors at the facilities who were resistant to change tended to respect the opinions of the specialists, and would listen to their advice and thus support the new guidelines that the junior doctors may have been trying to get adopted. Other aspects of visiting specialists was that surgeons could come to the peripheral hospitals for elective case theatre slates and perform many of the same operations in one day, with the local doctors present in order to learn skills.

The concept of outreach by specialists from nearby hospitals has been explored in a variety of studies. A study based in KwaZulu-Natal found that outreach was an important part of building and maintaining relationships between the hospitals (Grant *et al.*, 2018). The better structured and more regular the outreach programme was, the more likely it was to be sustainable, with the departments that did not have posts for specialists to do outreach being

less reliable in performing this task. In addition, it was found that documenting the visits helped with facilitating outreach, as did an agreed-upon transport arrangement for the specialists. Other findings were that communication technology was beneficial for the transferring of knowledge (but could also be a great source for frustration, because of poor reception) and that in-reach also formed a vital part of the outreach relationship. In-reach, it was found, should be viewed as the corollary of outreach (Grant *et al.*, 2018). The researchers in this case felt that the term 'outreach' was, in fact, outdated and demeaning and suggested that collaboration was a better way to view the relationship between peripheral doctors and those who supported them in one way or another (Grant *et al.*, 2018).

5.4.2.2 Academic support

Interviews revealed that there were two kinds of academic support: training that could occur on site, and self-initiated enrolment in courses that could be online or in person. Academic support is an important aspect of the experience of junior doctors, and if not catered for can lead to poor perceptions of growth in the community service year. As one doctor put it, 'Academics is one thing that's missing.' Another said that being placed so far from academic support felt like 'career suicide'.

Some of the facilities had morning meetings where the on-call doctor from the previous night would present cases to the day staff, which created a space for academic discussion. Other facilities had more structured academic meetings that would run according to schedule, involving presentations by doctors and feedback and oversight from a senior doctor. However, many of these academic discussions had not been reinstated after having ceased during the Covid pandemic. Some facilities ran meetings around morbidity and mortality statistics to enhance the care offered at the facility.

In addition, the key informant who was integral to managing obstetric care in the district often ran drills related to obstetrics emergencies at the facilities, referring to these as 'fire drills'. These were a good source of academic support, helping to prepare all staff for possible obstetrics emergencies.

A strong theme in the interviews was appreciation for the regular Zoom presentations or tutorials presented by Buffalo City Amathole Medical Support Initiative (BAMSI) for district level doctors. BAMSI was formed in 2019 following the identification of a need to support the peripheral doctors through a combination of in-reach, outreach and syllabus creation that

would put within reach the knowledge needed to practise more competently and confidently as young doctors (Wong, Kumar &Parrish, 2020).

The regular BAMSI meetings included doctors from many different facilities and input from a variety of specialists. These meets developed not only a sense of confidence and enhanced knowledge, but, importantly, fostered a sense of community among an entire group of doctors working at the district level, and a sense of connection with the tertiary hospital. Several of the participants mentioned how this helped to create a sense of belonging and of being seen as part of the district as a whole. The advent of Covid-19 accelerated the migration of BAMSI meetings to a digital platform, which in some ways benefited the district hospitals because, as result, all meetings could be attended by the majority, some of whom may not have been able to attend in-person meetings even before they became impossible under pandemic-related restrictions. Now that the meetings had been established online, they appeared to be highly valued for the input they gave on district level cases, advice on referral and management, and for the sense of community they fostered.

Many junior doctors said that being given the chance to attend courses was appreciated and acted as a motivating force, a source of academic stimulation and an opportunity to achieve goals. Many said that they appreciated when the management of their facilities took an interest in these courses and gave them time off to attend. They expressed gratitude that their clinical managers gave them study leave and encouraged them to attend courses because they had heard that at some facilities the doctors had to use their own leave in order to attend, and felt that they were being a burden on their facility by leaving it short staffed. It was clear that some clinical managers understood that by allowing doctors time off to participate in courses they indirectly strengthened the entire facility, as these doctors would share what they had learned. This was usually done informally, but with the encouragement of the clinical manager in many cases. This skills transfer boosted everyone at the facility and enhanced the quality of the healthcare offered.

The concept of furthering ones knowledge and skills as a means of self-motivation arose in a study that explored the challenges and opportunities offered to nurses in a rural facility. One incentive or contributor to motivation among nurses in a peripheral facility was being sent for training. Training was beneficial not only in imparting more knowledge to the nurses, but in boosting their sense of job security; nurses who attended courses felt that they were more

likely to be retained at their facility or to secure employment at a more attractive facility (Fabienne N. Jaeger *et al.*, 2018a).

