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TRANSFORMATION OF HUMAN RESOURCES FOR HEALTH IN SOUTH AFRICA:

Contributions to knowledge and policy

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Published work submitted to the School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Doctor of Science (DSc) in Medicine

26 September 2022

DECLARATION

I, Laetitia Charmaine Rispel, declare that my publications submitted for the degree of Doctor of Science (DSc) in Medicine (Med) represents work carried out by me or in which I participated actively.

My contribution to these publications is listed below.

1. I am the sole author of four publications (4, 18, 32, 51), first author of 24 publications (7, 8, 9, 16, 29, 21, 24-31, 34, 42, 45-48) and senior author of nine publications (10, 12, 13, 15, 17, 19, 22, 35, 41, 44). These publications arose from research where I was the principal investigator, responsible for conceptualisation, study design, execution, contribution to analysis, interpretation, preparation, and finalisation of the manuscripts.
2. Five publications arose from the research conducted by higher degree candidates (14, 33, 36-38). However, all these publications were completed AFTER the award of the relevant degree, hence are permissible for submission in terms of the rules of the University of the Witwatersrand, Johannesburg. All other joint publications with postgraduate students are listed for information in Annexure 1, and do not constitute part of the DSc (Med).
3. Seven publications arose from research projects where I shared the task equally with collaborators and contributed substantially to conceptualisation, writing, editing and finalisation (5, 11, 23, 39-41, 43). These collaborators have provided permission for the inclusion of the articles in the DSc (Med).
4. Two publications arose from my direct involvement with health policy formulation (49, 50), either as a member of the Health Ministerial Task Team (49), or as Chair and Leader of the Task Team (50).

The DSc publications have not been submitted before for any degree or examination at this or any other University.



Signature

Laetitia C. Rispel

Date: 26 September 2022

DEDICATION

To the beautiful and loving memories of my late mother, Maria, and my late aunt Joan

ACKNOWLEDGEMENTS

I owe a debt of gratitude to two powerful women, colleagues, friends, and mentors - Professor Beverley Kramer and Professor Judith Bruce. I thank you both for your encouragement, guidance, friendship and support over many years, and your honest and constructive critique that helps me to grow both professionally and personally. Judy, thank you for planting the seed of the DSc at the 2018 PhD graduation ceremony. Beverley, thank you for your generous friendship, and for reading and commenting on the many drafts with such patience and enthusiasm. I acknowledge and appreciate your thoughtful, constructive, and detailed comments that have made this DSc journey an absolute pleasure.

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I acknowledge with gratitude the colleagues at Oxford University who have enhanced my stay in the beautiful city of Oxford and who have assisted in various ways: Dr Rebecca Surender for sharing her office with me, Dr David Kerr for AfOx programme assistance, and Sherif Akil for always going out of his way to help, for his IT and printing assistance and for our many insightful conversations.

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ABBREVIATIONS AND ACRONYMS

AfOx	Africa Oxford [Initiative]
CI	Confidence Interval
CLP	Cleft Lip and/or Palate
COVID-19	Coronavirus Disease 2019
CTOPA	Choice on Termination of Pregnancy Act
DoH	Department of Health
DSc	Doctor of Science
DSc (Med)	Doctor of Science in Medicine
FGD	Focus Group Discussion
HEEG	Health, Employment and Economic Growth
HIC	High Income Country
HLM	Health Labour Market
HPCAP	Health Policy and Capacity Building
HPCSA	Health Professions Council of South Africa
HREC	Human Research Ethics Committee
HRH	Human Resources for Health
HS	Health System
GHWA	Global Health Workforce Alliance
IPC	Interprofessional Collaboration
ISQua	International Society for Quality in Health Care
KI	Key Informant
KIIs	Key Informant Interviews
LMG	Leadership, Management and Governance
LMICs	Low- and Middle-Income Countries
LSA	Local Service Area
MJH	Multiple Job Holding
MSM	Men who have Sex with Men
MTT	Ministerial Task Team
NDoH	National Department of Health
NGO	Non-Governmental Organisation
NHI	National Health Insurance
N&MC	Nursing and Midwifery Council (of Ghana)

NRF	National Research Foundation
OSD	Occupation Specific Dispensation
PHC	Primary Health Care
PMTCT	Prevention of Mother-to Child Transmission (of HIV)
RDP	Reconstruction and Development Programme
SANC	South African Nursing Council
SAPC	South African Pharmacy Council
SARChI	South African Research Chairs Initiative
SDGs	Sustainable Development Goals
SEC	Section [of the DSc]
UHC	Universal Health Coverage
UN	United Nations
WHO	World Health Organization
WHR	World Health Report
WiSDOM	Wits Longitudinal Study to Determine the Operation of the labour Market among its health professional graduates
Wits	University of the Witwatersrand

SECTION 1: BACKGROUND AND CONTEXT

1.1 Introduction

A health system is defined as "all organisations, people, and actions whose primary intent is to promote, restore, or maintain health. This includes the organisation of people, institutions, and resources (also known as the building blocks) that deliver health care services, as well as intersectoral action to address the determinants of health" (WHO, 2007, p. 2). The core goals of health systems are to improve population health outcomes, ensure responsiveness to communities, and make efficient use of available resources (WHO, 2000).

One of the building blocks of a health system is Human Resources for Health (HRH) or the health workforce (WHO, 2007), defined as "all persons engaged in actions whose primary intent is to enhance health" (WHO, 2006, p. xv). HRH consist of health care providers, such as nurses and doctors, and health managers and support workers, such as clerks. HRH are integral to the health system within which they function. The corollary is that the performance of a health system is dependent on the sufficient numbers and mix of HRH who are competent, responsive, productive and equitably distributed (WHO, 2007).

The relationship between the building blocks and the goals of a health system is illustrated in Figure 1.

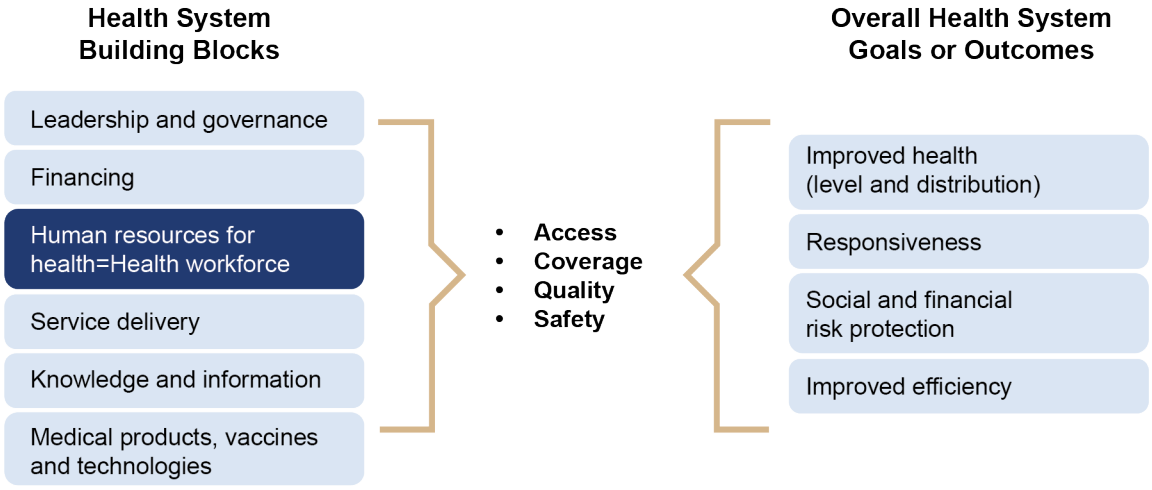

Figure 1: Relationship between the health system building blocks and outcomes

Source: Adapted from World Health Organization (WHO, 2007, p. 3).

This degree of Doctor of Science (DSc) in Medicine focuses on my contributions to knowledge and policy in the transformation of HRH in South Africa over more than two decades. The DSc brings together several strands at both conceptual and methodological levels: (1) HRH and its intersection with the health system; (2) leadership, management, and governance of HRH; (3) the health labour market and HRH; and (4) the performance of HRH. A major cross-cutting issue that complements the scholarly contribution is health policy engagement, influence and capacity building.

This introductory section provides the background to and context of the DSc and is divided into the following sub-sections: Section 1.2 summarises the global context and HRH, while Section 1.3 provides a brief overview of the South African context and HRH. Section 1.4 presents my journey to this DSc. The final Section 1.5 outlines the structure of the DSc

1.2 Global Context and Human Resources for Health

1.2.1 History and policy context

In 2000, the World Health Report (WHR) focused on improving the performance of health systems (WHO, 2000). The WHR underscored the relationship between the design, management and financing of health systems on the one hand, and population health outcomes, notably disease, disability, and death on the other hand (WHO, 2000). The report emphasised the centrality of HRH, noting that: "the performance of health care systems depends ultimately on the knowledge, skills and motivation of the people responsible for delivering services" (WHO, 2000, p. 77). The WHR recognised that health systems are labour intensive, that HRH constitute the biggest expenditure item, and that HRH and the other building blocks (infrastructure, equipment, medicines) should be in equilibrium (WHO, 2000).

In 2004, the Joint Learning Initiative, a consortium of more than 100 health leaders, recommended that HRH were central to achieving sustainable health systems and to managing health crises (Chen et al., 2004). Consequently, the 2006 WHR focused on HRH (WHO, 2006). Entitled, *Working Together for Health,* the report described HRH as "the personification of a [health] system's core values of caring for people, easing pain and suffering, promoting health, preventing disease and mitigating risk" (WHO, 2006, p. xv). Table 1 summarises key aspects on HRH contained in the 2006 WHR (WHO, 2006).

Table 1: Key aspects on human resources for health in 2006 World Health Report

Key messages

• HRH are:
  ➢ Central to advancing health.
  ➢ Essential to achieve global and national health goals.
• Driving forces are context (globalisation, public sector reforms), health needs (e.g., disease burden) and health system developments (e.g., financing, technology).
• The global health workforce comprises health service providers such as doctors and nurses (two-thirds) and health management and support workers such as clerks and cleaners (one third).
• The numbers and quality of HRH are positively associated with immunisation coverage, primary health care (PHC) and infant, child and maternal survival.
• Key HRH challenges include numbers (shortages or excesses), appropriate education and training, skills mix, maldistribution both among and within regions and countries, international migration and working conditions (compensation, non-financial incentives, workplace safety).
• Gender imbalances: men tend to dominate the medical profession, while women tend to dominate the nursing profession.

Recommendations

• Proposed a "working lifespan" approach to the dynamics of the workforce:
  ➢ *Entry:* preparing the workforce through planning, strategic investments in education and ethical recruitment.
  ➢ *Workforce*: enhancing worker performance through improved HRH management, compensation, lifelong learning, systems support.
  ➢ *Exit:* migration, career choice, attrition, safe work environment, retirement planning.
• National leadership and global solidarity are essential for implementation.

Source: Adapted from the 2006 World Health Report (WHO, 2006).

The publication of the seminal 2006 WHR led to the establishment of the Global Health Workforce Alliance (GHWA) (High-Level Commission on Health Employment and Economic Growth, 2016). The Alliance was an independent platform with the mandate and capacity to bring together all relevant stakeholders in the field of HRH (High-Level Commission on Health

Employment and Economic Growth, 2016). The GHWA also served as a catalyst for increased scholarly and policy attention on HRH (Cometto et al., 2013).

In 2007, the WHO's framework for action on strengthening health systems to improve population health outcomes reiterated HRH as one of the most important building blocks of a health system (WHO, 2007).

In the period between 2006 and 2016, the GHWA convened several global forums on HRH. A 2011 evaluation of the GHWA highlighted its strengths of global HRH advocacy, convening the global HRH forums, its location at WHO in Geneva, its governance, and an ability to work at global, regional and country levels (Vaughan et al., 2011). However, some of the reported challenges included lack of innovation in renewing its strategy, increasing competition for donor funds and with other organisations, and limited professional HRH expertise (Vaughan et al., 2011). In 2016, the Alliance completed its ten-year mandate and transitioned into the Global Health Workforce Network.

A decade after the 2006 WHR that focused on HRH, the High Level Commission on Health, Employment and Economic Growth (HEEG) was established (Buchan, Dhillon, & Campbell, 2017). The HEEG recommended investment in the health sector, and proactive strategies to prevent a projected shortfall of around 18 million health workers, especially in low- and middle-income countries (LMICs) (High-Level Commission on Health Employment and Economic Growth, 2016). Although the call for investment in HRH is similar to that made in 2006, the report underscored the positive correlation between investment (including research) in HRH and economic growth (High-Level Commission on Health Employment and Economic Growth, 2016). Hence, the HEEG report reflects a paradigm shift from framing HRH and the health system as consuming money, to recognising the contribution of HRH and the health system to economic and societal well-being (Buchan et al., 2017).

In the same year (and preceding the HEEG report), the WHO released the Global Strategy on HRH (WHO, 2016) to give effect to the global target of achieving universal health coverage (UHC), enshrined in the Sustainable Development Goals (SDGs) (United Nations, 2015). Notwithstanding insufficient investment in HRH and patchy implementation, there is now global recognition that an adequately skilled, productive and well-motivated health workforce is a prerequisite for UHC (Crisp & Chen, 2014; United Nations., 2019).

WHO declared 2020 as the International Year of the Nurse and Midwife, because nurses and midwives constitute the majority of health care providers globally (WHO, 2020b). However, the prioritisation of nurses and midwives was overshadowed by the COVID-19 pandemic. The pandemic has underscored the criticality of HRH, while highlighting pre-existing HRH challenges of under-investment, chronic shortages, maldistribution and poor working conditions (WHO, 2020a; Zapata, Buchan, & Azzopardi-Muscat, 2021). WHO designated 2021 the International Year of Health and Care Workers, both to acknowledge their dedication in the fight against the COVID-19 pandemic, and to highlight the urgency of investing in health workers https://www.who.int/campaigns/annual-theme/year-of-health-and-care-workers-2021.

Figure 2 provides a roadmap of the key global HRH milestones since the release of the seminal 2006 World Health Report (Buchan et al., 2017; Cometto et al., 2013; Global Health Workforce Alliance & WHO, 2013; High-Level Commission on Health Employment and Economic Growth, 2016; WHO, 2016; WHO, 2019, 2021a, 2021b; Zapata et al., 2021).

1.2.2 A global HRH crisis

The existence of a global HRH crisis is undisputed, characterised by shortages, maldistribution of health professionals, mismatch between population health needs and health professional training and education (Buchan et al., 2017; Crisp & Chen, 2014; High-Level Commission on Health Employment and Economic Growth, 2016; WHO, 2016). The global HRH crisis is exacerbated by demographic changes and the changing burden of disease (Crisp & Chen, 2014).