Another method through which doctors could further their skills and knowledge was enrolment in formal training courses or diplomas in certain specialities. These diplomas carry real weight for doctors and potential employers because doctors with these qualifications immediately raise the ability of a facility to provide a better package of care. KI 2 and 3 both commented on how some hospitals could not provide some services such as Caesarean sections and better obstetrics care without doctors who were well trained in those specialities. KI 3 bemoaned the fact that sometimes these doctors left the facilities, either from choice or from lack of funding for the post.

It was clear from the interviews that digital platforms were an important source of educational training and resource provision. With the distances between rural facilities and tertiary hospitals, visiting or specialist outreach is not always feasible, and so other ways to provide knowledge have been developed. Online resources can take the form of short courses, webinars, papers or guidelines, and even well-recognised certificate-bestowing formal courses (Ramsden & Lincoln, 2022).

In a review of papers assessing digital strategies for the provision of education and training to rural doctors, Ramsden and Lincoln (2022) note that there is mounting evidence that online platforms can offer academic support for rural doctors especially because the training may be undertaken at times that are convenient for the doctors. However, it is also important to note that the disadvantage of this form of self-initiated learning is that it requires buy-in from the doctors and an adequate level of digital literacy (Johnsson *et al.*, 2022). This sentiment was also expressed by KI 2 and 3. It was interesting that none of the participants commented on the use of the Knowledge Hub – a resource that was lauded by KI 2 as a wealth of knowledge and skills development. This suggests that to participate in online courses requires a commitment of effort and time, and possibly a higher level of personal motivation than many doctors feel.

In Johnsson *et al.*'s (2022) study, participation in self-initiated training or asynchronous learning showed improvements in the domains of 'knowledge and skills' as well as 'confidence' in those who engaged with the learning. This improvement was positively related to the number of courses or training resources that the participants had completed. Continuing medical education (CME) is a form of learning administered post-graduation and

includes a wide variety of topics from which doctors can choose. CME can be provided through in-person presentations, workshops, courses or online via webinars or video presentations, or even through formal courses that doctors undertake for certification in that field. A large literature review assessing the impact and utility of digital learning and CME showed that CME improves doctor confidence, performance and patient outcomes (Cervero & Gaines, 2015). The effect is greater if the training is interactive, if it entails multiple methods of delivery and multiple exposures over a longer period of time, and if it focuses on outcomes that the doctors feel are important (Cervero & Gaines, 2015; Johnsson *et al.*, 2022).

With learning from CME and teaching rounds offered by tertiary-level doctors through in-each or outreach, there is an improvement in physician ability and patient care, and a decrease in readmission rates of patients (Cervero & Gaines, 2015; Bracco *et al*., 2016; Wong, Kumar & Parrish, 2020). This is particularly the case when the learning is interactive; when the teaching offered by in-reach doctors is hands-or and when CME is delivered in multimedia/interactive fashion tailored to the needs of the physician (Cervero & Gaines, 2015). This is the case with BAMSI meetings, which involve a great deal of discussion and interaction. In light of this finding from the literature, it is easy to see the value placed in regular meetings and partnerships, whether these are conducted via distance learning platforms or on-site visits with interaction. This theme emerged strongly from the interviews with both junior doctors and key informants, and is well described in the literature. Therefore, interventions of this nature should be maintained and increased for the support of junior doctors. It would certainly be a worthwhile area of further research.

5.5. The positive effects of being provided with support

The interviews revealed that doctors who felt supported were more motivated and enthusiastic about performing their jobs than those who did not feel supported. This support could be as little as having one colleague to team up with to tackle ward work, or the arrangement made among team members to cover for each other while they took an occasional afternoon off. One doctor (Dr 7, Hospital 5) who felt really well supported by her CEO and who could have left the facility at the end of the community service year chose to stay on and encouraged other enthusiastic doctors to join the facility, which benefited from skills retained and the higher number of team numbers. This was also the case for Doctor 4 (Hospital 2) who had initially been nervous about the stress that maternity work and

Caesarean sections would involve, but who had become a core member of the hospital obstetrics team after being supported by KI 3. This junior doctor had even taken over managing a type of gynaecological clinic by himself with only occasional input from the consultant on an as-needed basis. This indicates the valuable role played by clinical, academic and emotional support for junior doctors.

The interviews revealed that for these doctors, the security of knowing that they could always call on someone for help enhanced their confidence and gave them a sense that they were growing in their profession. All of the key informants spoke about the improvements in confidence and competence that occurred in junior doctors as a result of support, through whichever medium it was provided. KI 2 was particularly interested in creating an environment in which junior doctors could grow, stating that those who grew the most were those who had a sense of calling in their jobs. This deep commitment to the profession and to the tasks it entailed enabled them to reach a 'sweet spot' in their work, in which they found meaning in all they did and, as a result, felt motivated and energetic. The literature reveals that this sweet spot can be attained by a combination of three other factors: feeling competent in one's job, feeling that one is making a difference, and being appreciated for what one does (Isay, 2016). KI 2 felt that having a sense of calling, combined with the presence of mentors, helped to prevent burnout and assisted in the development of well-rounded, competent doctors. Doctors in such a situation would be more likely to establish a strong foundation in their work and to offer valuable support to the next group of doctors.

In relation to community health, doctors in rural hospitals are important ambassadors for health and are well positioned to engage with the community as health advocates (South African Academy of Family Physicians, 2022). From the interviews, it appears that this is more likely to happen if doctors are well supported. KI 1 stated that well-supported doctors are 'just happy doctors', work better together in teams and are more likely to be proactive about problem solving, and implement projects that improve the functioning of the hospital, and community engagement. KI 2 spoke about how junior doctors can better be supported to engage with community outreach through strong, inclusive leadership that assisted them with outreach plans and guided them away from activities that were likely to lead to disappointment.

Several of the junior doctors stated that they would like to engage with the community in a more hands-on manner. They spoke of visiting the primary healthcare clinics to see patients

and help with teaching, and of how community engagement of this sort helped with their understanding of community health needs. This was particularly with regard to disease prevention and health promotion, where the allied health team would also give interactive talks in schools and clinics. These sorts of events really boosted their desire to be involved in community outreach.

KI 3 strongly felt that up-skilled doctors who remained in facilities beyond the required 12 months led to quicker onboarding and upskilling of new doctors who joined their team in the subsequent year. This had a positive impact on the community at large because having more skills in a district hospital would mean fewer referrals and probably better outcomes for the patients. Obstetrics, in particular, would improve. Obstetric care is a significant burden on district hospitals and a time-sensitive concern where quicker action can lead to better outcomes.

Upskilling doctors has a significant effect on their professional development and was rated as highly important to doctors and nurses in several studies (Blaauw *et al.*, 2013; Fabienne N. Jaeger *et al.*, 2018a; Reid *et al.*, 2018b). Importantly, the Reid study (2018) found that community service doctors who rated their levels of professional development highly were more likely to remain working in a rural setting, thus creating a strong foundation of knowledge from which the next group of community service doctors would benefit.

5.6 Significance of the study findings

This study aimed to explore specific themes related to the support offered to junior doctors working in rural facilities. The interviews with both junior doctors and key informants allowed all of these themes to be explored in some depth. The finding that many junior doctors experienced a strong sense of isolation, even within teams, was significant, in that a sense of isolation coupled with heavy workloads is a risk factor for burnout (Shapiro *et al.*, 2017; Whelan *et al.*, 2021). It was notable that more than one doctor referred to a sense of demotivation as a result of the behaviour of some senior doctors who were either apathetic and unprofessional or derogatory.

The finding that there is a lack of clinical support at most facilities is revealing. It appeared that some senior doctors were not willing to update their knowledge, or that they felt too overburdened with their own work to provide support, or possibly they felt it was not their duty to provide support. The finding is significant because it suggests that, unless changes are

made, junior doctors rotating through the facilities year after year in the future will not get any better support than the current cohort are receiving.

With regard to academic support, it was found that there has been an improvement over the past five years (according to KI 1). This was a positive finding and importantly allowed for an assessment of which types of academic support were most useful, out of on-site meetings, formal courses, visiting specialists and distance/digital learning. The positive reception of the digital platform BAMSI by those interviewed showed that this form of academic support is very effective and that it is worthwhile ensuring that this support is ongoing and well implemented. However, it is not sufficient merely to have excellent electronic resources for doctors; there also needs to be buy-in from the doctors in order to maximise the benefits for them personally and for the facility and the patients.

Ultimately, the strongest reason to enhance the support of peripheral doctors is to ensure their development and motivation. Well supported doctors gain not only in concrete knowledge which benefits them personally and the profession generally; it also enhances the less tangible qualities of motivation and enthusiasm for the job. These qualities, in turn, benefit the functioning of rural health facilities and ultimately the health of communities. Well supported doctors who are learning clinically and academically are more likely to stay on in rural facilities, form part of a strong core team, and be in a position to support new doctors rotating into their facility. Retention of these doctors is an important goal. It is vital that healthcare system managers are aware of the value of well-developed doctors who are able to support junior doctors in rural placements, for the efficient functioning of our district health system.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Given that the topic of interest in this study was the support available to young doctors first stepping out into the 'real world' of independent practice, with all the challenges and excitement that this entails, it is important to be mindful of the context in which they work. They work in a system that is doing its best to provide a service to the majority of the country who do not have health insurance; a system that comprises under-served rural people who constitute almost half of the country's population yet have the lowest doctor-to-patient ratio in the country, worsened by budget problems (Stats SA, 2011, 2015; Rural Health Advocacy Project, 2019). The daunting territory into which these young doctors venture has been confirmed by the verbatim reports of the participants in this study, who spoke of a lack of support, shortages of resources, a sense of isolation and the threat of burnout by the end of their year of community service.