In 2013, the global needs-based shortage of health workers was estimated to be in excess of 17 million, with the largest relative shortage of 4.2 million in the Africa Region (Buchan et al., 2017). Modelling suggests that the global needs-based shortage would be around 14 million in 2030, the target date for the achievement of the SDGs (Buchan et al., 2017). The 2030 projected shortages are estimated to be worse in the Africa region where an estimated 6 million health workers will be needed (Buchan et al., 2017).

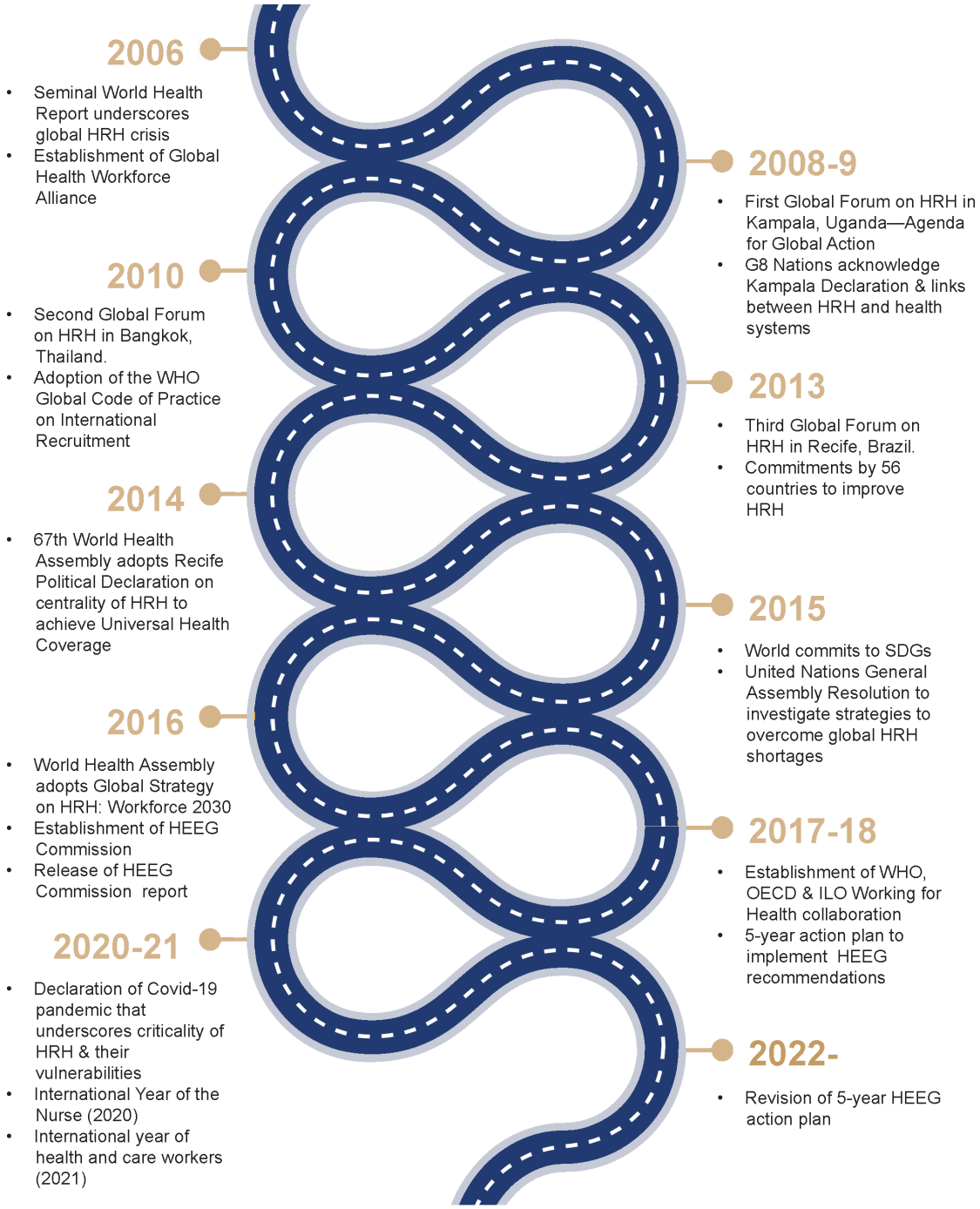

Figure 2: Roadmap of global HRH milestones, 2006-2021

Sources: (Buchan et al., 2017; Cometto et al., 2013; Global Health Workforce Alliance & WHO, 2013; High-Level Commission on Health Employment and Economic Growth, 2016; WHO, 2016; WHO, 2019, 2021a, 2021b; Zapata et al., 2021).

Notwithstanding progress on HRH since 2006, the HEEG emphasised that global health worker demand exceeds supply, with a growing gap, especially in LMICs (High-Level Commission on Health Employment and Economic Growth, 2016). The COVID-19 pandemic has exacerbated the global HRH crisis, with health workers comprising more than 10% of all new COVID-19 cases in the first three months of the pandemic in 2020, thus impacting on their availability (WHO, 2021b). Importantly, WHO estimated that worldwide, more than 100 000 health workers lost their lives due to COVID-19, thus exacerbating the HRH crisis (WHO, 2021a).

Although the quality of reported data remains problematic, Figure 3 shows the percentage of countries with insufficient health care professionals for the period 2013–2018 (WHO, 2019). Figure 3 demonstrates both the geographical inequities as well as the HRH crisis in the majority of WHO regions, with the exception of Europe where around 10% of countries experienced nursing shortages during the review period (WHO, 2019).

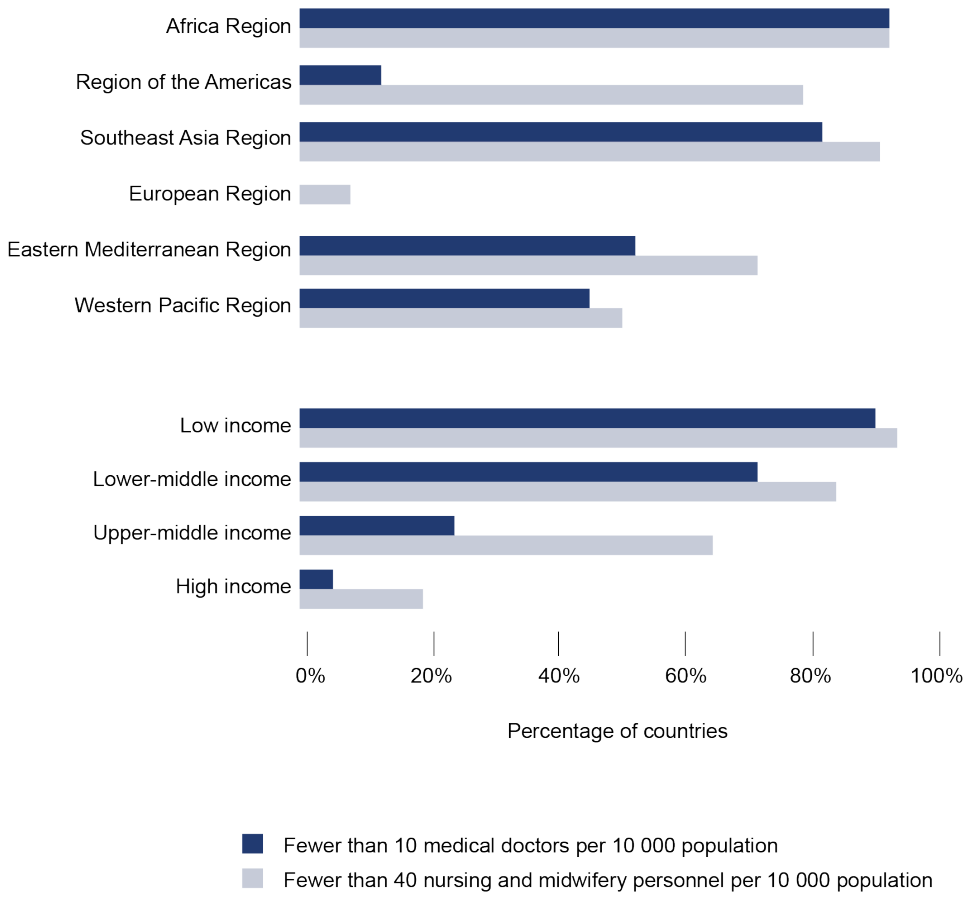

Figure 3: Percentage of countries with insufficient health care professionals, 2013–2018

Source: 2019 World Health Statistics (WHO, 2019, p. 8).

1.3 South Africa and HRH

1.3.1 History and policy context

South Africa is a constitutional democracy, with health a concurrent responsibility of both national and provincial government (Republic of South Africa, 1996).

The history and context of HRH cannot be reviewed in isolation of the legacy of apartheid that bequeathed a fragmented, racially segregated health system, widespread political, social and economic inequalities and deliberate policies to deny or restrict access to all forms of education for the black majority (Coovadia et al., 2009; The Presidency, 2019). These inequalities have implications on and for, HRH and for the discourse on a high-quality health system (Coovadia et al., 2009; van Rensburg, 2014).

The 1994 Reconstruction and Development Programme (RDP) was an ambitious policy framework to inform all legislation, policies and programmes (including health) of the new democratic government (African National Congress, 1994). The RDP aimed to address apartheid's socio-economic problems, alleviate poverty, the country's complex disease burden, and develop and expand social services, within an equity and human rights framework (African National Congress, 1994). The RDP envisaged a unified national health system that would bring together all relevant stakeholders, including public and private health providers. The RDP also specified human resources for the national health system, emphasising critical aspects of teamwork, incentives to attract staff to under-served (especially rural) areas, redistribution of personnel, attracting health workers in private practice back into the public sector, and the transformation of health worker education and training (African National Congress, 1994).

The 1997 White Paper for the Transformation of the Health System in South Africa was one of the first democratic government policy documents that outlined a policy position on HRH (Department of Health, 1997). The policy intentions on HRH were revolutionary in many respects, predating the global emphasis on HRH by almost a decade (Table 2).

Table 2: Synopsis of post-apartheid policy intentions on human resources for health

Recognition of:

- Contribution of HRH to health and social development.
- Relationship between meeting population health needs and recruitment, selection, and placement of HRH.
- Importance of equity, redress, and the national imperative for HRH to reflect the demographic profile of South Africa.
- Links between design and content of health professional education programmes, HRH competencies, and their geographical distribution.
- Importance of competent and caring health workers working in multidisciplinary teams.
- Criticality of creating or promoting "a new culture of health sector management".

Source: Adapted from Chapter 4 of the White Paper for the Transformation of the Health System, (Department of Health, 1997).

In the first decade of democracy, HRH developments were also influenced by other transformative laws and policies, such as the 1997 White Paper on Human Resource Management in the Public Service (Department of Public Service and Administration, 1997), the 1995 Labour Relations Act (Republic of South Africa, 1995) and the 1998 Employment Equity Act (Republic of South Africa, 1998).

In 1999, the National Department of Health (NDoH) established a task team on HRH. Entitled, *Human Resources for Health: A national strategy,* the report made recommendations in three key areas: health workforce needs and/or planning; health workforce training and education; and a health systems approach to health management and organisational development (Pick et al., 2001).

The 2003 National Health Act, promulgated in 2004, provides a comprehensive legal framework to give effect to the 1997 White Paper. The National Health Act makes provision for the development of policy and guidelines for the provision, distribution, training, management and utilisation of HRH within the national health system (Republic of South Africa, 2004). The Act establishes a Forum of Statutory Health Professions Councils to enable co-ordination among the different health professions (Republic of South Africa, 2004).

In 2004, the National Department of Health published a *Strategic Framework for Human Resources for Health* (NDoH, 2004). The 2004 framework provided a set of guiding principles, issues for discussion and debate, and identified HRH areas where more research or information was required (NDoH, 2004).

In 2012, the *Human Resources for Health South Africa: HRH Strategy for the Health Sector: 2012/13-2016/17* was published (NDoH, 2011). The 2012 Strategy provided an analysis of HRH trends, challenges and proposed recommendations to inform strategic priorities in three themes: supply and equity; education, training and research, and the working environment (NDoH, 2011).

All three documents reference other major health sector policies: the 1997 White Paper for the Transformation of the Health System, National Health Strategic Priorities, the National Health Act, the proposed NHI system and PHC Re-engineering (NDoH, 2004, 2011; Pick et al., 2001). All three strategies are concerned with proactively addressing inequities and maldistribution in the supply of HRH, and in improving the workplace performance and job satisfaction of health workers; all three converge on the need to strengthen critical areas of HRH governance, notably planning, education and information (NDoH, 2004, 2011; Pick et al., 2001).

Other important publications that focus on HRH challenges, and their intersection with the performance of the South African health system include the 2017 White Paper on the National Health Insurance (NHI) system (NDoH, 2017), the 2018 Presidential Health Summit that produced a social compact (South African Government, 2019) and the 2019 report of the Health Market Inquiry into the private health care sector (Competition Commission of South Africa, 2019).

1.3.2 South Africa's HRH crisis

South Africa has higher national health worker densities than most other African countries, as well as strong legal frameworks and cyclical national-level HRH strategic plans (NDoH, 2020). However, the country continues to face staff shortages, inequities in the distribution of HRH between urban and rural areas, and between the public and private health sectors, and sub-optimal performance and management of its health workforce (van Rensburg, 2014; Van Ryneveld, Schneider, & Lehmann, 2020). This is exacerbated by the absence of consolidated

national health workforce data, inclusive of both the public and private health sectors (NDoH, 2020).

All health professionals are required to register annually with their respective professional councils. However, the number of practising health professionals remains contested. The council data over-estimate the numbers because the information on registered health professionals includes those who have left South Africa, retired, or who work outside their profession (NDoH, 2020). Nonetheless, Table 3 shows the 2016 data on the health professionals registered with the Health Professions Council of South Africa (HPCSA), the South African Nursing Council (SANC) and the South African Pharmacy Council (SAPC) (NDoH, 2020).

Similar to the global situation, the COVID-19 pandemic has both underscored the criticality of HRH and exposed the crisis of staff shortages, maldistribution and poor management and governance of HRH in South Africa (Kulkarni et al., 2021; Oxfam South Africa, 2020). By December 2021, an estimated 1 233 health workers had died, translating into a case fatality rate of 12.5% (National Institute for Occupational Health, 2022).