With regard to clinical support, the study has revealed that on-site clinical support is generally lacking and constitutes a particularly challenging aspect of functioning as a junior doctor. This is very concerning, in light of the fact that one of the most stressful aspects of being a doctor is having to make clinical decisions and yet being unsure that they are correct. Mistakes made in this area can lead to poor outcomes for patients and can badly affect the doctor. They may even set off a vicious cycle of stress and fear, in which fear of further mistakes leads to burnout and more frequent mistakes (Bari, Khan & Rathore, 2016; Naidoo, Tomita & Paruk, 2020).

Important sources of clinical support that were identified by the junior doctors in this study included teaching visits to the district hospitals by specialists, the mentoring they received from some on-site doctors (but mostly from the District Clinical Specialist Team) and formal clinical courses that they participated in, either on their own or as part of the hospital or department's continuing professional education programme. All of the junior doctors interviewed felt that direct, face-to-face interactions, such as those they experienced in ward rounds and training drills, along with the assessed formal courses they had attended, had the greatest impact on their clinical practice. It was noted by most of the participants that the support offered from referral doctors was unpredictable and unreliable. There were also

concerns that referral doctors, many of whom worked in urban areas, did not understand the junior doctors' workplace contexts.

With regard to academic support, the study revealed that the junior doctors perceived on-site academic support to be lacking. While this did not necessarily affect their day-to-day functioning as clinicians, it led to some junior doctors feeling a sense of despondency about their career progression. It is to be hoped that some of the on-site academic support that was offered pre-Covid may have been reinstated by now; at the time the study was conducted, many of these academic meetings had not yet resumed.

The fact that academic stimulus or career progression is a contributor to doctor retention in rural hospitals has been observed in several studies, indicating that the provision of such support is well worth implementing (Kotzee & Couper, 2006; Goetz *et al.*, 2015; Reid, 2018). Enhancing academic stimulus at these hospitals and by encouraging more of these hospitals to be registered as off-site training sites were recommended as potential solutions.

Important sources of academic support provided were identified as: teaching and the running of 'drills' by visiting specialists – interestingly, these two activities were also listed as important sources of clinical support – and the provision of regular academic meetings run remotely by the Buffalo City Amathole Medical Support Initiative (BAMSI) team. These meetings provided participants with a platform for sharing clinical questions and experiences among all the district hospitals in the Buffalo City and Amathole Health District and additionally created a sense of community amongst the dispersed facilities.

Academic support was also gained through attendance of formal courses and by pursuing diplomas that would improve the doctors' clinical abilities. Thus formal courses combined two forms of support – academic and clinical – and were regarded as especially useful. The academic support gained through these courses as well as interacting with the NDoHs Knowledge Hub learning platform depended on the motivation of the junior doctors and their ability to make time for the courses. Some doctors felt that there was not enough time, and the fact that some courses were run after hours was an obstacle.

Themes that arose prominently across the interviews were: isolation, the sense of being misunderstood with regard to their capabilities (facility and clinical ability), poor motivation from colleagues leading to resentment of work, and feeling daunted by the high levels of responsibility thrust upon them.

It was interesting to find that in the midst of the many pressures and challenges that the doctors were experiencing, a certain amount of self-awareness helped them to manage their feelings. Some expressed that they were glad they had been able to identify these feelings, since by identifying them, they were able to consider the reasons calmly and rationally and find ways to cope. This process of self-reflection seemed particularly valuable among those who practised it.

Analysis of the themes that emerged from the interviews showed that clinical, academic and holistic support were available mostly from peers, 'significant others', and some of the interested senior doctors, such as the key informants.

The findings reveal the high value that participants place on a sense of mutual support and of community. The value of support was clearly demonstrated in the case of Dr 4 in Hospital 2, who, as a result of the ongoing support he had received from KI 3, had gained a tremendous amount of knowledge in obstetrics in one year to the point that he was confident enough to run a gynaecological clinic in his district - thus benefiting the patients.

The need for a sense of community among rural doctors has been noted in the literature. Some years ago, doctors working in various countries who were a part of the World Organisation of Family Doctors (WONCA) noted the problem of social isolation and sought a solution, creating the Rural Café project (Wheatley *et al.*, 2020). The Rural Café is a social media platform where rural doctors gather – physically or virtually – to share their stories, give and receive support, and benefit from medical education presentations and webinars (Wheatley *et al.*, 2020). The creators have seen an increasing volume of activity on the site in terms of use of the materials and participation in events that form connections among members. The project has definitely contributed to a sense of community among rural doctors all over the world, providing them with support (Wheatley *et al.*, 2020).

Many studies have explored the factors that enable support for rural doctors, frequently with a view to uncovering what would assist with their retention in rural facilities Kotzee & Couper, 2006; Ditlopo *et al.*, 2011; Stodel & Stewart-Smith, 2011; Goetz *et al.*, 2015; Labonté *et al.*, 2015). While the studies have had varying answers, support and a feeling of professional and/or personal development features highly in all. Some studies acknowledge the fact that one or two factors alone would probably not be sufficient to retain doctors; instead, a 'bundle' of interventions would need to be provided. Importantly, a key consideration in these studies is that fostering a rewarding personal and professional

development environment would need to underpin any other interventions in order for them to succeed (Kotzee & Couper, 2006; Lehmann, Dieleman & Martineau, 2008; Willis-Shattuck *et al.*, 2008; Ditlopo *et al.*, 2011).

The findings from this study demonstrate that these factors also apply in the Amathole Health District. They also mirror the findings of other studies conducted in South Africa, as well as in Chad and Australia, which identified a sense of isolation among rural doctors (Kotzee & Couper, 2006; Stevenson, Phillips & Anderson, 2011; Jaeger *et al.*, 2018). It is vital to address the challenges faced by these junior doctors in order to support them as health professionals in an environment which would hugely benefit from their retention. Personal and professional support is not that difficult to provide, and can be boosted by ensuring that the doctors are connected to peers in their district, on-site mentors and regular academic input, with frequently opportunities to benefit from in-reach specialist visits and outreach activities to the tertiary hospital.

This sort of support would help young doctors to develop into the competent, enthusiastic and resourceful doctors that they hope to become and that this country needs. It may even help stem the brain drain, in which professionals leave South Africa for greener pastures abroad. The need to unite our doctors and ensure they are linked to excellent clinical, academic and emotional support is imperative in order to overcome the 'tyranny of distance' (Ramsden &Lincoln, 2022) and retain them in rural areas where they are so desperately needed.

6.2 Recommendations

The following recommendations are made in light of the study findings:

At hospital level in the Amathole District:

1. Heads of departments in the tertiary-level hospital who are interested in performing outreach, or the district clinical specialist team, should establish a formal and stable outreach arrangement with the district hospitals in the Amatole District. This would improve inter-hospital collaboration, doctor support and patient care. The corollary of outreach is in-reach, and so an accompanying in-reach programme should be established in which doctors in rural hospital are given regular opportunities to visit the tertiary hospital for various activities. In-reach was a benefit noted by KI 1 and KI 3, as well as Grant *et al.*(2018).

2. The heads of departments at the tertiary hospital and the clinical managers at the Amathole district hospitals should encourage greater collaboration between junior doctors in the district and the various hospital departments, such as Paediatrics, Anaesthetics, and Obstetrics and Gynaecology. This would enable the teaching of theory and the gaining of experience for those wishing to pursue diplomas through an in-reach/outreach agreement.
3. The clinical managers at the district hospitals should ensure continued regular meetings via digital media via the BAMSI programme or others like it. Ideally, these meetings should be designed to include the essential components identified by Johnsson *et al.* (2022): they should be tailored to produce the outcomes set by the doctors, encourage interaction, allow multiple exposures to different methods of teaching, and be offered at appropriate times.
4. The clinical managers at district hospitals should explore the possibility of including a weekly time slot (for example, an hour in their regular working hours) during which the junior doctors are expected or encouraged to participate in an online course or professional development accredited activity.

At district level in the Amathole District:

1. An entity such as the Rural Doctors Association could consider creating a platform similar to the Rural Café, where South African rural doctors can share stories, advice and experiences. This would help create the needed sense of community and act as a meeting place where ideas for support can develop and, if needed, linkages and referrals to professional mental health and wellbeing care can be provided.
2. The Eastern Cape Department of Health should assess the efficacy and practicality of the suggestion by the South African Academy of Family Physicians (2022) of posting a family medicine doctor at each district hospital, and begin roll-out of the programme, if acceptable. This is an exciting idea, supported by all key informants, that would go a long way to creating the kind of on-site support needed for junior doctors.
3. Hospital managers in the Amathole Health District should initiate a process of engagement with the Provincial Department of Health HR department to discuss the findings of research with regard to the placement of doctors in rural facilities, including this research. The findings of this study support numerous others that point to the need for more support for junior doctors. The HR team need to be aware of

these findings, and design HR practices that would allow the appropriate quality of doctors to work in rural facilities, and ensure that there is adequate support for them. This would benefit the facilities in which doctors are placed, and ultimately ensure a better quality of care for vulnerable patients in rural areas.

4. Further research into factors affecting and promoting resilience in these doctors in their contexts would guide additional interventions for junior doctor support and health system strengthening.

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APPENDIX A: Participant information sheet

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21 959 2809 Fax: 27 21 959 2872

E-mail: soph-comm@uwc.ac.za

PARTICIPANT INFORMATION SHEET

Project Title: An exploration of the perceived extent and quality of clinical and academic support provided to junior doctors working in peripheral hospitals in a health district in the Eastern Cape Province, South Africa.

What is this study about?