Table 3: Numbers of registered health professionals in South Africa, 2016

Health worker categories	Number
General medical practitioners	29 311
Medical specialists	14 192
Dental practitioners	6 155
Dental therapists	661
Professional nurses	140 598
Enrolled nurses	73 558
Nursing assistants	73 302
Pharmacists	14 412
Occupational therapists	4 792
Physiotherapists	7 183
Psychologists	8 415
Radiographers	8 072
Environmental health practitioners	3 585
Clinical associates	577

Source: National Department of Health (NDoH, 2020, p. 28).

1.4 My DSc Journey

My journey to this Doctor of Science (DSc) in Medicine degree can be divided into three, interlinked and overlapping phases.

The first phase, entitled *Shaping HRH Developments in a Democratic South Africa*, corresponds to the period from 1990 until 1998. This phase includes my participation in the historic Maputo Health and Welfare Conference and the subsequent publication of the conference proceedings in Critical Health. The Critical Health publication laid the groundwork for HRH policies in the new democracy. This phase also included my master's degree research on nurses' perceptions of different types of representative organisations in a democratic South Africa and my PhD research on need norms for primary health care (PHC) services, including for staffing. Although no publications arose from the PhD, its results fed into subsequent national health policies on norms and standards.

The second phase, entitled: *Managing and Leading Health System and HRH Transformation*, corresponds to the period from 1996-2006, including my role as the Head of the Gauteng Provincial Department of Health. This period includes the implementation of many of the progressive national laws and the development and implementation of health policies in Gauteng province.

The third, and current phase, entitled: *Researching HRH and Health System Transformation*, corresponds to the period from 2006, when I returned to the academy, until 2021, when my DSc concept note was accepted, and when I registered for the DSc. Highlights from this period include leading a large, multi-million-rand health policy research project on nurses in South Africa and being awarded a Research Chair as part of the South African Research Chairs Initiative (SARChI). The latter is a flagship programme of the National Research Foundation (NRF) of South Africa (https://www.nrf.ac.za/about-us/). The NRF is a statutory government mandated research and science development agency that funds research, human capacity development, and research infrastructure to promote knowledge production across all disciplinary fields in South Africa (National Research Foundation, 2020). The SARChI Chairs programme is designed to attract and retain excellence in research and innovation at South African public universities with a long-term investment trajectory of up to 15 years (https://www.nrf.ac.za/about-us/).

My SARChI Chair is the first chair at a South African or African university that focuses on HRH. Another highlight during this third phase is my appointment as the chair and technical lead of the South African Health Ministerial Task Team (MTT) to develop the country's 2030 HRH strategy.

This journey is illustrated in Figure 4.

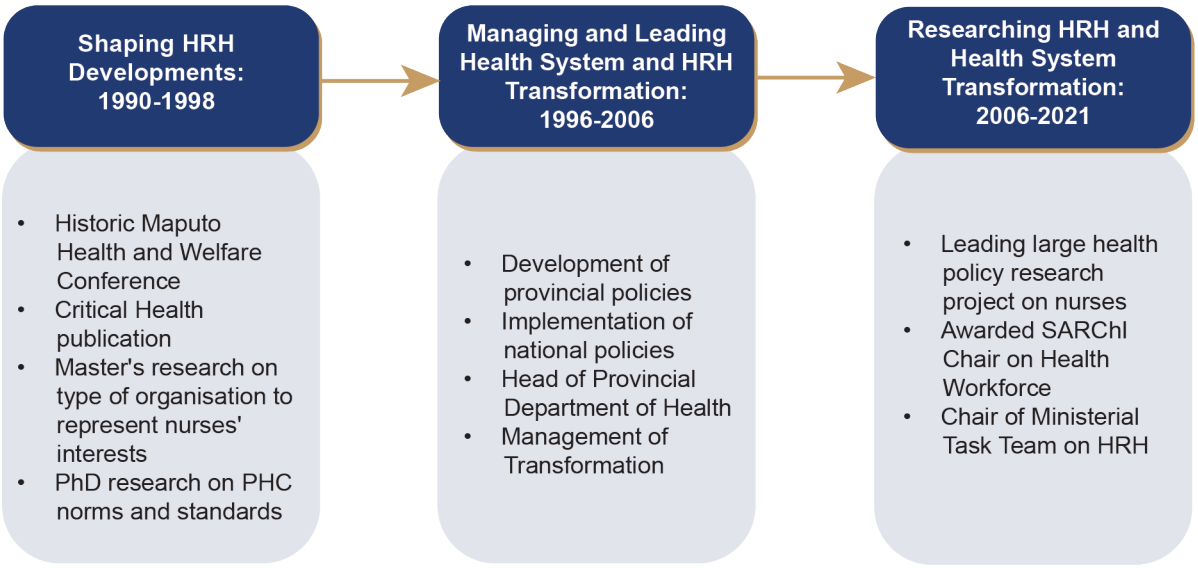

Figure 4: Historical timeline of my DSc journey

1.5 Structure of the Integrating Narrative

The remainder of the integrating narrative is divided into the following sections:

Section 2 presents my research and publications on Human Resources for Health (HRH) and its intersection with the South African Health System.

Section 3 presents a range of research publications on leadership, governance and management (LMG) of HRH, which is the one of the thematic research areas of my SARChI Chair.

Section 4 focuses on my research and publications on the South African Health Labour Market (HLM), another thematic research area.

Section 5 presents my research and publications on the performance of HRH, the third and final thematic research area.

Section 6 presents publications and research that focus on health policy influence and capacity building.

Section 7 is a short conclusion that highlights the scholarly and/or health policy contribution of my DSc publications.

The structure of each of the subsequent sections 2-6 is similar. In each section, I provide a brief overview of the theme, followed by a list and summary of each publication, highlighting its scholarly and/or health policy contribution. The publication links are also provided. Each section concludes with a synopsis that serves as a reminder of the focus of the relevant section. For ease of reference, the actual publications are contained in separate zipped files, each marked with the section number, abridged title, and publication numbers.

SECTION 2: HUMAN RESOURCES FOR HEALTH AND THE SOUTH AFRICAN HEALTH SYSTEM

2.1 Overview

As illustrated in the introductory section of this DSc, HRH enable the optimal functioning and performance of any health system, with the goal of improving population health outcomes. This section of the DSc illustrates the intersection between human resources for health (HRH) and the performance of the South African health system, and the contribution of my publications to knowledge and policy.

2.2 Summary of HRH Publications and the South African Health System

This **Section 2** consists of nine publications, listed below, followed by a summary of each publication.

1 **Rispel L**, Schneider H. Personnel development for health in South Africa. *Critical Health,* 1990; **31/32**: 38-40.

2 **Rispel L**, Peltzer K, Phaswana-Mafuya N, Metcalf C, Treger L. Assessing missed opportunities for the prevention of mother-to-child HIV transmission in an Eastern Cape local service area. *South African Medical Journal,* 2009; **99** (3): 174–179. https://www.ajol.info/index.php/samj/article/view/50740

3 **Rispel LC**, de Jager P, Fonn S. Exploring corruption in the South African health sector. *Health Policy and Planning*, 2016; **31**: 239–249. https://doi.org/10.1093/heapol/czv047

4 **Rispel L.** *Analysing the progress and fault lines of health sector transformation in South Africa.* Chapter 2 in: Padarath A, King J, Mackie E-L, Casciola J (editors). South African Health Review 2016. Durban: Health Systems Trust, 2016:17-23. URL: http://www.hst.org.za/publications/south-african-health-review-2016

5 Macarayan EK, García-Elorrio E, Rodriguez VE, Teijeiro ME, Yakob B, Baye K, Deribe, K, Oubova, SV, García-Saisó S, Pérez Cuevas R, Aryal A, Ho BL, Ndiaye Y, Konate N, **Rispel L,** Masilela T, Yahya T, Mohamed MA, Eliakimu E, Gage A. National Commissions on High Quality Health Systems: activities, challenges, and

future directions. *The Lancet Global Health,* 2019; **7** (2): e179-180. https://doi.org/10.1016/S2214-109X(18)30528-X

6 **Rispel LC**, Shisana O, Dhai A, Dudley L, English R, Grobler G, Masilela TC, Patel RH, Puren A, Rensburg R, Stewart J, Whittaker S, Wolvaardt G. *Achieving high-quality and accountable universal health coverage in South Africa: a synopsis of the Lancet National Commission Report.* Chapter 6 in: Moeti T, Padarath A (editors). South African Health Review 2019. Durban: Health Systems Trust, 2019: 69-80. URL: http://www.hst.org.za/publications/Pages/SAHR2019.

7 **Rispel LC,** Barron P**.** Valuing human resources: Key to the success of a National Health Insurance System**.** *Development Southern Africa,* 2012; **29** (5): 616-635. https://doi.org/10.1080/0376835X.2012.730974

8 **Rispel LC**, Padarath A. *South African Health Review 2018* [Editorial]. Durban: Health Systems Trust, 2018: vii-ix. https://www.hst.org.za/publications/Pages/SAHR2018.aspx

9 **Rispel LC,** Marshall C, Matiwane B, Tenza IS. Innovations, contestations and fragilities of the health system response to COVID-19 in the Gauteng Province of South Africa. *PLoS ONE,* 2021; **16** (12): e0261339. https://doi.org/10.1371/journal.pone.0261339

The 1990 Critical Health article of Rispel and Schneider (**Publication 1)** underscored the key aspects to be taken into account in HRH policies and development in a post-apartheid South Africa (Rispel & Schneider, 1990). The publication followed the Maputo Health and Welfare Conference held in April 1990 after the unbanning of political organisations in exile (Maputo Health and Welfare Conference, 1990). The significance of the conference is that it brought together for the first time health and social welfare workers, the African National Congress (ANC), anti-apartheid activists from the United States of America, the United Kingdom and Europe, as well as anti-apartheid, progressive health organisations in South Africa, and their counterparts from Mozambique and other Frontline States (Maputo Health and Welfare Conference, 1990). Importantly, the conference played a critical role in "formulating specific proposals, strategies and policies for the structure, organisation, financing and development of

health and welfare services for a truly democratic South Africa" (Maputo Health and Welfare Conference, 1990, p. 4).

In 1990, Rispel and Schneider (**Publication 1)** provided an astute analysis of the situation, notably the problems of maldistribution, lack of national HRH plans and policies for the training, deployment and management of health personnel, inappropriate health professional training, poor management of personnel, the vested interests and power of health professionals, and dealing with the expectations of communities (Rispel & Schneider, 1990). **Publication 1** also presented the prerequisites for HRH policies to be successful, concluding with a series of issues requiring further discussion and/or research (Rispel & Schneider, 1990). **Publication 1** contributed both to HRH policies contained in the RDP (African National Congress, 1994) and the subsequent 1997 White Paper for the Transformation of the Health System in South Africa (Department of Health, 1997).

Publications 2-6 focus on various aspects of the [sub-optimal] performance of the South African health system, and the contribution or role of the health workforce to solving these problems: missed opportunities for prevention (Rispel et al., 2009), corruption (Rispel, De Jager, & Fonn, 2016); progress and fault lines of health sector transformation (Rispel, 2016) and quality of care both globally (Macarayan et al., 2019) and in South Africa (Rispel et al., 2019b).

Publication 2 is based on a study that examined missed opportunities in the prevention of mother-to-child-transmission (PMTCT) of HIV infection (Rispel et al., 2009). In the study, we defined a missed opportunity as "a failure to use an opportunity for PMTCT at an appropriate health service encounter" (Rispel et al., 2009, p. 175). The research was conducted in the Kouga Local Service Area (LSA), bordering the Nelson Mandela Bay Municipality in the Eastern Cape, with an estimated 2007 population of around 400 000 and an estimated 2007 HIV prevalence of 19.9% (Rispel et al., 2009). The Eastern Cape Department of Health selected the Kouga LSA for PMTCT programme strengthening. Using mixed methods, **Publication 2** was one of the first empirical studies to assess the missed opportunities in the implementation of the PMTCT programme in the Kouga LSA (Rispel et al., 2009). The study found that staff had high levels of awareness of HIV policies, and most had received some relevant training on PMTCT. However, the average uptake of Nevirapine at clinic level was 56% (Rispel et al., 2009). There

were many missed opportunities for PMTCT, with 67% of pregnant women tested for HIV and only 43% of antenatal care attendees tested during a previous pregnancy (Rispel et al., 2009).

The recommendations in **Publication 2** included the strengthening of the formal health sector, with HRH listed as one of the priority areas for intervention (Rispel et al., 2009). The findings led to an increased awareness among health service managers of missed opportunities and influenced the design and implementation of subsequent technical interventions in the Kouga LSA.

Corruption, defined by Transparency International as 'the abuse of entrusted power for private gain', disproportionately affects the most vulnerable members of society (Transparency International, 2013). **Publication 3** is one of the first scholarly articles that explored corruption in the South African health sector (Rispel et al., 2016). The study used agency theory as the conceptual framework, and combined data from the Auditor-General of South Africa, semi-structured interviews with health sector key informants and a three-year content analysis of print media reports to put the spotlight on health sector corruption (Rispel et al., 2016). The study found that corruption is influenced by adverse agent selection, lack of mechanisms to detect corruption and a failure to sanction those involved in corrupt activities (Rispel et al., 2016). The recommendations in **Publication 3** are that a combination of interventions is needed to prevent or reduce corruption, including effective government to enforce laws, appropriate systems, and mechanisms to encourage or ensure accountability (Rispel et al., 2016). HRH play a critical role in the prevention or mitigation of corruption, notably the meritocratic appointment of competent and ethical public servants whose values are aligned with the goals of the health system (Rispel et al., 2016). The article contributed to the map of Transparency International that focuses on pathways to corruption at a global level.

Publication 4 explores the disconnections between progressive and far-reaching health policies in South Africa and the fault lines of implementation (Rispel, 2016). Drawing together my own research studies over several years, three fault lines are identified: tolerance of ineptitude as well as leadership, management and governance failures; lack of a functional district health system, and inability or failure to deal decisively with the HRH crisis (Rispel, 2016). **Publication 4** underscores the negative consequences of these fault lines for patients, health professionals and for policy implementation (Rispel, 2016). Importantly, frontline health care providers struggle to uphold their professional code of ethics and provide good quality of care,

amidst unsupportive management environments, staff shortages and health system deficiencies (Rispel, 2016).