This is a research project being conducted by Simon Comley at the University of the Western Cape. We are inviting you to participate in this research project because you are a junior doctor working within the Amathole health district and have had contact with the regional hospital, Cecilia Makiwane Hospital. The purpose of this research project is to gain insight into your day-to-day experiences of working within a peripheral district hospital and the access you have had to supervisory support. I am interested in learning about your experiences over the past year or so, so that I can provide the appropriate stakeholders within the district and province with a greater understanding of what junior doctors like yourself suggest needs to be changed or improved in relation to the support that is provide to them in a peripheral district hospital.

What will I be asked to do if I agree to participate?

You will be asked to participate in an interview conducted telephonically or by video call. The interview will have a set questions but will also allow you to expand more on your points. We will conduct this interview at a time that is convenient for you. The interview will be composed of a set of questions that will focus on the context of your health facility setting, the team with whom you work, some of your day-to-day experiences and the support you have been provided with both academically and clinically. You will also be asked to

make recommendations about how your believe a junior doctor working in a peripheral setting as you do could receive additional or different kinds of support from what you have currently receiving.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, (1) your name will not be included on the interview transcript and other collected data; (2) a code will be placed on the interview transcript and other collected data; (3) through the use of an identification key, the researcher will be able to link your interview to your identity; and (4) only the researcher will have access to the identification key.

To ensure your confidentiality, the digital transcripts will be kept on my password protected computer and any physical pages will be kept in my private filing cupboard, which will be kept secure.

If we write a report or article about this research project, your identity will be protected.

In accordance with legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities any information that comes to our attention that is of concern in relation to the well-being of patients and others within the health team. In this event, we will inform you that we have to break confidentiality to fulfil our legal responsibility to report this incident to the designated authorities.

What are the risks of this research?

There may be some risks from participating in this research study. During the course of our discussions we may unearth some painful or difficult aspects about your job which may upset you. If this occurs we can speak about that immediately and halt the interview. All human interactions and talking about self or others carry some amount of risk. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention. The toll-free contact number for a mental healthcare hot line to provide free counselling by registered psychologists and psychiatrists is: 0800 21 21 21 or SMS 43001.

What are the benefits of this research?

The benefits to you include an opportunity to discuss aspects of your job and your experience working in a peripheral hospital and the challenges that you face.

This research may not help you personally, but the results may help the investigator learn more about conditions of such peripherally placed junior doctors who may be struggling in posts with very little or poor support. We hope that, in the future, other people might benefit from this study through improved understanding of how to approach these problems and to undertake interventions that will assist to improve the support that the district and province provides for these doctors. The anticipated benefits of improving the support mechanisms and structures for junior doctors in peripheral areas would be enhanced confidence and competence and job satisfaction for those doctors as well as doctors better supported to benefit their community.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by ***Simon Comley as part of the School of Public Health*** at the University of the Western Cape. If you have any questions about the research study itself, please contact:

Simon Comley

48 Edly Symons Avenue

Beacon Bay

East London;

0768154572

comleysimon@gmail.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof Uta Lehmann

Head of Department: School of Public Health

University of the Western Cape

Private Bag X17

Bellville 7535

ulehmann@uwc.ac.za

Prof Anthea Rhoda

Dean: Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Biomedical Research Ethics Committee with reference number: BM21/8/12

Biomedical Research Ethics Committee

University of the Western Cape

Private Bag X17

Bellville

7535

Tel: 021 959 4111

e-mail: research-ethics@uwc.ac.za

Reference Number BM21/8/12

APPENDIX B: Consent form

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21 959 2809 Fax: 27 21 959 2872

E-mail: soph-comm@uwc.ac.za

CONSENT FORM

Title of Research Project: **An exploration of the perceived extent and quality of clinical and academic support provided to junior doctors working in peripheral hospitals in a health district in the Eastern Cape Province, South Africa.**

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

___ I agree to be **[**videotaped/audiotaped**]** during my participation in this study.

___ I do not agree to be **[**videotaped/audiotaped**]** during my participation in this study.

Participant's name…….

Participant's signature…….

Date…….

APPENDIX C: Proposed participant interview guide

a) **Good day. Thank you for being part of this research – I really appreciate it. Could I start by asking you a few demographic questions?**
    a. **How old are you?**
    b. **What is your 'home' language?**
    c. **What other languages are you comfortable speaking?**
    d. **Where did you qualify as a Medical Doctor?**
    e. **Which year did you qualify as a Medical Doctor?**
    f. **When did you start working at [Name] district hospital?**

b) **Please tell me a little about the geographical context and the hospital in which you work:**

Probes:

- *How would you describe where you work?*
- *What are the premises like?*
- *What is your patient population like – socioeconomic, insight, health?*
- *How do you feel about being placed here?*

c) **Could you tell me a little more about your role within the hospital and what an average day for you would involve:**

Probes:

- *Role in relation to other health workers in the hospital*
- *Key responsibilities*
- *Key challenges*

d) **I would like to find out about the clinical and academic support and/or supervision that you have received over the past year(s). For example the support could be with regards to guiding you through practical procedures, patient interactions, and continued learning – any aspects that may help you feel more confident in your role. Could you tell me a little about the supervision you have received to date?**

Probes:

- *Supervision from who/which facility/team*
- *How frequently or on request?*

- *Do you feel supported in your role?*
- *What makes you feel more supported?*
- *What makes you feel less supported?*
- *Are your seniors supportive? And how so/in what ways (or not)?*
- *Is hospital management supportive? And how so/ in what ways (or not)?*

e) What do you feel would make your functioning in the hospital and the district more effective?

Probes:

Which aspects of this is related to supervision?

What recommendations would they like to make in terms of how supervision could be changed or strengthened?

f) Reflections on your placement: how do you feel your presence here has impacted the community and their health?

Probes:

- *Do you feel you made a positive change?*
- *Do you feel you've been developing relationships with the patients?*

g) Future plans: what are your plans going forwards in your journey as a doctor?

Probes:

- *Are you planning to remain working in this setting – what would keep you / what would push you away?*

h) Do you have any further aspects you would like to add/discuss?

APPENDIX D: Key informant information sheet

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21 959 2809 Fax: 27 21 959 2872

E-mail: soph-comm@uwc.ac.za

KEY INFORMANT INFORMATION SHEET

Project Title: ***An exploration of the extent and quality of clinical and academic supervisory support provided to junior doctors in peripheral hospitals in the Amatole Health District in the Eastern Cape Province, South Africa.***

What is this study about?

This is a research project being conducted by Simon Comley at the University of the Western Cape. We are inviting you to participate in this research project because you are a senior doctor working on the district clinical specialist team for the Amathole health district. Furthermore, you have insight into the functioning of the health system within this district, the district hospitals of interest, and the regional hospital at which the researcher is based, Cecilia Makiwane Hospital. The purpose of this research project is to gain insight into the working context and experiences of those junior doctors placed in peripheral hospitals within the district in which you have a position of greater overview of the hospitals of interest. The goal is to gain enough information from your interview in conjunction with that of the junior doctors that we may motivate for improvements in support structures at peripheral hospitals if this is an issue that is identified.

What will I be asked to do if I agree to participate?

You will be asked to participate in an interview conducted telephonically or by video call. The interview will have set questions but will also allow you to expand more on your points. We will conduct this interview at a time that is convenient for you. The interview can be performed wherever it suits you to engage in the interaction. The interview will be composed of 10 questions with a few subsections. The questions will ask about aspects regarding your work in the district, your perceptions of the support structures in place, and your experiences with regard to junior doctors and their development.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, ***(1) your name will not be included on the interview transcripts and other collected data; (2) a code will be placed on the interview transcripts and other collected data; (3) through the use of an identification key, the researcher will be able to link your interview to your identity; and (4) only the researcher will have access to the identification key.]***

To ensure your confidentiality, the digital transcripts will be kept on my password protected computer and any physical pages will be kept in my private filing cupboard.

If we write a report or article about this research project, your identity will be protected.

In accordance with legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities information that comes to our attention concerning potential harm to you or others. In this event, we will inform you that we have to break confidentiality to fulfil our legal responsibility to report to the designated authorities.

What are the risks of this research?

There may be some risks from participating in this research study. During the course of our discussions we may unearth some painful or difficult aspects about your job which may upset

you. If this occurs we can speak about that immediately and halt the interview. All human interactions and talking about self or others carry some amount of risk. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

The benefits to you include *an opportunity to discuss aspects of being in a position with oversight of the district in some sense and the roles you play and the change you bring about for patients and practitioners.*

This research may not help you personally, but the results may help the investigator learn more about conditions of peripherally placed junior doctors who may be struggling in posts with poor support. This research could help inform aspects that concern you and possibly assist you in the course of your job. We hope that, in the future, other people might benefit from this study through improved understanding of how to approach these problems and to undertake interventions to assist improvements in support for these doctors. The anticipated benefits of improving the support structures for doctors would be enhanced confidence and competence and job satisfaction for those doctors as well as doctors better supported to benefit their community.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by ***Simon Comley as part of the School of Public Health*** at the University of the Western Cape. If you have any questions about the research study itself, please contact:

Simon Comley

48 Edly Symons Avenue

Beacon Bay

East London

0768154572

comleysimon@gmail.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof Uta Lehmann

Head of Department: School of Public Health

University of the Western Cape

Private Bag X17

Bellville 7535

ulehmann@uwc.ac.za

Prof Anthea Rhoda

Dean: Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Biomedical Research Ethics Committee with reference number: BM21/8/12