Improving the quality of care provided by health workers remains a global and national priority. **Publication 5** analysed the lessons learned from nine national commissions established as part of the Global Lancet Commission on achieving high-quality universal health coverage (UHC) especially in LMICs (Macarayan et al., 2019). Across nine countries in which national commissions were established, the common reported challenges included the fragmentation of quality-of-care initiatives, lack of transparency, and lack of health system-wide interventions. The article underscores the importance of context and HRH to achieving high-quality health systems in LMICs (Macarayan et al., 2019)

Publication 6 is a synopsis of the South African National Lancet Commission report on achieving a high-quality health system (Rispel et al., 2019b). The South African National Lancet Commission used a combination of methods, including a literature review, key informant interviews, expert inputs, and numerous consultative meetings (Rispel et al., 2019b). Notwithstanding the rights-based Constitution, and the progress made on the provision of quality health care in the 25 years of democracy, the Commission found that gaps in ethical leadership, management and governance contribute to poor quality of care, resulting in unnecessary loss of lives (Rispel et al., 2019b). The HRH crisis has the potential to undermine the achievement of high-quality UHC in South Africa. Four overarching recommendations focus on governance and leadership for quality and equity; revolutionise quality of care; invest in and transform human resources in support of a high-quality health system; and measure, monitor and evaluate to ensure high-quality UHC (Rispel et al., 2019b).

Publication 7 focuses on the criticality of HRH in achieving the successful implementation of the proposed NHI system in South Africa (Rispel & Barron, 2012). Using mixed methods, the study triangulated data from several sources: a 2009 national health systems assessment; an analysis of the 2012/13 national HRH strategy and the 2011 Green Paper on the NHI; and qualitative comments obtained from 1200 frontline nurses (Rispel & Barron, 2012). **Publication 7** presents evidence on the HRH crisis in the country, exacerbated by the under-investment in HRH (Rispel & Barron, 2012). The article also presents a critique of the 2012/13-2016/17 HRH Strategy, notably the numerous listed objectives, apparent lack of prioritisation and insufficient implementation capacity (Rispel & Barron, 2012). The key message of

Publication 7 is that the success of any future NHI system is dependent on addressing the HRH challenges at structural, system, and management levels (Rispel & Barron, 2012).

Publication 8 is a guest editorial of the authoritative South African Health Review that tracks progress in health sector reforms in the country since the early 1990s (Rispel & Padarath, 2018). Drawing from the studies in the 2018 South African Health Review, the editorial illustrates the chronic under-investment in HRH and the unfinished agenda of addressing critical HRH issues in order to ensure universal health coverage, and the success of the proposed NHI system (Rispel & Padarath, 2018).

As illustrated in Section 1, the COVID-19 pandemic has underscored the criticality of HRH. In one of the first empirical studies on the COVID-19 response at a sub-national level, **Publication 9** describes the health system response to the COVID-19 pandemic during the first epidemic wave in Gauteng province and explores the perspectives of key informants on the provincial response (Rispel et al., 2021b). The study was informed by an adapted Pandemic Emergency Response Conceptual Framework and consisted of 36 key informant interviews and an analysis of relevant policy documents (Rispel et al., 2021b). The study found that Gauteng developed an innovative, multi-sectoral and comprehensive provincial COVID-19 response that aimed to address the dual challenge of saving lives and the economy (Rispel et al., 2021b).

However, the COVID-19 pandemic exposed and amplified the fragilities of existing systems, reflected in the corruption on personal protective equipment, poor data quality, and inappropriate decisions on self-standing field hospitals (Rispel et al., 2021b). Rooted in a chronic under-investment and insufficient focus on the health workforce, the provincial response failed to consider or deal with the fears of health workers, and to incorporate strategies for psychosocial support, and safe working environments (Rispel et al., 2021b). In line with the conceptual framework, **Publication 9** underscores the need for improved health leadership, management and governance, but importantly the prioritisation of HRH in the COVID-19 pandemic response (Rispel et al., 2021b).

2.3 Synopsis

The nine publications in Section 2 of the DSc illustrate the intersection between HRH and the performance of the South African health system. These publications generated new knowledge on missed opportunities in PMTCT prevention, health sector corruption. health system deficiencies, and the importance of HRH in health sector reforms or the COVID-19 pandemic response. The publications also highlight my research contribution to health policies and/or the design of technical interventions. Publication 9 underscores the need for improved health leadership, management and governance and prioritisation of HRH in the COVID-19 pandemic response and leads to the next **Section 3** that focuses on leadership, governance and management of human resources for health.

The nine publications are contained in the zipped file, entitled: **Rispel DScSEC2 HS-HRH P1-9 (**SEC=Section, HS=Health System; HRH=Human Resources for Health). The publications (P) are numbered from 1 to 9.

SECTION 3: LEADERSHIP, MANAGEMENT AND GOVERNANCE OF HUMAN RESOURCES FOR HEALTH

3.1 Overview

Effective leadership, management and governance (LMG) have been proposed as critical and central components of a comprehensive approach to the health workforce (Global Health Workforce Alliance & WHO, 2013), and have assumed increasing importance. The importance of LMG has been amplified by the COVID-19 pandemic (Haldane et al., 2021). Leadership and governance involve "the existence of strategic policy frameworks, combined with effective oversight, coalition building, regulation, attention to systems design, and accountability" (WHO, 2007, p. vi), as well as the roles and responsibilities of, and relationships among, various health policy actors (Brinkerhoff & Bossert, 2014). Management encompasses planning, coordinating and directing non-clinical activities and resources (including HRH) and implementing policies within health care systems in order to achieve the desired results (Management Sciences for Health, 2014).

3.2 Summary of Leadership, Management and Governance Publications

This Section 3 contains 14 publications that can be clustered as follows:

3.2.1 The leadership and governance of health sector reforms, and how these are perceived or implemented by managers and/or frontline health providers: **Publications 10-14.**

3.2.2 Health service management and its intersection with health care providers: **Publications 15-17.**

3.2.3 The leadership, management and governance challenges faced by nurses: **Publications 18-20.**

3.2.4 The perspectives of frontline providers on the type of organisations that would represent their socio-economic and professional interests **(Publication 21)** or on the regulator **(Publication 22).**

3.2.5 Leadership during the COVID-19 pandemic **(Publication 23).**

These publications are listed below, and each publication is then summarised.

10 Motsosi K, **Rispel LC**. Nurses' perceptions of the implementation of occupational specific dispensation at two district hospitals in Gauteng. *African Journal of Nursing and Midwifery,* 2012; **14** (2): 130-144. https://hdl.handle.net/10520/EJC137474

11 Ditlopo P, Blaauw D, **Rispel L**, Thomas S, Bidwell P. Policy implementation and financial incentives for nurses in two South African provinces: A case study on the occupation specific dispensation. *Global Health Action,* 2013; **6**: 19289. https://doi.org/10.3402/gha.v6i0.19289

12 Blaauw D, Ditlopo P, **Rispel LC.** Nursing education reform in South Africa: lessons from a policy analysis study. *Global Health Action,* 2014; **7**: 26401. http://dx.doi.org/10.3402/gha.v7.26401

13 Armstrong SJ, **Rispel LC.** Social accountability and nursing education in South Africa. *Global Health Action,* 2015; **8**: 27879. https://doi.org/10.3402/gha.v8.27879

14 Muthathi IS, Kawonga M, **Rispel LC**. Using social network analysis to examine intergovernmental relations in the implementation of the Ideal Clinic Realisation and Maintenance programme in two South African provinces. *PLoS ONE,* 2021; **16** (5): e0251472. https://doi.org/10.1371/journal.pone.0251472

15 Armstrong SJ, **Rispel LC,** Penn-Kekana L. The activities of hospital unit managers and quality of patient care in South African hospitals: A paradox? *Global Health Action,* 2015; **8**: 26243. http://dx.doi.org/10.3402/gha.v8.26243

16 **Rispel LC**, Angelides G. Utilisation and costs of nursing agencies in the South African public health sector, 2005-2010. *Global Health Action,* 2014; **7**: 25053. http://dx.doi.org/10.3402/gha.v7.25053

17 White J, Phakoe M, **Rispel LC**. "Practice what you preach": Nurses' perspectives on the Code of Ethics and Service Pledge in five South African hospitals. *Global Health Action,* 2015; **8**: 26341. http://dx.doi.org/10.3402/gha.v8.26341

18 **Rispel L.** Challenges facing nurses in the Republic of South Africa. *Image (The Journal of Nursing Scholarship),* 1995; **27:** 231-235. https://doi.org/10.1111/j.1547-5069.1995.tb00864.x

19 Ditlopo P, Blaauw D, Penn-Kekana L, **Rispel LC**. Contestations and complexities of nurses' participation in policy-making in South Africa. *Global Health Action,* 2014; **7**: 25327. http://dx.doi.org/10.3402/gha.v7.25327

20 **Rispel L**, Bruce J. *A profession in peril: Revitalising nursing in South Africa.* Chapter 9 in: Padarath A, King J, English R (editors). South African Health Review, 2014/15. Durban: Health Systems Trust, 2015: 117-125. URL: Complete_SAHR_2014_15.pdf (hst.org.za).

21 **Rispel L**, Buch E. South African Nurses' attitudes to different organisations: Policy implications. *Journal of Advanced Nursing,*1991; **16**: 996-1003. https://doi.org/10.1111/j.1365-2648.1991.tb01806.x

22 Christmals CD, Aziato L, **Rispel LC**. Perceptions of the functioning and effectiveness of nursing regulators in Ghana and South Africa: a cross-sectional study. *BMJ Open,* 2021; **11**: e050580. http://dx.doi.org/10.1136/bmjopen-2021-050580

23 Chiriboga D, Garay J, Buss P, Rocío Sáenz Madrigal RS, **Rispel LC**. Health inequity during the COVID-19 pandemic: a cry for ethical global leadership [Letter]. *The Lancet,* 2020; **395**: 1690-1691. https://doi.org/10.1016/S0140-6736(20)31145-4

3.2.1 Leadership and governance of key health sector reforms

Publications 10-14 focus on the leadership and governance of key health sector reforms*:* the implementation of a financial incentive for health workers in the public sector known as the occupation specific dispensation (OSD); the stewardship of nursing education reforms; and the implementation of the Ideal Clinic Realisation and Maintenance (ICRM) programme. These publications add to the body of knowledge on health policy implementation in South Africa, with relevance for other LMICs.

Publication 10 (Motsosi & Rispel, 2012) and **Publication 11** (Ditlopo et al., 2013) illustrate how health sector reforms, notably the occupation specific dispensation (OSD), are perceived by nurses. Despite the intended benefits of these reforms, the studies illustrate the unintended negative consequences that arise from the failure to involve these frontline health service providers.

Publication 10 paper explores nurses' perceptions of the implementation of OSD at two district hospitals in the Gauteng province of South Africa (Motsosi & Rispel, 2012). Drawing on policy implementation theory, this was a mixed methods study that included interviews with key informants and a survey among permanently employed day duty nurses at the two hospitals (Motsosi & Rispel, 2012). The study found that the OSD resulted in salary improvements for nurses and facilitated the hospital's ability to attract nurses with specialised skills. However, 72.0% of day duty nurses indicated that the OSD had been implemented unfairly, 54.1% that OSD demoralised them and 58.3% that OSD adversely affected the relationships between management and nurses (Motsosi & Rispel, 2012). Only 24.0% of the nurses agreed that communication around OSD was good, and 22.7% agreed that the OSD improved service delivery. The study recommendations centred on clear communication, involvement of frontline nurses, training to ensure uniform interpretation and implementation; and improved monitoring and evaluation of the OSD implementation (Motsosi & Rispel, 2012).

Publication 11 examines the implementation of the OSD for nurses in two South African provinces (Ditlopo et al., 2013). Using Hogwood and Gunn's conceptual framework of 'perfect implementation' pre-conditions, in-depth interviews and an analysis of policy documents, the study found that there were several OSD implementation weaknesses. These included incomplete and inaccurate HRH information systems, under-estimation of resource requirements, and inadequate communication (Ditlopo et al., 2013).

Publication 12 (Blaauw, Ditlopo, & Rispel, 2014) and **Publication 13** (Armstrong & Rispel, 2015) underscore the importance of leadership, management and governance (LMG) in steering nursing education reforms. This is because the reform of health professions education is essential for enhancing health workforce performance, thereby improving the functioning of health systems.

Publication 12 applied a policy analysis framework to interrogate the context, content, actors, and processes of the revision of nursing qualifications as part of the post-apartheid transformation of nursing (Blaauw et al., 2014). The study found that the policy process took more than a decade to complete and the final regulations were only promulgated in 2013, primarily due to the weak policy capacity of, and governance by, the South African Nursing Council (SANC) and the Department of Health (Blaauw et al., 2014). The study respondents criticised the slow progress of implementation, limited planning for implementation, and the inappropriateness of the proposals for South Africa (Blaauw et al., 2014).

Publication 13 is one of the first studies to examine nursing education through the lens of social accountability and the building blocks for transformative education. Study respondents reported positive aspects of South Africa's strategic plans on human resources and nursing and a well-established system of regulation and accreditation of nursing education through the SANC (Armstrong & Rispel, 2015). However, the study respondents criticised the lack of national staffing norms and sub-optimal governance by both the SANC and the Department of Health. Other issues of concern were the outdated curricula unresponsive to population and health system needs, the unpreparedness of nurse educators, and the perceived unsuitability of the majority of nursing students (Armstrong & Rispel, 2015).

Publication 14 examines cooperative governance enshrined in South Africa's Constitution, specifically the cohesion of inter-governmental relations across national, provincial and local government health departments in the implementation of the ICRM programme (Muthathi, Kawonga, & Rispel, 2021). The study used a novel social network analysis and was conducted in the Gauteng and Mpumalanga provinces of South Africa. The social network analysis revealed non-cohesive relationships between the different spheres of government, illustrated by the low densities of seeking advice (Gauteng = 15.6%; Mpumalanga=24.4%) and providing advice (Gauteng=14.1%; Mpumalanga=25.1%) (Muthathi et al., 2021). The most cohesive relationships existed within the National Department of Health (density=66.7%), suggesting that national policy actors sought advice from one another, rather than from the provincial health departments (Muthathi et al., 2021).

3.2.2 Health service management and health care providers

Publications 15-17 focus on health service management and its intersection with frontline health care providers.

Publication 15 highlights the relationship between the nursing management of hospital units and the ability to provide quality of patient care (Armstrong, Rispel, & Penn-Kekana, 2015). Using a cross-sectional, study design, research was conducted in nine randomly selected hospitals (six public, three private) in two South African provinces. The study found that nursing unit managers spent 25.8% of their time on direct patient care, but 11.8% on miscellaneous activities (Armstrong et al., 2015). The nursing unit managers also experienced numerous interruptions and distractions, which affected their ability to oversee quality care (Armstrong et al., 2015).

Publication 16 illustrates the importance of management in the utilisation of high cost nursing agencies (Rispel & Angelides, 2014). A survey of all nine provincial health departments illustrated actual expenditure on nursing agencies, although only five provinces reported utilisation of these nursing agencies (Rispel & Angelides, 2014). The study found that in the 2009/10 fiscal year, R1.49 billion (US$212.64 million) was spent on nursing agencies in the South African public health sector. In that financial year, a total of 5 369 registered nurses could have been employed in lieu of nursing agency expenditure, thus illustrating the need for uniform policies and improved management of commercial nursing agencies in the South African public health sector (Rispel & Angelides, 2014).

Similarly, **Publication 17** illustrates the importance of management in creating a positive practice environment to enable frontline nurses to comply with their ethical obligations (White, Phakoe, & Rispel, 2015). The study explored hospital nurses' perspectives on the International Code of Ethics for Nurses; their perspectives on the South African Nurses' Pledge of Service; and their views on contemporary ethical practice in five hospitals in two South African provinces (White et al., 2015). The majority of respondents agreed with a statement that they will promote the human rights of individuals (98%) and that they have a duty to meet the health and social needs of the public (96%). More nuanced responses were obtained for some questions, with 60% agreeing with a statement that too much emphasis is placed on patients' rights as opposed to nurses' rights and 32% agreeing with a statement that they would take part in strike action to improve nurses' salaries and working conditions (White et al., 2015). The nurses' responses to open-ended questions revealed the dilemmas of nurses in upholding the Code of Ethics and the Pledge in face of workplace constraints and/or poor working conditions (White et al., 2015).

3.2.3 Nurses' leadership, management, and governance challenges

Publications 18-20 provide insights into the leadership, management and governance challenges faced by nurses. Knowledge on these challenges is imperative as nurses constitute the majority of health care providers in South Africa, and a failure to address these problems influences their performance in the health system.

Publication 18, written by journal invitation at the turn of democratic change in South Africa in the 1990s, underscored several challenges that need to be taken into account in transforming nursing in the country: those related to the legacy of apartheid and the history of the profession; those related to the context of health service delivery; and those related to the health system in a democratic South Africa (Rispel, 1995). **Publication 18** underscored the importance of nurses' participation in the policy-making process for a transformed health system and their involvement in resolving the problems of poor working conditions, and low salaries (Rispel, 1995).

However, almost two decades later, **Publication 19** illustrates the contestations and complexities of nurses' participation in policy-making in South Africa (Ditlopo et al., 2014). The study reported in **Publication 19** applied a policy analysis framework, that combined in-depth interviews with key informants and a survey among frontline nurses in four South African provinces (Ditlopo et al., 2014). The study found that the extent and nature of nurses' participation in nursing policies was disputed among the different health policy actors. Furthermore, the levels of awareness of the various policies under investigation differed between the nurse leaders and frontline nurses, with questions about the legitimacy of various nursing interest groups (Ditlopo et al., 2014). Shifting power relationships influenced who participated, the nature of the participation and the degree to which frontline nurses' views and inputs were considered and incorporated (Ditlopo et al., 2014).

Publication 20, written by invitation, provides an analytical perspective on nurses and nursing in South Africa, and the critical issues that need to be addressed by health policy-makers and practitioners in order to revitalise the profession (Rispel & Bruce, 2015). Drawing on the evidence of a four-year research programme, **Publication 20** highlights the impending nursing crisis unless issues of curriculum quality and relevance, nurse educator quality, educational resources, and governance of nursing education are addressed (Rispel & Bruce, 2015). **Publication 20** recommended a high-level investment in preparing nurses for and in practice,

through appropriate training that emphasise ethical value systems and social accountability, adequate staffing in different health care settings and enabling work environments (Rispel & Bruce, 2015). Ironically, these recommendations are also contained in the 2020 State of the World's Nursing Report (WHO, 2020b).

3.2.4 Perspectives of frontline health service providers on governance

Prior to democracy in South Africa, and in response to the discourse on the type of organisation that would best represent the interests of nurses and facilitate their contribution to health sector transformation in a post-apartheid South Africa, **Publication 21** reports on the findings of a national survey (Rispel & Buch, 1991). The survey focused on three types of organisations, namely a professional nursing association, a health worker organisation and a trade union (Rispel & Buch, 1991). The survey found that there was widespread ignorance about trade unions and health worker organisations and reported resistance to strike action (Rispel & Buch, 1991). The survey respondents expressed dissatisfaction with the racist nature of the old South African Nursing Association and in meeting their socio-economic needs, but scored them reasonably well on meeting their professional needs (Rispel & Buch, 1991). The health policy implications of the study centred on two critical issues: addressing the socio-economic needs of nurses to ensure their retention in the health system, and encouraging nurses to take their rightful place in shaping health policies in a post-apartheid South Africa (Rispel & Buch, 1991).

Publication 22 provides empirical evidence on the perceived functioning and effectiveness of the nursing regulators in Ghana and South Africa and is one of the first comparative nursing governance studies in sub-Saharan Africa (Christmals, Aziato, & Rispel, 2021). Using a cross-sectional design, a survey was conducted among the heads of accredited nursing institutions in Ghana and in South Africa (Christmals et al., 2021). In South Africa, the mean score for overall functioning of the South African Nursing Council (SANC) was 4.6 (SD 1.97), whereas the mean score for overall functioning of the Nursing and Midwifery Council (N&MC) of Ghana was 7.1 ($p<0.0001$) (Christmals et al., 2021). Similarly, the mean score for effectiveness of the SANC by NEIs was 5.1, compared with the mean effectiveness score of 7.2 for the N&MC ($p<0.001$). Notwithstanding the vital role of the nursing councils in Ghana and South Africa in governing the nursing workforce, the study findings suggest the need for concerted efforts to improve the functioning and effectiveness of the regulators, especially the SANC (Christmals et al., 2021).

3.2.5 Leadership during the COVID-19 pandemic

Publication 23 is a scientific letter to the Lancet which I co-authored in my capacity as the then president of the World Federation of Public Health Associations. The letter put the spotlight on ethical leadership of the health system during the COVID-19 pandemic (Chiriboga et al., 2020). The letter led to an audience with the deputy-director general of the United Nations and of the World Health Organization (WHO), and served as a catalyst for the establishment of a broader global movement on sustainable health equity (Chiriboga et al., 2020).

3.3 Synopsis

The 14 publications in Section 3 advanced health systems research methodology, generated new knowledge on the leadership and governance of health sector reforms, and its intersection with frontline health care providers. The publications contributed to the health policy discourse on the LMG of health care reforms, the LMG of frontline nurses and underscored the criticality of global leadership during the COVID-19 pandemic. LMG is both essential for, and can be enhanced by research on the health labour market, which is discussed in **Section 4 of the DSc**

The 14 publications are contained in the zipped file, entitled: **Rispel DScSEC3 LMG-HRH P10-23 (**SEC=Section, LMG=Leadership, Management and Governance; HRH=Human Resources for Health). The publications (P) are numbered from 10 to 23.

SECTION 4: RESEARCH ON THE SOUTH AFRICAN HEALTH LABOUR MARKET

4.1 Overview

Since the global recognition of the crisis in HRH (see Section 1), there is emerging consensus that policy solutions must take into account the "unique and rapidly evolving dimensions of national health labour markets" (Soucat, Scheffler, & Ghebreyesus, 2013, p. xxi). A health labour market is a dynamic system that consists of two independent, yet related economic forces: the supply of health workers and the demand for such workers, influenced by a country's institutions, regulations and socio-economic circumstances (McPake et al., 2013, p. 842). However, there is a dearth of research on the health labour market in low- and middle-income countries (LMICs), particularly those in sub-Saharan Africa (Buchan et al., 2017; McPake et al., 2013; Soucat et al., 2013).

Although I was unaware of the concept of the health labour market, a seminal paper in 1991 analysed the contradictory trends of professionalisation and proletarianisation in South African nursing, hence the paper is included in this section.

My current research as part of the SARChI Chair has begun to address the dearth of knowledge on the health labour market in LMICs by commencing the WiSDOM (Wits longitudinal Study to Determine the Operation of the labour Market among its health professional graduates) study. WiSDOM is a longitudinal study that aims to generate new knowledge on the career choices and job location decisions of health professionals in South Africa. The novelty of WiSDOM is both in its methodological innovation (longitudinal, cohort study) and in focusing on eight different health professional groups. The cohort consists of clinical associates, dentists, doctors, nurses, oral hygienists, occupational therapists, pharmacists, and physiotherapists and will be followed up for 15 years.

4.2 Summary of Health Labour Market Publications

This Section 4 on the health labour market consists of four publications listed below.

24 **Rispel L**, Schneider H. Professionalization of South African Nursing: Who benefits? *International Journal of Health Services,* 1991; **21**:109 -126. https://doi.org/10.2190/GUHD-GWFQ-YWJJ-EYKH

25 **Rispel LC**, Blaauw D, Ditlopo P, White J. *Human resources for health and universal health coverage: progress, complexities, and contestations.* Chapter 2 in: Rispel LC, Padarath A (editors). South African Health Review 2018. Durban: Health Systems Trust, 2018: 13-22. https://www.hst.org.za/publications/Pages/SAHR2018.aspx

26 **Rispel LC,** Ditlopo P, White JA, Blaauw D. Socio-economic characteristics and career intentions of the WiSDOM health professional cohort in South Africa. *PLoS ONE,* 2019; **14** (10): e0223739. https://doi.org/10.1371/journal.pone.0223739

27 **Rispel LC,** Ditlopo P, White J, Blaauw D. Methodological considerations in establishing and maintaining longitudinal health workforce studies: Lessons learned from the WiSDOM cohort in South Africa, *Global Health Action*, 2021, **14 (**1): 1996688. DOI: https://doi.org/10.1080/16549716.2021.1996688

Publication 24 presents a critical analysis of the reasons for and nature of professionalisation in South African nursing (Rispel & Schneider, 1991). Globally, professionalisation has emerged as a response of a predominantly female group to the power, prestige, and privilege held in the health sector by a predominantly male medical profession (Rispel & Schneider, 1991). However, in South Africa the professionalisation process has mirrored the apartheid race and class divisions in society. Furthermore, the strategies pursued have not necessarily been in the interests of the majority of nurses or of patients (Rispel & Schneider, 1991). Importantly, embedded in the professionalisation process, is a contradictory trend of proletarianisation, namely the lack of control that the majority of nurses have over their work, often performing many repetitive, albeit essential tasks (Rispel & Schneider, 1991).

The positive aspects of professionalisation include the development of professional education and practice standards, codes of ethics, and a commitment to the provision of high-quality health care in different settings (Rispel & Schneider, 1991). However, the process has also had negative consequences for teamwork, relationships among different categories of nurses and with communities, and their social accountability (Rispel & Schneider, 1991). **Publication 24** has generated new knowledge on the intersection of professionalisation, race, class and gender, and enhanced the discourse on the unintended negative consequences of the process in South African nursing (Rispel & Schneider, 1991). **Publication 24** has also advanced the strategies

needed to ensure that nurses participate in the transformation of the post-apartheid South African health system and its re-orientation towards PHC (Rispel & Schneider, 1991).

Publication 25 draws on theories of the health labour market to review the progress, complexities and contestations pertaining to HRH (Rispel et al., 2018). In 2018, the South African government's commitment to developing HRH norms and standards, a relatively strong health professional regulatory framework, the publication of a major study on health professions education, and embryonic initiatives to develop HRH strategic plans linked to UHC counted as both strengths and opportunities (Rispel et al., 2018).

Simultaneously, **Publication 25** underscored the criticality of addressing the gaps and weaknesses in the HRH foundation (Rispel et al., 2018). These weaknesses include: insufficient stewardship of HRH planning across the entire healthcare system; lack of a national integrated HRH information system, and inadequate information on overall HRH supply to address historical inequities between urban and rural areas and between the public and private health sectors (Rispel et al., 2018). Key recommendations that remain relevant are the need to enhance HRH technical capacity and expertise in the NDoH to provide strategic leadership and support for the entire health system; recruitment of public servants with the right skills, competencies, ethos and values; and equitable resource allocation to rural and/or underserved areas (Rispel et al., 2018).

Publication 26 describes the baseline socio-economic characteristics and career intentions of the novel WiSDOM health professional cohort in South Africa (Rispel et al., 2019a). The study found that the mean age of all participants was 24.1 years; 13.1% were born in a rural area; 11.9% and 8.0% completed their primary and secondary schooling in a rural area respectively (Rispel et al., 2019a). The health professional students came from relatively privileged backgrounds: 45.0% had attended a private school, the majority of their fathers (77.1%) had completed tertiary education, and 69.1% of their mothers had completed tertiary education (Rispel et al., 2019a). Students with higher socio-economic status (SES Quintiles 3–5) made up a larger proportion of the occupational therapists (77.8%), physiotherapists (71.7%), doctors (66.7%), and dentists (64.7%). In contrast, individuals from SES Quintiles 1 and 2 were over-represented among the clinical associates (75.0%), oral hygienists (71.4%), nurses (61.9%), and pharmacists (56.9%). Although 86.3% of all cohort members indicated that they plan to stay in their chosen profession, this ranged from 43.2% for clinical associates to 100% for dentists.

The results of the WiSDOM baseline study have implications for university selection criteria and national health workforce planning (Rispel et al., 2019a).

Publication 27 describes the methodology and lessons learned from establishing and maintaining the WiSDOM health professional cohort study in South Africa (Rispel et al., 2021a). This is because health workforce cohort studies are uncommon in LMICs, and HRH researchers can learn from our experience. Key steps in establishing the WiSDOM cohort include extensive consultation, communication and marketing, stakeholder feedback and resources (Rispel et al., 2021a). Retention strategies consist of an electronic database, detailed cohort contact information, cohort engagement, communication and feedback, short survey tools, and appropriate incentives (Rispel et al., 2021a).

4.3 Synopsis

The publications in Section 4 begin to address the knowledge gaps on the health labour market in South Africa. The lessons and insights are relevant for other LMICS, especially those in Africa. The publications are contained in the zipped file, entitled: **Rispel DScSEC4 HLM P24-27** (HLM=Health Labour Market). The publications are numbered from 24 to 27.

The next **Section 5** of the DSc focuses on the performance of HRH.

SECTION 5:

PERFORMANCE OF HUMAN RESOURCES FOR HEALTH

5.1 Overview

The 2006 World Health Report defines performance in terms of availability, competence, responsiveness, and productivity of the health workforce (WHO, 2006). Competence reflects what a health worker can do, whereas performance reflects what a health worker does in practice (WHO, 2016). Performance is complex and influenced by several factors: availability of resources; health professional education; health worker attitudes and behaviours (such as moonlighting or absenteeism); and their responsiveness to communities, especially the needs of vulnerable groups (e.g., men who have sex with men, women seeking termination of pregnancy or children with cleft lip and/or palate). Although optimal HRH performance is a prerequisite for the achievement of UHC (Global Health Workforce Alliance & WHO, 2013), research on their performance has received insufficient priority globally.

5.2 Summary of Publications on Performance of HRH

This Section 5 on the performance of HRH contains 14 publications that can be clustered as follows:

5.2.1 Moonlighting (also known as multiple jobholding), sickness absenteeism and the performance of HRH: **Publications 28-33.**

5.2.2 Health worker responsiveness to the needs of vulnerable groups: **Publications 34-38.**

5.2.3 Mentoring as a strategy to enhance HRH performance: **Publications 39-41.**

These publications are listed below, and then summarised.

28 **Rispel LC**, Blaauw D, Chirwa T, de Wet K. Factors influencing agency nursing and moonlighting among nurses in South Africa. *Global Health Action,* 2014; **7**: 23585. http://dx.doi.org/10.3402/gha.v7.23585

29 **Rispel LC**, Chirwa T, Blaauw D. Does moonlighting influence South African nurses' intention to leave their primary jobs? *Global Health Action,* 2014; **7:**25754. https://doi.org/10.3402/gha.v7.25754

30 **Rispel LC,** Blaauw D. The health system consequences of agency nursing and moonlighting in South Africa. *Global Health Action,* 2015; **8**: 26683. http://dx.doi.org/10.3402/gha.v8.26683

31 **Rispel LC**, Moorman J. The indirect costs of agency nurses in South Africa: a case study in two public sector hospitals. *Global Health Action,* 2015, **8**: 26494. http://dx.doi.org/10.3402/gha.v8.26494

32 **Rispel LC.** Transforming Nursing Policy, Practice and Management [Guest Editorial]. *Global Health Action,* 2015; **8**: 28005. http://dx.doi.org/10.3402/gha.v8.28005

33 Ramsamy R, Ditlopo P, **Rispel LC.** Determinants of approved incapacity leave among health professionals in a South African provincial health department. *Occupational Health Southern Africa,* 2021; **27** (6): 200-206. https://hdl.handle.net/10520/ejc-ohsa_v27_n6_a5

34 **Rispel LC**, Metcalf CA, Cloete A, Moorman J, Reddy V. "You become afraid to tell them that you are gay": Health service utilization by men who have sex with men in South African cities. *Journal of Public Health Policy,* 2011; **32** (supplement 1): s137-s151. https://doi.org/10.1057/jphp.2011.29

35 Xaba M, **Rispel L.** Ensuring women's right to choose: Exploring nurses' role in the Choice on Termination of Pregnancy Act. *Agenda,* 2013; **27** (4): 69-78. https://doi.org/10.1080/10130950.2013.867626.

36 Teffo ME, **Rispel LC**. Resilience or detachment? Coping strategies among termination of pregnancy health care providers in two South African provinces. *Culture, Health & Sexuality*, 2020; **22** (3): 336-351. https://doi.org/10.1080/13691058.2019.1600720

37 Hlongwa P, **Rispel LC**. Interprofessional collaboration among health professionals in cleft lip and palate treatment and care in the public health sector of South Africa. *Human Resources for Health,* 2021; **19**: 25 https://doi.org/10.1186/s12960-021-00566-3

38 Hlongwa, P**. Rispel, LC.** Coproduction in the management of individuals with cleft lip and palate in South Africa: The Ekhaya Lethu model. *International Journal for Quality in Health Care*, 2021; **33** (S2): ii33–ii39. https://doi.org/10.1093/intqhc/mzab082

39 Lescano AG, Cohen CR, Raj T, **Rispel LC,** Garcia PJ, Zunt JR, Hamer DH, Heimburger DC, Chi BH, Ko AI, Bukusi EA. Strengthening mentoring in low- and middle-income countries to advance global health research: An overview. *American Journal of Tropical Medicine and Hygiene,* 2019; **100** (Supplement 1): 3-8. https://doi.org/10.4269/ajtmh.18-0556

40 Gandhi M, Raj T, Fernandez R, **Rispel LC**, Nxumalo N, Lescano AG, Bukusi EA, Mmbaga BT, Heimburger DC, Cohen CR. Mentoring the Mentors: Implementation and evaluation of four Fogarty-sponsored mentoring training workshops in low-and middle-income countries. *American Journal of Tropical Medicine and Hygiene,* 2019; **100** (Supplement 1): 20-28. https://doi.org/10.4269/ajtmh.18-0559

41 Hamer DH, Hansoti B, Prabhakaran D, Huffman MD, Nxumalo N, Fox MP, Gopal S, Oberhelman R, Mwananyanda L, Vwalika B, **Rispel LC.** Global health research mentoring competencies for individuals and institutions in low- and middle-income countries. *American Journal of Tropical Medicine and Hygiene*, 2019; **100** (Supplement 1):15-19. https://doi.org/10.4269/ajtmh.18-0558

5.2.1 Moonlighting, sickness absenteeism and the performance of HRH

Multiple jobholding (MJH) or moonlighting affects the performance of nurses and has negative consequences both for them as individual health care providers and for the health system as a whole (Rispel, 2015). However, MJH has received insufficient scholarly and policy attention. **Publications 28-31** provide empirical evidence on the reasons for and predictors of moonlighting in South Africa, as well as agency nursing (the vehicle for moonlighting) which had been poorly understood and under-researched (Rispel & Blaauw, 2015; Rispel et al., 2014a; Rispel, Chirwa, & Blaauw, 2014b; Rispel & Moorman, 2015). **Publications 28-30** present the findings of the first, large cross-sectional survey on moonlighting (or multiple jobholding), among nurses in South Africa, and indeed in sub-Saharan Africa (Rispel & Blaauw, 2015; Rispel et al., 2014a; Rispel

et al., 2014b), while **Publication 31** examines the indirect costs of agency nursing (Rispel & Moorman, 2015).

Publication 28 examines the prevalence of agency nursing, moonlighting, and overtime among nurses in South Africa, and the factors influencing moonlighting (Rispel et al., 2014a). The large cross-sectional survey was conducted in a random sample of 80 hospitals in four South African provinces in both the public and private health sectors (Rispel et al., 2014a). Most survey participants (n=3 784) were South African (98.0%), female (92.7%), and employed in government (52.8%) (Rispel et al., 2014a). The occurrence of moonlighting among nurses in the 12 months preceding the survey was 28.0% [95% CI: 24.2-32.1], the frequency of agency nursing was 37.8% [95% CI: 32.4-43.6], while 56.0% of nurses did overtime [95% CI: 51.4-60.4] (Rispel et al., 2014a). The predictors of moonlighting were province, sector of primary employment, unit of work, category of nurse, and having children (Rispel et al., 2014a).

Publication 29, using findings from the same survey, examines whether moonlighting is a determinant of South African nurses' intention to leave their primary jobs (Rispel et al., 2014b). Almost one-third of survey participants (30.9%) indicated that they planned to leave their jobs within a 12-month period (Rispel et al., 2014b). Intention to leave was higher among the moonlighters (39.5%) compared to non-moonlighters (27.9%; $p<0.001$). In a multiple logistic regression model, the predictors of intention to leave were moonlighting in the preceding year, nursing category, sector of primary employment, period working at the primary job, and the number of children (Rispel et al., 2014b). The odds of intention to leave were 1.40 (95% CI: 1.16-1.69) times higher for moonlighters than for non-moonlighters (Rispel et al., 2014b).

Publication 30 examines the potential health system consequences of agency nursing and moonlighting among South African nurses (Rispel & Blaauw, 2015). Of the 3 784 survey participants, 51.5% reported feeling too tired to work, 11.5% paid less attention to nursing work on duty, and 10.9% took sick leave when not actually sick in the preceding year (Rispel & Blaauw, 2015). Among the moonlighters, 11.9% had taken vacation leave to do agency work or moonlighting, and 9.8% reported conflicting schedules between their primary and secondary jobs. In the bivariate analysis, moonlighting nurses were significantly more likely than non-moonlighters to take sick leave when not sick ($p=0.011$) and to pay less attention to nursing work on duty ($p=0.035$) (Rispel & Blaauw, 2015). However, in a multiple logistic regression analysis, the differences between moonlighters and non-moonlighters did not remain

statistically significant after adjusting for other socio-demographic variables (Rispel & Blaauw, 2015). Although moonlighting did not emerge as a statistically significant predictor, the reported health system consequences are serious and require pro-active management.

The objective of the study reported in **Publication 31** was to determine the direct and indirect costs of agency nurses, as well as the advantages and the problems associated with agency nurse utilisation in two public sector hospitals in South Africa (Rispel & Moorman, 2015). The study found that agency nurses assisted the selected hospitals in dealing with the problems of nurse recruitment, absenteeism, shortages, and skills gaps in specialised clinical areas (Rispel & Moorman, 2015). The problems experienced with agency nurses included their perceived lack of commitment, unreliability, and providing sub-optimal quality of patient care (Rispel & Moorman, 2015). However, the direct costs (expenditure) and indirect costs (recruitment, administration, nurse management) were considerable at both hospitals (Rispel & Moorman, 2015), pointing to the need for hospital managers and policy-makers to address the effective utilisation of agency nurses and the quality of patient care in tandem (Rispel & Moorman, 2015).

The guest editorial in **Publication 32** underscores the criticality of addressing all the dimensions of the nursing crisis, including the process of casualisation, illustrated by the findings on moonlighting and agency nursing (Rispel, 2015). Leadership, management and governance (see Section 3) are essential to address moonlighting and agency nursing and to reduce its negative consequences for nurses and for the health system (Rispel, 2015). Subsequently, the 2012/13-2016/17 HRH strategic plan incorporated the moonlighting findings, and proposed remedial strategies (NDoH, 2011). In 2020, Oxfam South Africa drew extensively on the results of the moonlighting study in their report that profiled the precarious working conditions of frontline nurses and community health workers and their advocacy campaign on the right to dignified healthcare work (Oxfam South Africa, 2020).

Publication 33 examines performance of health workers through an analysis of incapacity leave, which is a category of sickness absenteeism (Ramsamy, Ditlopo, & Rispel, 2021). Using the electronic records of approved incapacity leave stored in the Government's Personnel Salary Administration system, the study examined the association between approved incapacity leave, and the demographic and occupational characteristics of health professionals employed in the Gauteng Department of Health (Ramsamy et al., 2021). The study found that professional

nurses (n = 215, 41.5%) constituted the largest group of health workers that had taken incapacity leave (Ramsamy et al., 2021). The main medical reasons for incapacity leave were mental disorders (n=148, 12.8%) and musculoskeletal disorders (n=139, 12.0%). The odds of incapacity leave increased with age and for health professionals working in the Sedibeng and Johannesburg health districts (Ramsamy et al., 2021).

5.2.2 Health worker responsiveness to the needs of vulnerable groups

Publications 34-38 show that performance can also be assessed through the responsiveness of health workers to the needs of vulnerable groups, whether such vulnerability is based on sexual orientation (Rispel et al., 2011), women seeking termination of pregnancy (Teffo & Rispel, 2020; Xaba & Rispel, 2013) and/or care provision to individuals with cleft lip and/or palate (Hlongwa & Rispel, 2021a, 2021b).

Publication 34 describes the utilisation of health services by men who have sex with men (MSM) in four South African cities, their perceptions of available health services, and their service preferences (Rispel et al., 2011). The study triangulated data from 32 key informant interviews (KIIs) spread across South Africa, 18 focus group discussions (FGDs) with MSM in four South African cities, and a survey of 285 MSM in two cities (Rispel et al., 2011). The FGDs and KIIs revealed that targeted public health sector programmes for MSM were limited, and that MSM experienced stigma, discrimination, and negative health worker attitudes in the public health sector (Rispel et al., 2011). The survey found that 57% of the survey participants had used public health services in the preceding 12 months, and that 69% had no private health insurance (Rispel et al., 2011). Given this context and South Africa's progressive constitution, **Publication 34** recommended that South Africa should take the lead in sub-Saharan Africa in providing responsive and appropriate HIV services for MSM (Rispel et al., 2011).

Publications 35 and 36 shift to a positive HRH discourse by focusing on the few willing and competent health care providers that enable women's access to sexual and reproductive health services, while emphasising the need for HRH investment (Teffo & Rispel, 2020; Xaba & Rispel, 2013).

Publication 35 uses the concept of positive deviance (i.e. behaviours that depart from the norm) to explore the views and experiences of nurses who were involved in various stages of the

Choice on Termination of Pregnancy Act (CTOPA) between 1996 and 2010 (Xaba & Rispel, 2013). The in-depth interviews with nurses who were central to the development and implementation of the CTOPA revealed their activism for gender equality and women's rights, their desire to make a difference, and their commitment to nursing excellence (Xaba & Rispel, 2013). **Publication 35** counters the negative discourse on nurses as gatekeepers, and highlights their indispensable role in the implementation of the CTOPA (Xaba & Rispel, 2013).

Publication 36 turns the attention to the importance of addressing the psychosocial well-being of those health care providers who continue to provide abortion services, despite health system constraints and discrimination or stigma from their colleagues (Teffo & Rispel, 2020). **Publication 36** focuses on the coping strategies among health care providers working at abortion facilities in the Gauteng and North West provinces of South Africa (Teffo & Rispel, 2020). Through in-depth interviews, the providers were asked about their lived experiences of abortion service provision, the meanings they attached to their work, and their reported coping strategies. Interpretative phenomenological analysis was used to analyse the interviews. Interviewees' mean age was 45.8 years, all were professional nurses, and the majority were female (82%), working for an average of 3.6 years in abortion services (Teffo & Rispel, 2020). Their reported coping strategies included: silence and concealing emotions; seeking support; detachment or disengagement; and the comfort they get from their belief systems (Teffo & Rispel, 2020). The study findings point to the need for effective, sustainable employee wellness programmes, within an overall context of positive practice environments (Teffo & Rispel, 2020).

Publications 37 and 38 explore the performance of health workers, through the care provided to individuals with cleft lip and/or palate (Hlongwa & Rispel, 2021a, 2021b). Cleft lip and/or palate (CLP), a complex but common congenital anomaly of the craniofacial complex, requires life-long treatment and care by a multi-disciplinary team of health professionals (Hlongwa & Rispel, 2021a, 2021b).

Given the importance of interprofessional collaboration (IPC), **Publication 37** examines IPC among health professionals in all cleft lip and/or palate specialised centres in South Africa's public health sector (Hlongwa & Rispel, 2021b). The survey was one of the first to examine interprofessional collaboration among members of the teams taking care of individuals with

CLP (Hlongwa & Rispel, 2021b). The relevant health professionals completed a self-administered questionnaire on IPC, using the Interprofessional Competency Framework Self-Assessment Tool (Hlongwa & Rispel, 2021b). Plastic surgeons accounted for 38.5% of all study participants, followed by speech therapists (23.1%), and professional nurses (9.6%) (Hlongwa & Rispel, 2021b). The lowest mean score of 2.55 was obtained for effective group function, and the highest mean score of 2.92 for care expertise. Explanatory factor analysis showed that gender did not influence IPC, but that the category of health professional was a predictor of the IPC scores obtained (Hlongwa & Rispel, 2021b).

Publication 38 resulted from an invitation from the International Society for Quality in health care (ISQua) to contribute to a special issue on coproduction. ISQua is a global organisation dedicated to promoting quality improvement in health care, whose network of health professionals spans more than 70 countries and six continents. Coproduction is defined as the "interdependent work of users and professionals to design, create, develop, deliver, assess, and improve the relationships and actions that contribute to the health of individuals and populations (Batalden, 2018, p. 2).

Publication 38 draws on the findings of a large empirical study on CLP in South Africa's public health sector and the theory and principles of healthcare service coproduction to present the *Ekhaya Lethu* (isiZulu for House of Care) Model for the management of CLP (Hlongwa & Rispel, 2021a). **Publication 38,** specifically the Ekhaya Lethu Model, contributes to the discourse on coproduction in the design and implementation of quality health care to individuals with CLP, particularly in LMICs (Hlongwa & Rispel, 2021a).

5.2.3 Mentoring as a strategy to enhance HRH performance

Health worker performance is influenced by competencies, which in turn is enhanced by mentoring. **Publications 39-41** summarise the evidence and motivates for the establishment of formalised mentorship programmes that have universal relevance, regardless of health care setting (Gandhi et al., 2019; Hamer et al., 2019; Lescano et al., 2019).

Publication 39 underscores the importance of mentoring, which tends to be an uncommon practice in LMICs (Lescano et al., 2019). As existing mentoring approaches and guidelines are geared toward high-income country settings, **Publication 39** provides an overview and specific recommendations on how to tailor mentoring to the context, culture and resource constraints of

LMICs (Lescano et al., 2019). Key principles include leadership by individuals from LMICs, diversity and using evidence to inform mentoring practices (Lescano et al., 2019).

Publication 40 is a comparative analysis of four Fogarty-Sponsored Mentoring Training Workshops for participants in East Africa (n=29), Southern Africa (n=36), South America (n=30) and South-east Asia (n=37) (Gandhi et al., 2019). The workshops revealed important comparisons and contrasts in the practice of mentoring, and specific barriers and facilitators to mentoring within each cultural and regional context (Gandhi et al., 2019). The specific regional issues included professional hierarchies, the post-colonial legacy and diversity. The common barriers across all four regions included a lack of a culture of mentoring, time constraints, lack of formal training, and a lack of recognition for mentoring (Gandhi et al., 2019). These workshops were novel in focusing exclusively on different aspects of mentoring, and they provided valuable training to participants on concepts and a structure for the development and strengthening of formal mentoring programmes across institutions in LMICs (Gandhi et al., 2019).

Publication 41 emphasises the benefits of mentoring to mentors, mentees, and their institutions, especially in LMICs (Hamer et al., 2019). **Publication 41** proposes nine core global health research mentoring competencies: maintaining effective communication; aligning expectations with reasonable goals and objectives; assessing and providing skills and knowledge for success; addressing diversity; fostering independence; promoting professional development; promoting professional integrity and ethical conduct; overcoming resource limitations; and fostering institutional change (Hamer et al., 2019). These competencies will assist mentors to sharpen their cognitive skills, acquire or generate new knowledge, and enhance professional and personal growth and job satisfaction (Hamer et al., 2019). Similarly, the proposed competencies will enhance the knowledge and skills of mentees, who can continue and extend the work of their mentors, and advance knowledge for the benefit of the health of populations in LMICs (Hamer et al., 2019).

5.3 Synopsis

In summary, the 14 publications in Section 5 generated new knowledge on the performance of HRH, whether related to MJH or sickness absenteeism or the responsiveness of health workers to the needs of vulnerable groups. These publications also enhanced the discourse on the

performance of HRH and generated new knowledge on mentoring as a strategy to enhance HRH performance

The 14 publications are contained in the zipped file, entitled: **DScSEC5 PERFORM P28-41.** The publications are numbered from 28 to 41.

The final **Section 6** of the DSc centres on my contribution to health policy and capacity building (both informal and informal) in South Africa.

SECTION 6: HEALTH POLICY INFLUENCE AND CAPACITY BUILDING

6.1 Overview

There is a sizeable literature on the challenges of achieving public policy impact from health research (Gentry, Milden, & Kelly, 2020; Glassman et al., 1999; Hanney et al., 2003; Howlett, Ramesh, & Wu, 2015; Kuruvilla, Mays, & Walt, 2007; Lavis et al., 2002; Maarse & Jeurissen, 2016; Reich et al., 2016; Walt, 1994). This is because public policy-making is complex, an intensely political process, shaped by context, power, leadership, resource availability and the relationships among stakeholders or policy actors (Gentry et al., 2020; Glassman et al., 1999; Hanney et al., 2003; Howlett et al., 2015; Kuruvilla et al., 2007; Lavis et al., 2002; Maarse & Jeurissen, 2016; Marchildon & Bossert, 2018; Reich et al., 2016; Walt, 1994).

Although there is no linear relationship between research, public policy-making and impact (Gentry et al., 2020), I have highlighted the contributions of my research and publications to knowledge generation and/or to health policy reform in South Africa in the preceding Sections 2 to 5. The most direct impact of my research in the pre-democratic era has been during my time as a public servant from 1996 until 2006, illustrated by Figure 5.

Figure 5 shows the framed Employment Equity Statement at one of the large public sector hospitals in Gauteng that I signed as Head of Department, and which remains in place at the hospital management offices. As can be seen from the Statement, I committed the Gauteng Department of Health to compliance with the Employment Equity Act (Republic of South Africa, 1998), one of the most important pieces of legislation for redress in post-apartheid South Africa. The Statement underscores the principles of respect and acceptance of diversity, non-discrimination, professional excellence, and the recognition and reward of potential and performance.



GAUTENG
PROVINCIAL GOVERNMENT

Department
of Health

EMPLOYMENT EQUITY POLICY STATEMENT

1. The Gauteng Department of Health commits itself to:

I. Adhering to the requirements stipulated by the Employment Equity Act No. 55 of 1998
II. Actively developing all its employees as the development of staff potential will contribute significantly towards quality and sustainable service delivery.
III. Providing developmental opportunities to people from designated groups.
IV. Recognising merit, potential and performance. This will be achieved through appointments, continuing education, promotions, bursaries etc.

2. Employment Equity in the department shall be driven in line with the following principles:

I. Respect and acceptance of diversity
II. Non-discrimination
III. Respect for the dignity of each individual
IV. Professional excellence
V. Recognising and rewarding potential and performance

3. In the implementation process of the Employment Equity Act the Gauteng Department of Health shall ensure that:

I. [illegible]rent Equity is planned purposefully as stipulated in the Employment Equity Act
II. [illegible] practices are free of discrimination
III. Sta[illegible]re consulted to ensure the credibility and legitimacy of the process
IV. Genuine [illegible]ncerns, anxieties and expectations are addressed
V. The potentia[illegible]mployees is recognized in attracting, rewarding, development and retention initiatives.

4. Consultation with stakeholders

Gauteng Department of Health shall consult employees in line with Section 16 and 19 of the Employment Equity Act.

5. Non-discrimination

I. Gauteng Department of Health shall promote the principle of equal opportunity through elimination of unfair discrimination
II. Employees shall not be discriminated against in terms of race, gender, pregnancy, marital status, family responsibility, ethnic and social origin, colour, sexual orientation, age, disability, religion, HIV status, conscience, beliefs, political opinion, culture, language and birth.
III. Gauteng Department of Health shall ensure that this principle is generally reflected in all its policies procedures and practices, as well as in the conduct of its employees.
IV. The Gauteng Department of Health shall specifically ensure that none of the above measures promote a work environment that unfairly discriminates against any employee on the basis of his or her HIV/AIDS status.

HEAD OF DEPARTMENT
GAUTENG DEPARTMENT OF HEALTH

Figure 5: Employment Equity Statement to illustrate impact on HRH transformation

This **Section 6** highlights both the direct (instrumental) and conceptual influence of my research on the South African health system and/or human resources for health (HRH). I also highlight my contribution to growing the next generation of health systems or HRH researchers.

6.2 Health Policy Influence and Capacity Building Publications

Section 6 contains 10 publications that can be clustered as follows:

6.2.1 Shaping post-apartheid health policies: **Publications 42-45**

6.2.2 Participation in health policy analysis or development: **Publications 46-50**

6.2.3 Growing the next generation of HRH researchers: **Publication 51**.

Annexure 1, excluded from this DSc (Med), contains a list of my co-authored publications with my former post-graduate students. These illustrate my contribution to capacity building and growing the next generation.

The 10 publications are listed below, and each publication is then summarised.

42 **Rispel L**, Doherty J, Makiwane F. The development of a plan for primary health care facilities in Soweto, South Africa Part I: Guiding principles and methods. *Health Policy and Planning*, 1996; **11**: 385-393. https://doi.org/10.1093/heapol/11.4.385

43 Doherty J, **Rispel L**, Webb N. The development of a plan for primary health care facilities in Soweto, South Africa. Part II: The application of locational criteria. *Health Policy and Planning,* 1996; **11**: 394-405. https://doi.org/10.1093/heapol/11.4.394

44 Doherty J, **Rispel L**. From conflict to cohesion: Involving stakeholders in policy research. *Evaluation and Program Planning*, 1995; **18** (4): 409-415. https://doi.org/10.1016/0149-7189(95)00027-5

45 **Rispel LC,** Doherty J. Research in support of health systems transformation in South Africa: the experience of the Centre for Health Policy. *Journal of Public Health Policy,* 2011; **32** (supplement 1): s10-s29. https://doi.org/10.1057/jphp.2011.33

46 **Rispel** LC, Barron P. Can disease control priorities improve health systems performance in South Africa? *South African Medical Journal,* 2010; **100** (12): 801-6. https://hdl.handle.net/10520/EJC67201

47 **Rispel L,** Moorman J. Health legislation and policy: Context, process and progress. Chapter 14 in: Fonn S, Padarath A (editors). *South African Health Review 2010.* Durban: Health Systems Trust, 2010: 127-141. https://www.hst.org.za/publications/Pages/HST-SOUTH-AFRICAN-HEALTH-REVIEW-2010.aspx

48 **Rispel LC**, Moorman J, Munyewende P. *Primary health care as the foundation of the South African health system: myth or reality*? Chapter 22 in: Meyiwa T, Nkondo M, Chitiga-Mabugu M, Sithole M, Nyamnjoh F (editors). State of the Nation 2014-South Africa 1994-2014: A twenty-year review. Cape Town: HSRC Press, 2014:378-94. https://www.hsrcpress.ac.za/books/state-of-the-nation-south-africa-1994-2014

49 Department of Health (DOH). *Strategic Plan for Nursing Education, Training and Practice 2012/13-2016/17*. Pretoria: DOH, 2013.

50 National Department of Health (NDoH), *2030 Human Resources for Health Strategy: Investing in the Health Workforce for Universal Health Coverage*. Pretoria: NDoH, 2020.

51 **Rispel LC**. Relationships, power, and accountability: Reflections on transformative postgraduate supervision workshops at a South African University School of Public Health, 2014-2020. *Innovations in Education and Teaching International,* 2021. https://doi.org/10.1080/14703297.2021.1952888

6.2.1 Shaping post-apartheid health policies

Publications 42-44 focus on a major health systems research project in Soweto in the early nineties, shortly before the first democratic elections (Doherty, Rispel, & Webb, 1996; Doherty & Rispel, 1995; Rispel et al., 1996). The apartheid National Department of Health and Population Development offered funding for the building of new clinics in Soweto (a large black township to the south-west of Johannesburg), with the sale of strategic oil reserves. The Soweto Civic Organisation, a community-based anti-apartheid organisation approached our team that consisted of a group of progressive architects and health systems experts from the Wits Centre for Health Policy.

Publications 42 and 43 detail the approach and results of developing a plan for primary health care (PHC) facilities in Soweto, shortly before democratic transition in South Africa (Doherty et al., 1996; Rispel et al., 1996).

Publication 42 describes the guiding principles and methods used to develop a coherent and objective plan for comprehensive PHC facilities in Soweto (Rispel et al., 1996). The brief of the research team was to determine the location of new facilities, identify existing facilities which required upgrading or closure, and recommend the order of improvements over a period of ten years (Rispel et al., 1996). However, the context was characterised by fragmentation (at the time of the research, public PHC services in Soweto were provided by five different authorities), heightened political tension, uncertainty, violence (one clinic experienced six burglaries in an eight-week period during 1992), and concerns of community-based organisations to participate in a planning process with those who supported or colluded with apartheid (Rispel et al., 1996). The research team adopted a participatory research approach, and used a combination of methods including detailed facility checklists, observation, record reviews, stakeholder discussions, and the adaptation of international and local guidelines for service planning (Rispel et al., 1996).

Publication 43 describes how to reconcile the technical problem of planning PHC facilities in Soweto with inadequate information during a difficult transition period (Doherty et al., 1996). The research team was faced with the problem of transforming the existing network of over-burdened and unevenly distributed clinics into a functional and more equitable system (Doherty et al., 1996). Hence, the team developed a conceptual framework that consisted of the following elements: comprehensive PHC services (i.e. no fragmentation between preventive and curative services); equity in the distribution of health care facilities; maximise geographical access within resource constraints; take account of the existing resource base of facilities in Soweto; and prioritise communities most in need (Doherty et al., 1996).

Publications 42 and 43 underscore the value of a participatory research approach in laying the foundation for both community and health worker involvement and ensured that the recommendations had the widest support (Doherty et al., 1996; Rispel et al., 1996). At the same time, the research team pioneered systematic planning, objectivity and fairness in a context characterised by apartheid's fragmented spatial planning, while overcoming the problem of

incomplete data (Doherty et al., 1996; Rispel et al., 1996). The approach and principles remain relevant both in South Africa, and in other LMICs.

Publication 44 is one of the first articles in South Africa to describe a participatory research approach to develop transformative health policies, incorporating the diverse views of stakeholders during transition periods and within a context of uncertainty, suspicion, and violence (Doherty & Rispel, 1995). **Publication 44** highlights the importance of mapping all relevant policy actors, and of meetings and consultation with these stakeholders to build trust and establish credibility (Doherty & Rispel, 1995). The advantages of participatory research include the ability to collect and triangulate information from different groups, capacity building, advocacy and consensus building and commitment to the recommendations (Doherty & Rispel, 1995). However, the process has disadvantages that include time and resource constraints, researcher fatigue, and unrealistic community expectations (Doherty & Rispel, 1995). There are also methodological limitations of receiving biased or inaccurate information from stakeholders, accessing community members, and the potential of distorting community priorities (Doherty & Rispel, 1995). Notwithstanding these limitations and challenges, **Publication 44** makes the case for a participatory approach to policy-making that includes community members and health workers at all levels of the health system (Doherty & Rispel, 1995).

Publication 45 describes the role and research of the Wits University Centre for Health Policy in health sector transformation in South Africa (Rispel & Doherty, 2011). Using in-depth interviews with key informants and a document analysis, the study found that the Centre's research over more than two decades has contributed conceptually and directly to health policy development, health sector transformation and implementation (Rispel & Doherty, 2011). Key success factors for policy influence are research quality and trustworthiness, ethical conduct and research integrity, strategic alliances and networking, and capacity building (Rispel & Doherty, 2011).

6.2.2 Participation in health policy analysis or development

Publications 46-50 illustrate the outputs of direct participation in health policy development in South Africa, albeit a contentious and fraught process.

Publication 46 is a critical assessment of the overall performance of the South African health system (Rispel & Barron, 2010), drawing on a review in which I participated and that was commissioned by one of the former health ministers (Barron et al., 2009). The ministerial review was prompted by the projected overspending in eight of South Africa's nine provinces during the 2008/09 financial year, given the potentially negative consequences of such over-spending for health system priorities (Barron et al., 2009). **Publication 46** uses the WHO's framework on health system strengthening (WHO, 2007) to examine the performance of the South African health system. Despite an enabling legal and policy framework, **Publication 46** highlights that leadership gaps, insufficient planning and/or resourcing of many national policies, lack of a broad public health approach to service delivery, and poor utilisation of existing information for decision-making contribute to the sub-optimal performance of the South African health system (Rispel & Barron, 2010).

The non-governmental organisations Section 27 and the Rural Health Advocacy Programme used the findings of the overall assessment in their advocacy efforts to improve the functioning of the health care system. However, changes in political leadership at national and provincial levels in 2009 impeded the implementation of the recommendations.

Publication 47 was by invitation, and analysed health and health-related legislation, key health policy initiatives and progress with implementation for the 18-month period from December 2008 until May 2010 (Rispel & Moorman, 2010). Using in-depth interviews and an analysis of policy documents, the review found that there was an enabling legal, policy and fiscal environment and context that facilitated the achievement of the millennium development goals in South Africa. At the time, **Publication 47** highlighted the slow progress with the implementation of the National Health Act (Rispel & Moorman, 2010). The study underscored the flaws in the process and timing of many health policy initiatives (Rispel & Moorman, 2010). Although these policy initiatives were aimed at improving the functioning of the health system, the processes often resulted in alienation of many stakeholders, particularly those responsible for implementation. The need for focus and prioritisation, careful attention to process and actors when developing or implementing legislation or policies, and improved monitoring and evaluation to enhance accountability to the public and to achieve health outcome goals constituted the core recommendations (Rispel & Moorman, 2010).

Against the backdrop of 20 years of democracy and the proposed NHI system, **Publication 48** is a critical analysis of whether primary health care (PHC) is the foundation of the South African health system (Rispel, Moorman, & Munyewende, 2014c). The methodological approach in **Publication 48** applied the 2008 WHO PHC reforms of universal coverage, service delivery, healthy public policies and leadership as an analytic framework (WHO, 2008). This policy analysis was complemented by in-depth interviews with key informants at national, provincial and district health levels (Rispel et al., 2014c).

We found that there has been significant progress in each of the reform areas of universal access, service delivery, public policy and leadership (Rispel et al., 2014c). Notwithstanding the progress that has been made, the analysis identified significant challenges. These included the complex burden of disease, uncertainties about the NHI, unclear, insufficient and/or fragmented funding for NHI and PHC reforms, shortages and inadequacies in human resources for PHC, insufficient patient/community participation, and lack of understanding of the importance of PHC (Rispel et al., 2014c). We highlighted the emerging opportunities for strengthening the health system at the PHC level, and recommend that implementation strategies should recognise the inter-relatedness of leadership, healthy public policy, people-centred service delivery, and community participation (Rispel et al., 2014c).

Publication 49 is the 2012/13 -2016/17 Nursing Strategy on Education, Training and Practice developed by a Health Ministerial Task Team (MTT) on Nursing, of which I was a member (DOH, 2013). The overall goal of the Strategy was to "develop, reconstruct and revitalise the nursing and midwifery profession" to enable them to address the disease burden and population health needs in South Africa (DOH, 2013). Apart from active participation in the MTT, I played a central role in the conceptualisation of the technical work, the engagement and consultation with various stakeholders, and the final writing and editing of the strategy.

Publication 50 represents the pinnacle of the policy impact of my research (NDoH, 2020). In 2019, the former Minister of Health, Dr Motsoaledi, appointed me as the chair and technical lead of the MTT on Human Resources for Health. The brief of the MTT was to develop the country's 2030 HRH Strategy and the accompanying five-year strategic plan (NDoH, 2020). I steered the research and technical analyses and the work of more than 40 MTT members. I delivered the final strategy in March 2020 (NDoH, 2020).

6.2.3 Growing the next generation of HRH researchers

During my research career, I have graduated 20 post-graduates: eight PhDs (7 women, 1 man) and 12 master's candidates (7 women, 5 men). These graduates occupy senior positions in government, the private or non-governmental sectors, and the academy. These graduates are competent to develop or implement evidence-informed policies and programmes or expand their research focus areas. The publications which I have co-authored with the eight PhD and two master's graduates are shown in **Appendix 1, and do not form part of the assessment process for this DSc**

Publication 51 brings together my supervision approach in growing the next generation of researchers. **Publication 51** uses Freire's adult education theory and Hackman's tools of social justice education to reflect on transformative supervision workshops held between 2014 and (Rispel, 2021). Combining formal and informal evaluation, postgraduate students reported that the workshops facilitated collegiality and supportive relationships; contributed to their personal and professional empowerment; and enhanced individual and peer accountability (Rispel, 2021). Postgraduate students have realised their own power and that of the collective to inspire, assist or effect change (Rispel, 2021). The workshops have embraced decolonial pedagogy and demonstrated that postgraduate supervision can be done in a collegial and empowering group setting (Rispel, 2021). The workshops have also valorised different forms of knowledge, and have highlighted the power of mutual and multi-directional learning between the supervisor and post-graduate students (Rispel, 2021).

Subsequently, I have had requests to share the model of the transformative supervision workshops with other schools in the Wits Faculty of Health Sciences.

6.3 Synopsis

The 10 publications in **Section 6** illustrate my contribution to shaping post-apartheid health policies (**42-45),** my direct participation in health policy analysis or development: **(46-50),** and my contribution to growing the next generation of HRH researchers (**51)**.

These 10 publications are contained in the zipped file, entitled: **Rispel DScSEC6 HPCAP P42-51** (HPCAP=Health Policy and Capacity Building). The publications are numbered from 42 to 51.

SECTION 7: CONCLUSION

The preceding **Sections 2 to 6** that constitute this degree of Doctor of Science (DSc) in Medicine focuses on my contributions to knowledge and policy in the transformation of human resources for health (HRH) in South Africa over more than two decades. This concluding section summarises the DSc scholarly contribution and policy relevance

7.1 Scholarly contribution

The scholarly contribution of the DSc is both in the generation of new knowledge, and its methodological innovation. The **51 publications** that comprise the full submission has generated knowledge in the following areas:

- *HRH and its intersection with the South African health system*, with studies that underscore the vital role of HRH in the prevention of missed opportunities, the prevention or mitigation of health sector corruption, or responding to an unknown pandemic such as COVID-19: **Publications 1-9.**
- The *criticality of leadership, management, and governance* in the implementation of health sector reforms, in dealing with the challenges of nurses and nursing who constitute the largest group of health care providers in the health system, or in responding to COVID-19: **Publications 10-23.**
- Pioneering research on and analysis of the *health labour market*: **Publications 24-27.**
- Examining the *performance of HRH*, with studies that generated new knowledge on moonlighting and its predictors, incapacity leave as a sub-set of sickness absenteeism, health worker responsiveness to the needs of vulnerable groups, and mentoring as a strategy to enhance HRH performance: **Publications 28-41.**

The methodological contribution of the DSc derives from the courage to experiment with a range of mixed methods. The qualitative methods have included in-depth interviews, focus group discussions, and analysis of policy documents. The quantitative methods include large-scale cross-sectional surveys (e.g., on moonlighting), analysing routine government statistics to obtain strategic insights (e.g., the predictors of incapacity leave, agency nursing expenditure in South Africa), longitudinal cohort studies (e.g., WiSDOM) and social network analysis. These mixed methods have enabled the generation of robust and generalisable findings.

7.2 Policy relevance and contribution

There is global recognition of the need to invest in HRH order to achieve both the sustainable development goals, and one of the seminal targets of universal health coverage by 2030 (WHO, 2016). Although **Publications 1-41** have influenced or contributed to the HRH policy discourse in South Africa, **Publications 42-51** highlight the research contribution to shaping post-apartheid health policies, my direct participation in health policy analysis or development in democratic South Africa, and importantly my contribution to growing the next generation of HRH researchers.

7.3 Looking to the future

At the end of 2020, my SARChI chair on the health workforce was upgraded to Tier 1 and renewed until the end of 2025. My vision is that the Chair is a national and international hub of excellence on health workforce research, informed and enriched by the South African and African context. I will maintain the three research themes of: leadership, management, and governance; analysing the health labour market; health workforce performance; and the intersection of these themes with the health system.

The envisaged research outcomes are to: advance excellence in health workforce research; generate new knowledge and evidence to assist with improvements in health system performance; and contribute to ongoing health sector transformation in the country. An explicit goal of the SARChI Chair is to invest in talent and to build the capacity of the next generation of health policy and systems researchers.

I will continue to engage with and nurture relationships with different health policy actors, including policy-makers, managers, health workers and their representative organisations, and other relevant civil society organisations, thereby contributing to positive changes in the South African health system.

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APPENDIX 1: JOINT PUBLICATIONS WITH POST-GRADUATE STUDENTS

i. Dreyer AD, **Rispel LC.** Using log diaries to examine the activities of final-year medical students at decentralised training platforms of four South African universities. *African Journal of Health Professions Education*, 2022; 14 (2). https://doi.org/10.7196/AJHPE.2021.v14i2.1471

ii. Muthathi IS, Levin, J, **Rispel LC**. Decision space and participation of primary healthcare facility managers in the Ideal Clinic Realisation and Maintenance programme in two South African provinces. *Health Policy and Planning*, 2020; 35 (3): 302–312, https://doi.org/10.1093/heapol/czz166

iii. Michell K, **Rispel LC.** Self-reported compliance with occupational health legislation among professional nurses in South Africa. *Occupational Health Southern Africa,* 2019; **25** (3):84-91.

iv. Hlongwa P, Levin J, **Rispel LC.** Epidemiology and clinical profile of individuals with cleft lip and palate utilising specialised academic treatment centres in South Africa. *PLoS ONE,* 2019; **14** (5): e0215931. https://doi.org/10.1371/journal.pone.0215931

v. Hlongwa P, Dandajena TD, **Rispel LC.** Comparative analysis of healthcare provision to individuals with cleft lip and/or palate at specialised academic centres in South Africa. *South African Medical Journal,* 2019; **109** (6):426-430.

vi. Benson FG, Levin J, **Rispel, L**. Health care providers' compliance with the notifiable diseases surveillance system in South Africa. *PLoS ONE,* 2018; **13**(4): e0195194. https://doi.org/10.1371/journal.pone.0195194

vii. Hlongwa P, **Rispel LC**. "People look and ask lots of questions": caregivers' perceptions of healthcare provision and support for children born with cleft lip and palate. *BMC Public Health,* 2018; **18**:506 https://doi.org/10.1186/s12889-018-5421-x

viii. Teffo ME, Levin J, **Rispel LC**. Compassion satisfaction, burnout, and secondary traumatic stress among termination of pregnancy providers in two South African provinces. *Journal of Obstetrics and Gynaecology Research*, 2018; **44**: 1202 – 1210. https://doi:10.1111/jog.13665

ix. Teffo ME, **Rispel LC**. "I am all alone": Factors influencing the provision of termination of pregnancy services in two South African provinces *Global Health Action*, 2017, **10**:1, 1347369. https://doi.org/10.1080/16549716.2017.1347369

x. Agbo S**, Rispel LC**. Factors influencing reproductive choices of HIV positive individuals attending primary health care facilities in a South African health district *BMC Public Health,* 2017; **17**:540 DOI 10.1186/s12889-017-4432-3

xi. Benson FG, Musekiwa A, Blumberg L, **Rispel, L.** Comparing laboratory surveillance with the notifiable diseases surveillance system in South Africa. *International Journal of Infectious Diseases,* 2017, **59**: 141–147.

xii. Michell K, **Rispel LC.** Governance of occupational healthcare services in South Africa: Cohesion or conflict? *Occupational Health Southern Africa,* 2017; **23** (2): 10-17.

xiii. Michell K, **Rispel LC.** "Mindless Medicals": Stakeholders' Perceptions of the Quality of Occupational Health Service Delivery in South Africa. *Workplace Health & Safety* 2017; 65(3): 100-108.

xiv. Benson FG, Musekiwa A, Blumberg L, **Rispel, L.** A survey of the perceptions of key stakeholders on the attributes of the South African Notifiable Diseases Surveillance System. *BMC Public Health,* 2016; **16**: 1120. https://doi.org/10.1186/s12889-016-3781-7

xv. Munyewende P, Levin, J, **Rispel LC.** An evaluation of the competencies of primary health care clinic nursing managers in two South African provinces. *Global Health Action*, 2016; **9**: 32486 - http://dx.doi.org/10.3402/gha.v9.32486

xvi. Olojede OI, **Rispel, LC**. Exploring the characteristics of nursing agencies in South Africa. *Global Health Action* 2015, 8: **27 878-** http://dx.doi.org/10.3402/gha.v8. **27 878**

xvii. Munyewende P, **Rispel LC.** Using diaries to explore the work experiences of primary health care nursing managers in two South African provinces. *Global Health Action,* 2014; **7**: 25323. http://dx.doi.org/10.3402/gha.v7.25323

xviii. Munyewende P, **Rispel LC**, Chirwa T. Positive practice environments influence job satisfaction of primary health care clinic nursing managers in two South African provinces. *Human Resources for Health*, 2014; **12**: 27. https://doi.org/10.1186/1478-4491-12-27