Biomedical Research Ethics Committee

University of the Western Cape

Private Bag X17

Bellville

7535

Tel: 021 959 4111

e-mail: research-ethics@uwc.ac.za

APPENDIX E: Proposed Key informant questions/interview guide

Introduction: Good day, I am Dr Simon Comley currently studying through the University of the Western Cape and I'm going to be interviewing you today to explore your role in the structures of the Amathole health district with regards to support structures of junior doctors. Thank you so much for your agreeing to assist with this research. Firstly, are there any aspects of the information sheet that you would like to clear up?

a) **You occupy a very important role to help junior doctors. Could you please describe your position and responsibilities?**
   - *Probes:*
     - *Which body/committee/team?*
     - *Which hospitals?*
     - *What aspects of informing planning at district hospitals concern you?*
b) **Could you please describe your impression of the functioning of the district hospitals in your area over time?**
   - *Probes:*
     - *Specific hospitals – Victoria, Grey, Fort Beaufort, Stutterheim, Bhisho etc*
     - *Any insight into changes when doctors remain on at facilities?*
c) **How would you explain the support structures for the junior doctors at peripheral hospitals?**
   - *Probes:*
     - *Are these standard at facilities?*
     - *Who oversees the support structures?*
     - *Are there regular meetings or does support occur on an 'as needed' basis?*
d) **Where would you say are the support structures better in place and why do you feel that way?**
e) **How would you describe the effect on the development of junior doctors of well-implemented support structures at facilities?**
   - *Probes:*
     - *Are the junior doctors more likely to remain on at their facility post comm serve?*
     - *Do they get more involved with more diverse/proactive aspects of the hospital?*

f) **What do you think would be the benefit of having junior doctors feeling more supported?**
   - *Probes:*
     - *To the hospital*
     - *To the community*
     - *For the doctors ongoing career*

g) **Which body would be responsible for adapting/improving existing support structure planning within the junior doctors work places?**
   - *Probes:*
     - *At national level?*
     - *At provincial level?*
     - *At district level?*
     - *At facility level?*

h) **How would you recommend the support structures be improved?**

i) **What would you like to see happening for the junior doctors and facilities as they develop going forwards?**
   - *Probes:*
     - *Junior doctor development/engagement with communities?*
     - *Facility functioning/satisfaction levels with staff and community?*

j) **Do you have any further remarks or questions for me that we can discuss?**

Thank you for your valuable time.

APPENDIX F: Permission e-letter for carrying out research at the district hospitals

For Attention:
CEO/Clinical Manager of [NAME of District Hospital]
ADDRESS of District Hospital

[Date] 2021

Dear [Name]

Re: Request for permission to conduct research at [Name of District Hospital]

I am writing to request your permission to perform research at your facility. My name is Simon Comley and I am a student at the University of the Western Cape currently completing my Masters in Public Health. I am required to write up a mini-thesis in order to complete my qualification. As part of the mini-thesis aspect of my training I am required to perform research and present this to our faculty. The title of my research project is "An exploration of the perceived extent and quality of clinical and academic support provided to junior doctors working in peripheral hospitals in a health district in the Eastern Cape Province, South Africa".

The research will involve my interviewing one or two of your junior doctors via a telephonic interview at a time that is convenient for them and that does not interfere with their responsibilities of functioning in your facility. The research aims to explore the junior doctors' contexts and perceptions of clinical and academic support they are able to access within their work place. Ultimately the research may guide further interventions to enhance the confidence and competence of the junior doctors thus improving their development and ability to provide better patient care for your facility.

The research is purely explorative with no experiments or patient care planned to be affected. The research proposal has been granted ethical approval from the University of the Western Cape with reference number: BM21/8/12

The results of the study will be available in 2022 and I would like to share them with your facility when they are.

I trust this provides enough information for you to consider granting permission but if any other information is required then please do contact me with the details below.

Yours sincerely

Dr Simon Comley
Internal Medicine Department
Cecilia Makiwane Hospital
Billie Road
Mdantsane
5219

comleysimon@gmail.com
076 815 4572

APPENDIX G: Doctors permission letter

For attention: Doctor as participant in study

29 September 2021

Dear Doctor

Thank you for your interest in this study. I trust that the information sheet has given you the information you require but please be aware that I am available to answer questions at any stage. I require further permission from you to allow me to use your responses as a doctor for the findings in my research. Your responses will still be anonymous but because of the nature of asking questions of doctors around their jobs and treating of patients I will require this extra permission. I also require your permission as part of the POPI act to use your personal information particularly as it pertains to your medical training and your contact details for the purposes of the study. I require to retain your contact details for the duration of the study in order to maintain clear channels of communication with you. The information shared will be kept confidential and will only be used by me and accessible to me.

I, Dr _____ hereby give permission for my responses as they pertain to my working environment and potential patient treatment sensitive information to be used in this study. Furthermore I give consent for my personal information to be retained for the purposes of the study. I understand that the responses will be kept confidential and that the findings will be used to guide better support structures for junior doctors.

Signed:

Witness:

Witness sign: