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2030 Human Resources for Health Strategy:

Investing in the Health Workforce for Universal Health Coverage

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Foreword by the Minister of Health: Dr Z. Mkhize

The 2030 Human Resources for Health (HRH) Strategy highlights the progress that has been made in the 25 years of democracy. We have laid a solid foundation with a strong regulatory framework, robust health policies, excellent health professional education and training institutions and higher national health worker densities that most other African countries.

The 2030 HRH Strategy comes at a time when we face an unprecedented pandemic of COVID-19, which will disrupt and change fundamentally all aspects of South African society, including its health system. Health workers are the personification of any health system. They are the vanguard of the defense of humanity against the pandemic. Hence, we underscored the importance of HRH in both the Reconstruction and Development Programme and the 1997 White Paper for the Transformation of the Health System. HRH are critical in achieving global mandates such as Universal Health Coverage and to the implementation of our own National Health Insurance (NHI) System.

I am pleased that the 2030 HRH Strategy takes South Africa's rights-based Constitution as its departure point. The drafters have also foregrounded the National Development Plan, the 1978 Alma Ata Declaration on Primary Health Care, and the proposed NHI system. This Strategy underscores the need for additional investments in HRH to improve health service quality, equity and access. The Strategy highlights the importance of a capable state and the need for government to take decisive steps to improve equity in the distribution of health care providers, between the public and private health sectors, and between urban and rural areas. Given the bleak economic and fiscal outlook, exacerbated by the COVID-19 pandemic, the 2030 Strategy highlights the need to improve the performance of the health workforce. Importantly, the Strategy highlights the criticality of looking after our health workers, through positive practice environments, and gender-transformative practices.

I wish to express my gratitude to all the members of the Ministerial Task Team (MTT) and senior health managers in the National Department and the nine provinces, for their sterling work on the HRH Strategy in the past year. The 2030 HRH Strategy provides a springboard to advance the goal of Universal Health Coverage and good health for all through investing in HRH.

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Acronyms and Abbreviations

AIDS	Acquired Immune-Deficiency Syndrome
ALMH	Academy of Leadership and Management in Health
CHW	Community Health Worker
CHWs	Community Health Workers
COE	Compensation of Employees
DHET	Department of Higher Education and Training
DHIS	District Health Information System
DoH	Department of Health
DPSA	Department of Public Service and Administration
GP	General Practitioner
HEEG	Health Employment and Economic Growth
HEMIS	Higher Education Management System
HISP	Health information Systems Programme
HIV	Human Immuno-Deficiency Virus
HLMCF	Health Leadership and Management Competency Framework
HMI	Health Market Inquiry
HPCSA	Health Professions Council of South Africa
HR	Human Resources
HRH	Human Resources for Health

HRHIS	Human Resource for Health Information System
HST	Health Systems Trust
HWCAF	Health Workforce Consultative and Advisory Forum
IPECP	Inter-professional education and collaborative practice
ITAC	Interim Technical Advisory Committee
ICAP	International Center for AIDS Care and Treatment Programs
ILO	International Labour Organization
I-TECH	International Training and Education Centre for Health
LMG	Leadership, Management and Governance
LMICs	Low- and Middle-Income Countries
M&E	Monitoring and Evaluation
MTEF	Medium Term Expenditure Framework
MTSF	Medium Term Strategic Framework
MTT	Ministerial Task Team
NDoH	National Department of Health
NDP	National Development Plan
NHA	National Health Act
NHISSA	National Health Information Systems of South Africa
NHWA	National Health Workforce Accounts
NHC	National Health Council

NHI	National Health Insurance
NHISSA	National Health Information System of South Africa
OHSC	Office of Health Standards Compliance
PERSAL	Personnel Salary Administration System
PHC	Primary Health Care
PHCWBOTS	Primary Health Care Ward-Based Outreach Teams
POPI	Protection of Personal Information
QA	Quality Assurance
QI	Quality Improvement
SA	South Africa
SANC	South African Nursing Council
SAPC	South African Pharmacy Council
SDGs	Sustainable Development Goals
SHPs	Skilled Health Professionals
UHC	Universal Health Coverage
UN	United Nations
WBCOT	Ward Based Clinical Outreach Teams
WHO	World Health Organization
WISN	Workload Indicator of Staffing Needs

Glossary of terms

Decent work	Decent work involves opportunities for work that are productive and deliver a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organise and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men. https://www.ilo.org/global/topics/decent-work/lang--en/index.htm Accessed 16 December 2019.
[Health] Equity	is the absence of avoidable, unfair, or remediable differences among groups of people, whether those groups are defined socially, economically, demographically or geographically or by other means of stratification [1].
Human resources for health (HRH)	HRH – also known as the health workforce – is defined as "all people engaged in actions whose primary intent is to enhance health"[2]
Governance	“Ensuring strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to systems design, and accountability” [3] as well as the roles and responsibilities of, and relationships among, health policy actors [4].
Leadership	The creation of a vision and strategic direction for the organisation, communication of that vision to the staff and customers of the organisation, and inspiring, motivating and aligning people and the organisation to achieve this vision [5].

Management	"All the activities and tasks undertaken by one or more persons for the purpose of planning and controlling the activities of others in order to achieve an objective or complete an activity that could not be achieved by the others acting independently" [6].
Positive practice environments	Positive Practice Environments are settings that support excellence and decent work. In particular, they strive to ensure the health, safety and personal well-being of staff, support quality patient care and improve the motivation, productivity and performance of individuals and organisations [7].
Social Accountability	Refers to the process of constructive and on-going engagement between education institutions, the health services and communities of a shared geographical area to ensure education and clinical training processes and placements produce graduates with the relevant competencies for addressing the priority health needs and service expectations of the different communities the institutions serve [2].
Universal health coverage (UHC)	UHC embodies three concepts: (1) equity in access to preventive, curative, rehabilitative and palliative health services, i.e. those individuals who need the services should get them, not only those who can pay for them; (2) that the quality of health services is good enough to improve the health of those receiving services; and (3) financial-risk protection - ensuring that the cost of using care does not put people at risk of financial hardship. (obtained from: https://www.who.int/healthsystems/universal_health_coverage/en/. Accessed 16 December 2019)

The Case for Investing in the Health Workforce

Box 1: Key messages on investing in the health workforce

1. The health workforce is:
    a. A key driver of inclusive economic growth.
    b. An investment, contributing to decent work and job creation, particularly for women and youth in rural and underserved communities.
    c. At the heart of an efficient and well-functioning health system when empowered with the optimum skills mix, distribution, competencies, standards, support and motivation to deliver essential services.
2. The value of investing in the health workforce is demonstrated by the experience in Brazil, Ghana, Mexico and Thailand. These countries recorded sustained improvements in Universal Health Coverage (UHC), which in turn contributed to improved population health outcomes.
3. There can be no delivery of UHC and National Health Insurance without a skilled, enabled and supported health workforce.
4. Strategic leadership, optimal governance and capable management are needed to maximise the efficiency, accountability and measurable impact of investment in the health workforce.

Investing in the health workforce

The health workforce- also known as Human Resources for Health (HRH)-is the personification of any health system [2]. The right health workforce enables an efficient and effective health system, which is critical for attaining the goals of improved population health, responsiveness to patient and community expectations, and ensuring financial risk protection [8]. The Sustainable Development Goals (SDGs) contain a key target (3.8) on Universal Health Coverage (UHC) [9]. The specific target 3c in the SDGs recommends an increase in health financing and in the recruitment, development, training and retention of the health workforce, especially in low-and middle-income countries (LMICs) [9]. Both of these underscore the importance of the health workforce in attaining SDG 3 on health and UHC. The United Nations High Level Commission on Health Employment and Economic Growth (HEEG) emphasised the investment potential of HRH in contributing to overall economic growth, by creating jobs, particularly for women and young people [10] and called for country-level investments in the right skills, decent working conditions and an appropriate number of health workers. This would in turn contribute to the achievement of SDG goals 4 (education), 5 (gender equality) and 8 (decent work) [8, 10]. The 2030 Global HRH Strategy of the World Health Organization (WHO) extends the SDGs, and implements the proposals of the HEEG by recommending a paradigm shift in how countries plan, educate, deploy, manage and reward health workers [8]. These seminal global frameworks provide a foundation on which to build South Africa's national HRH Strategy.

The value of investing in the health workforce is demonstrated by the experience in low- and middle-income countries, including Brazil, Ghana, Mexico and Thailand [11]. These countries have recorded sustained improvements in UHC through a specific policy focus on the health workforce [11]. The key success factors in these countries were: political leadership and commitment; appropriate legislation and policies; actions to ensure a health workforce that is "fit-for-purpose and fit-to-practise", intersectoral action and partnerships across government departments, and inside and outside the health sector [11]. Hence, a major mind shift is needed to appreciate that the health workforce is an investment, rather than an expenditure item [12].

This multi-country experience suggests that improvements in population health outcomes and the achievement of UHC in South Africa are closely tied to health workforce investment [11]. Such investment will also contribute to the reduction of health inequity, while creating employment and enhancing social protection, economic participation and skills development [10, 11].

This 2030 HRH Strategy for South Africa sets out the overall vision, goals and actions required to advance South Africa's progress in addressing persistent issues of inequity and inefficiencies in the health workforce.

Approach to developing the HRH Strategy

In March 2019, the Minister of Health appointed a Ministerial Task Team (MTT) with wide-ranging expertise in health, management, research and HRH to support the National Department of Health (NDoH) with the development of a HRH Strategy for 2030 and an associated Strategic Plan for the five-year period from 2020/21 until 2024/25.

Box 2: HRH values and principles

- Equity and social justice
- Human rights
- Honesty, integrity, and fairness
- Respect, and trust
- Gender-transformative and enabling policies
- Diversity, representation and redress
- Teamwork
- Participation and partnerships
- Decent work for the health workforce
- A capable state to ensure implementation

The MTT also took account of several national imperatives. Foremost among these was South Africa's rights-based Constitution that provides the foundation for the approach to health and development [13]. The MTT opted to plan for a future as envisaged by: the National Development Plan (NDP [14], an effective and efficient health system, financed through the proposed NHI system [15]; and the pressing need to strengthen PHC, with a focus on health service delivery in rural areas for improved access and equity.

The work of the task team commenced in April 2019, with the main activities listed in Table 1.

Table 1: Overview of MTT methodology

Method	Brief description
MTT meetings and workshops	The MTT held the following meetings: • Bi-weekly meetings of a small steering committee • Monthly meetings of the chair, deputy chair, chairs and technical support persons of the various Work Streams, and the NDoH senior officials • Workshops on thematic or specific focus areas • Individual Work Stream meetings
Literature review	The MTT conducted a review of development policies and strategies for health, health systems and HRH, focusing on: • Global level • Low-and middle-income countries • South Africa The review included conceptual frameworks for HRH planning
Key informant interviews	The MTT conducted in-depth interviews with key informants from: • Various branches in the NDoH • Department of Public Service and Administration (DPSA) • National Treasury • The Presidency • Health professions councils • Relevant HRH stakeholder groups. The purpose of the interviews was to elicit key HRH priorities, and strategic imperatives.
Consultations	The consultations took the following forms: • Two HRH Izindaba in August 2018 and September 2019 to ensure stakeholder views and inputs • Workshop with all the heads of provincial health human resource departments or divisions to ascertain strategic and operational problems • Work Stream specific consultative meetings • Workshops with health professional students or young professionals to obtain their views on HRH priorities • A newspaper advert to invite the public at large, and HRH stakeholders in particular, to submit written inputs and comments • Three presentations to the National Health Council (x1), and its Technical Committee consisting of national and provincial health department executives (x2)
Technical analyses	The MTT commissioned specific technical analyses on: • Health labour market in South Africa • Health workforce needs and costs • Health workforce needs of primary health care (PHC)

All these activities were integrated into this final HRH Strategy for 2030. The MTT recognised that the future profile, number, types and competencies of health workers required for South Africa's health system will be influenced by various factors, including the success in reducing the burden of disease through improving timely access to quality essential health services, addressing the social determinants of health, and disease prevention, health promotion, treatment and care, and rehabilitation. The South African health system must deliver at primary, secondary, tertiary and quaternary levels, each of which requires the right mix of health workers. The HRH strategy must be underpinned by values and ethics, reflect gender transformation and take account of the fourth industrial revolution and its anticipated impact.

Building the capacity of the state to ensure accountability for the strategic leadership, governance, management, implementation and sustainability of HRH interventions was reinforced throughout the lifespan of the MTT. Five MTT work streams addressed the domains of HRH, shown in Table 1Table 2.

Table 2: MTT Work Streams and their focus areas

No	Work Stream	Thematic areas
1	Health Workforce Needs and Costs	Labour workforce projections, skills mix, the influence of migration, costing (including analysis of different categories of health workers), financing, and budgeting.
2	Education and Training	Education, training and development, faculty (staff) development and support, teaching and learning platforms and environments.
3	Leadership, Management and Governance	Human resource leadership, management and governance; staffing, recruitment, deployment, distribution, migration; re-engineering, performance, utilisation, quality and accountability.
4	Conditions of Service	Positive workplaces and practice environments, conditions of employment.
5	Information, Monitoring and Evaluation (M&E)	Planning and M&E capacity, M&E, use of data, information, decision-making, research, innovation.

HRH conceptual framework

The MTT reviewed a myriad of conceptual frameworks on HRH, which ranged from the one proposed in the 2006 World Health Report [2], the HEEG framework [10], and the Health Labour Market Framework contained in WHO's Health Workforce 2030 [8]. Following extensive deliberations, the MTT adapted the *Health Human Resources Conceptual Framework* of Murphy *et al* [16], as the primary one (Figure 1). We complemented this framework with elements from the Health Labour Market Framework for UHC [17]; and a framework for HRH system development for fragile and post-conflict states [18].

The South African Constitutional values of human rights, equity and social justice underpin the conceptual framework [13]. In addition, the framework takes into account the global and national

social, political, economic and technological context and their influence on population health, the health system, and HRH Planning [16]. The global context includes the SDGs [9] and WHO 2030 Health Workforce strategy [8] and the national context includes the NDP [14] and proposed NHI reforms [15].

In our conceptual framework, we consider *leadership and governance* to be the most critical aspect to the success of any HRH strategy and its implementation in South Africa.

The population health component of the framework takes into consideration South Africa's quadruple burden of disease. The imperative to address population health needs provides the justification for HRH planning and forecasting [16]. Planning and forecasting focus on HRH planning models and practices, their assumptions, methods, data requirements, and limitations [16]. Planning and forecasting should take into account supply, production, resources, service delivery models, and the management and organisation of health services [16]. *Supply* is influenced by a range of factors, namely the actual number, type, and geographic distribution of healthcare providers, the production, recruitment and retention, licensing, regulation, and scope of practice, migration, and employment status of health care providers [16].

The *production* component of the framework underscores the importance of linking the health workforce education and training programme to population health needs. Production is also influenced by the availability, quantity and quality of skilled educators (faculty), the teaching and learning platforms and the selection and throughput of students [16-18].

Our conceptual framework suggests a two-way relationship between the component on HRH management, deployment, utilisation and performance and the component on planning and forecasting, and the various outcome components [16, 18]. Health outcomes refer to one of the core goals of the health system, and HRH are key to achieving such outcomes.

The health system outcomes refer to outcomes of quality, UHC and responsiveness to the needs of patients and communities [16]. The component on an enabling environment and efficient mix of resources reflects the number and type of resources needed in order to achieve the best population, provider, and system outcomes [16]. These lead to the important health provider outcomes of ensuring the health and well-being of HRH and retention and job satisfaction

All the components have to take cognisance of existing legislation and policies that impact on health, both within the health system, as well as in other ministries [17].

Lastly, we propose the prioritisation of a clear monitoring and evaluation (M&E) system to support the successful implementation of the HRH recommendations to achieve the desired outcomes Figure 1.

We have used this conceptual framework to guide development of this 2030 HRH Strategy.

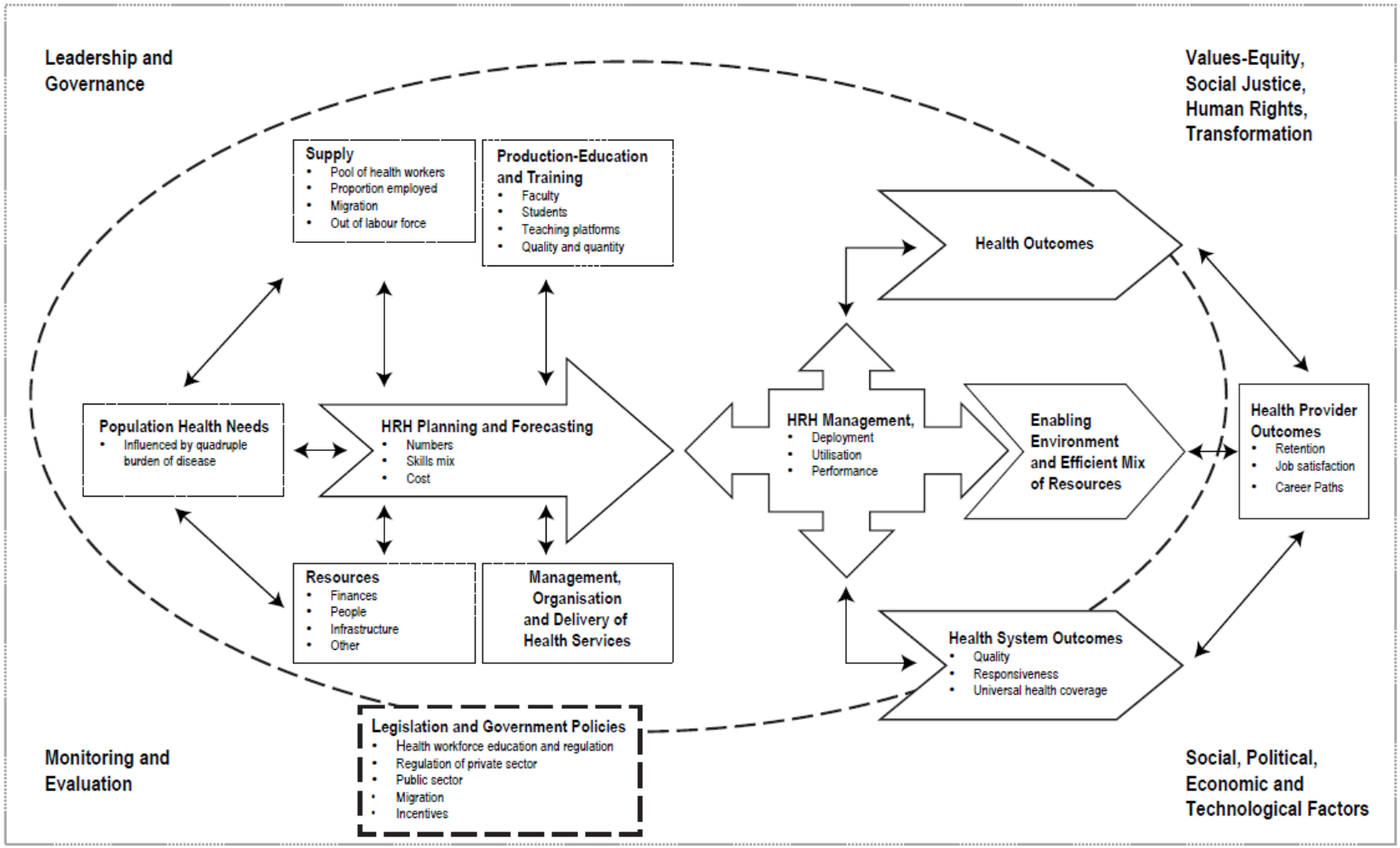

Figure 1: Human Resources for Health Conceptual Framework

Sources: [16-18].

The context of the HRH strategy

The Global Context

Globally there is an estimated shortfall of 18 million health workers, primarily in low resource settings [8]. This deficit impacts on countries' ability to achieve UHC [8]. In addition, population growth, combined with changing demographics and epidemiology will increase the need for health workers, while new technologies will require a health workforce with different skills mix, thus exacerbating some of these shortfalls [8]. Figure 2 shows the extent of health care professional shortages by WHO region [19]. The proposed SDG threshold is 44.5 doctors, nurses and midwives per 10 000 population. In Africa, the average ratio of doctors, nurses and midwives is around 14 per 10 000. In South Africa the average ratio of doctors, nurses and midwives is slightly below 60 per 10 000. Hence, South Africa is not on the list of countries that face critical skills shortages. However the country faces a different set of health workforce challenges, enunciated below.

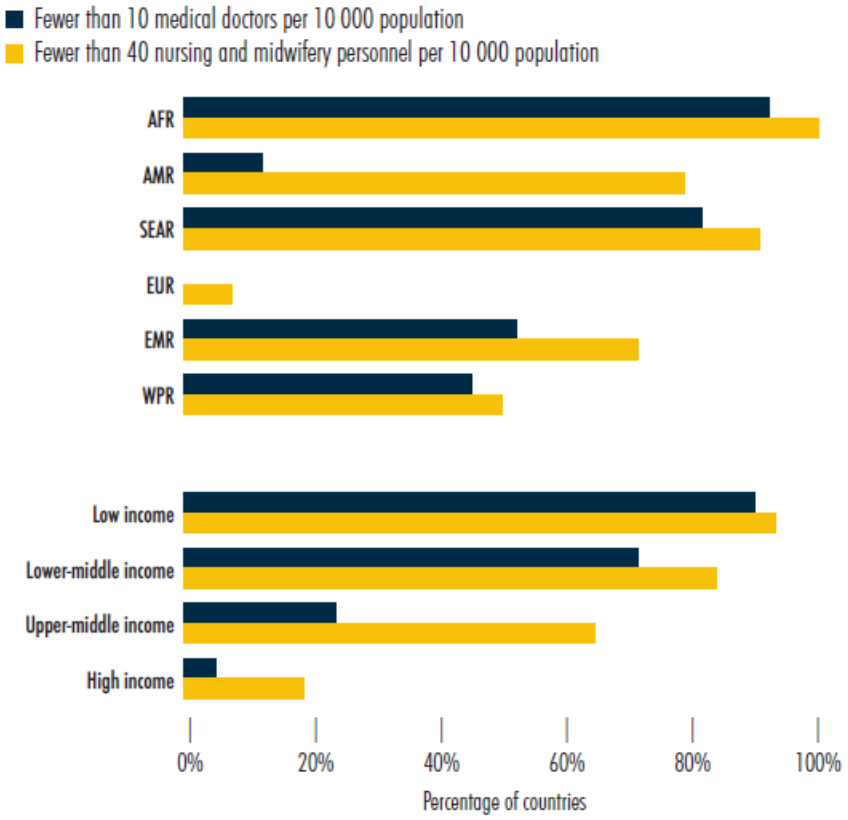

Figure 2: Health professional shortages by region

Source: WHO, 2019 [19]

The National Context

Legislation and policies

Section 27 of South Africa's Constitution specifies the right of access to health care services, and the State's obligation to achieve the progressive realisation of health rights [13]. The Constitution provides the overall framework for the development of sectoral legislation, with most of the legislative frameworks affecting HRH developed in the first five years of democracy between 1994 and 1999. The 1997 White Paper for the Transformation of the Health System in South Africa recognised that a suitable health workforce is central to meeting the population health needs of a democratic South Africa, and the implementation of health and social development programmes [20]. A complementary 1997 White Paper on Human Resource Management in the Public Service advocated a shift from personnel administration to human resource management [21]. The latter also positioned human resource management as a core competency for all public service managers and not the sole responsibility of personnel practitioners [21].

The 1995 Labour Relations Act established a rights-based labour framework for the country and created the Public Health and Social Development Sectoral Bargaining Council, which has played an important role in dispute resolutions [22]. The National Health Act (NHA) was promulgated in 2004, and makes provision for the development of policy and guidelines for the provision, distribution, training, management and utilisation of HRH within the national health system [23]. These policies and guidelines must, amongst other things, facilitate the adequate distribution of HRH; the provision of appropriately trained staff at all levels of the national health system to meet the population's health care needs; and the effective and efficient utilisation, functioning, management and support of HRH [23]. The NHA makes provision for the establishment of a Forum of Statutory Health Professional Councils to enable co-ordination between the different professions, complemented by the 2005 Nursing and 2007 Health Professions Amendment Acts [24, 25].

Development context

South Africa has made significant progress in addressing the apartheid legacy of race-based discrimination and access to resources. Despite this progress, the country remains one of the most unequal countries in the world, with high levels of wealth and wage inequalities [26]. In 2017, the Gini coefficient was 0.63, reportedly the highest in the world [27]. The reduction of

poverty and inequality is central to South Africa's development policies and programmes, enunciated at first in the 1994 Reconstruction and Development Programme (RDP), and in the 2012 National Development Plan (NDP) [26]. The latter presents the country's 2030 vision for development to overcome the triple challenge of poverty, inequality and unemployment [14].

The Burden of Disease

The triple challenge of poverty, inequality and unemployment is exacerbated by South Africa's quadruple burden of disease: the HIV & AIDS epidemic alongside a high burden of tuberculosis (TB); high maternal and child mortality; high levels of violence and injuries; and a growing burden of non-communicable diseases (NCDs) [28]. This quadruple burden is reflected in the top 10 causes of disability-adjusted life years (DALYs): HIV & AIDS, lower respiratory tract infections, road injuries, interpersonal violence, tuberculosis, diabetes, ischaemic heart disease, diarrhoeal diseases, cerebrovascular disease, and low back and neck pain [29].

Improving health will make a productive contribution to the economic development of South Africa, but this cannot be achieved without a skilled, enabled and supported health workforce. The capacity and capability of the health system to respond to this disease burden requires a strategic focus on how the health workforce of today and the future is planned for, produced, deployed, utilised, supported and managed.

The Health System

The WHO defines a well-functioning health system as one that "responds in a balanced way to a population's needs and expectations by: improving the health status of individuals, families and communities; defending the population against what threatens its health; protecting people against the financial consequences of ill-health; and providing equitable access to people-centred care" [30], page 1.

South Africa is driving a progressive agenda of health sector reforms through the design and implementation of its NHI system and the transformation of the health system service delivery model towards PHC [31]. However, the country's development and health challenges are compounded by the inequalities and poor performance of the South African health care system.

South Africa spends around 8.6% of its Gross Domestic Product (GDP) on health [32], almost half of which is public spending [32]. Despite around 15% of Government budget allocation to health, the public health system is not delivering value for money or desired health outcomes due to its inefficiency [33]. The private system on the other hand is driven by a profit motive, and is characterised by overprovision of highly specialised curative services and a lack of integrated care [34].

Human Resources for Health

An analysis of the HRH landscape in South Africa demonstrates that vital progress has been made in the preceding 25 years. The country has regulatory and governance structures in place, a strong education system and relatively large fiscal space for public sector employment [35]. However, the prevailing HRH challenges are a result of continued underinvestment, limited strategic planning and management capacity, and gaps in governance, stewardship, accountability, coordination and implementation of key health workforce policy interventions for the delivery of quality services [35]. This is exacerbated by the two-tiered health system, fiscal federalism, fragmentation, and varying capacities and performance levels of provincial health departments [36].

Box 3: What might the fourth industrial revolution mean for HRH?

- Exposure to disruptive technologies in pre-service education and the working environment e.g. robotics, patient/provider relationship and changing nature of work.
- Critical thinking and complex problem solving skills.
- Health workforce with technical competence, yet committed to service excellence and ethical practice.

Since 1994, there have been three national HRH Plans [37-39] all of which have faced policy, funding and implementation constraints. A 2018 review examined some of the unresolved critical HRH issues [40], illustrated in the diagram.

The 2017 White Paper on the NHI highlighted the inequity in the distribution of skilled health professionals between the public and private health sectors [15]. This inequity exacerbates shortages in the public health sector that takes care of the majority of the South African population, with an extraordinary complex disease burden. The NHI White Paper also underscored the health workforce disparities between urban and rural areas and inefficiencies in the use of available human resources [15]. Other factors highlighted in the White Paper are inadequate health workforce planning, policy incoherence (e.g. between education and training, and public sector employment or absorption), inadequate management and supervision, many disabling work environments and suboptimal conditions of employment [15]. The NHI White Paper contains several HRH strategies. These include an expansion of the platforms for international collaboration (such as the Mandela-Castro Collaboration Programme in Cuba), innovative public-private contractual arrangements, increasing the training of medical doctors and medical specialists, nurses and allied health professionals. There is recognition in the NHI White Paper that increasing the quantity and quality of health professionals need to be accompanied by positive practice environments, retention strategies, and improving the quality of life of health professionals working in rural areas [15].

At the 2018 Presidential Health Summit, participants raised several HRH concerns. These include disparities in the distribution of human resources, suboptimal planning and information systems, centralisation, vacant posts in the public health sector, and inadequate performance management [41]. The Summit led to a social compact. Some of the key outcomes include the equitable distribution of the health workforce; evidence-based planning and strategic leadership and management; improved use of data and evidence; filling of critical posts; addressing the negative impact of remunerative work outside the public service (RWOPS); and addressing gaps in statutory internships and community service [41].

The Health Market Inquiry (HMI) into the Private Health Care Sector was an investigation conducted by South Africa's Competition Commission because of concerns of high prices in private health care and the general state of competition in this sector. The final 2019 HMI Report flagged a range of regulatory and systemic issues that need to be addressed, including key HRH related challenges. These include the disparity in the availability of specialists and general medical practitioners between the public and private health sectors, and between rural and urban communities [34]. The Report also identified concerns regarding the market power

of health practitioners, incentives and relationships that may (perversely) influence the behaviour of practitioners, health service utilisation and expenditure, regulations that limit competition, and the impact of the fee-for-service reimbursement model on private health expenditure [42]. An infographic on the HRH journey since 1994 is shown below.

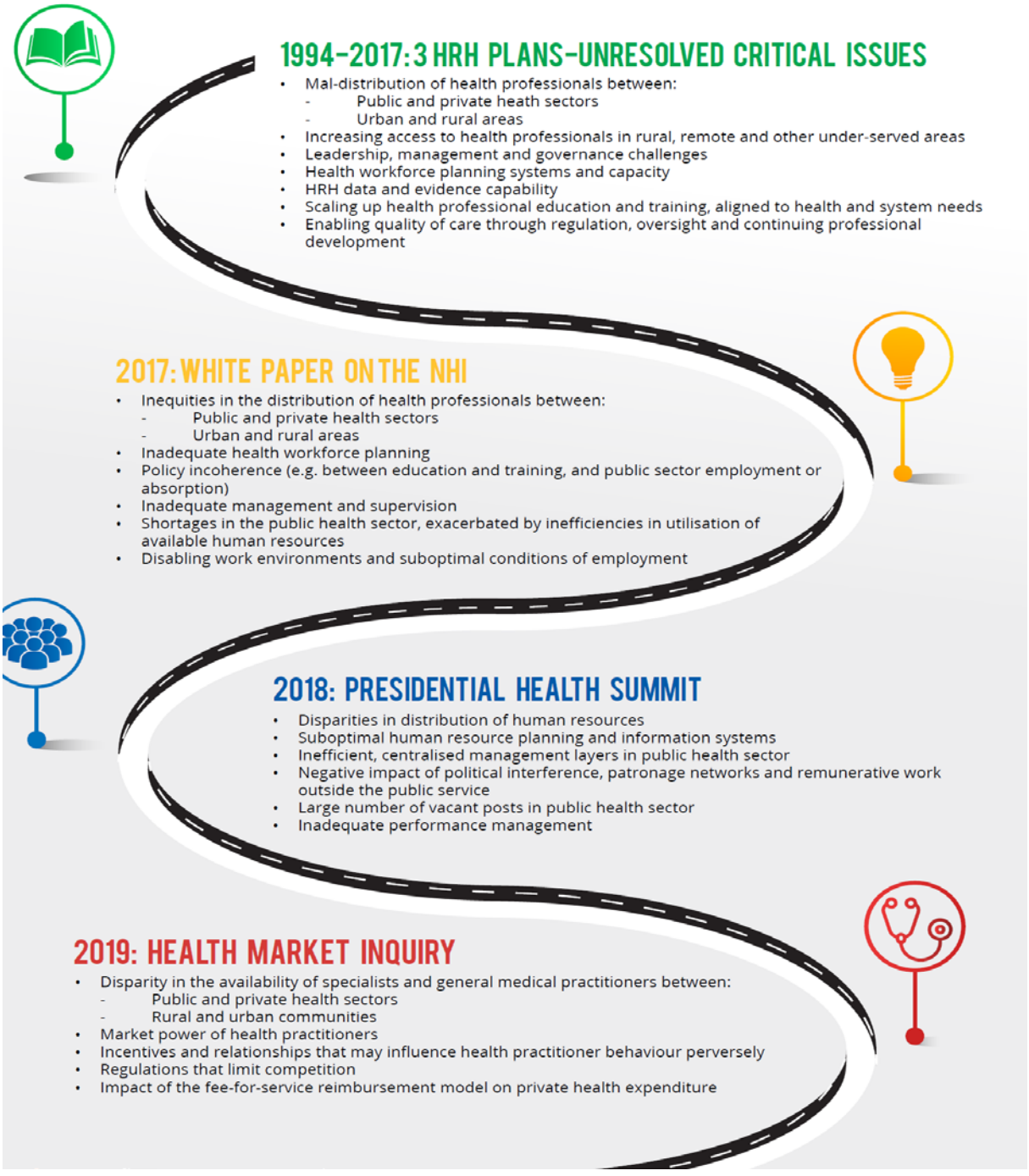

Figure 3: South Africa's HRH journey 1994-2019

Sources: [15, 34, 40, 41]

Notwithstanding these challenges, existing evidence shows that solid foundations have been laid across much of the HRH spectrum. Since 1994, there have been numerous initiatives of varying success aimed at resolving prevailing challenges. However, much remains to be addressed regarding the health workforce in South Africa. With this backdrop, the 2030 HRH Strategy for South Africa sets out the overall vision, goals and actions required to advance South Africa's progress in addressing persistent issues of inequity and inefficiencies in the health workforce. The Strategy focuses primarily on health care providers, i.e. those that directly deliver care. It does not delve deeply into the numbers of administrative and support staff needed, nor their skill mix, education and conditions of service. This is because of data limitations and time constraints.

Audience and structure

The primary audience for our HRH Strategy is Government, as National Government is the steward of HRH planning and resource allocation. The mandate of Provincial Health Departments is implementation. The HRH Strategy is also targeted at those planning the NHI. At the same time, we hope that the 2030 Strategy will speak to health leaders and health managers, and health care providers in both the public and private health sectors, academic institutions, statutory bodies, community-based and non-governmental organisations, organised labour and civil society in general.

The remainder of the Strategy is divided into three sections. In the next section of the 2030 HRH strategy, we examine health workforce needs and costs. Together with this background, the needs and cost analysis informs the five goals and a set of strategies to achieve these goals over the next decade until 2030 in a section entitled, *Towards Business Unusual*. The final section contains the five-year strategic plan for the period from 2020/21 until 2024/2025

Health Workforce Needs and Costs: Dilemmas and Complexities

Box 4: Key messages on health workforce needs and costs

Key messages
1. South Africa has higher national health worker densities than most other African countries, and pays health workers relatively higher salaries. However, health and health system outcomes are not commensurate with these relative advantages. 2. Significant additional investments in the health workforce will be required to improve health service access, quality and equity. a. Our modelling suggest that improving inter-provincial equity in the public sector by 2025 will require an additional 97 000-health workers, with CHWs comprising around one third. b. Expanding public sector PHC utilisation to the benefits package defined in national policy is estimated to require an additional 88 000 PHC health workers by 2025. c. Lastly, a recent analysis suggests that the number of medical specialists needs to increase significantly by 2025 to keep up with demographic and epidemiological changes. d. Additional investment will also have a major positive impact on socio-economic development, and contribute to employment of youth and women, and the reduction of poverty due to ill health. 3. The absence of consolidated national health workforce accounts data, from both the public and private health sectors, compromises the validity of estimates of health workforce availability and need. 4. Health workforce planning is also hampered by the lack of national capacity, skills and appropriate and credible planning models. More sophisticated health workforce planning is needed urgently. Little progress has been made in addressing these limitations since the last National HRH Strategic Plan, and this is concerning. 5. In 2019/20, South Africa spent 63% of the public health budget on personnel (~R133 billion). a. There is a significant differential in average salary costs across health worker categories. For example, compared to the annual salary of enrolled nurses, professional nurses cost 1.6 times more, allied health workers 1.8-2.9 more, doctors 3.3 more, and medical specialists 4.4 times. b. Doctors make up a relatively small part of the workforce (8.6%) but a considerable part of the salary bill (30.9%). c. The appropriateness of these salary differentials require further interrogation. d. Overtime payments constitute a substantial part of the remuneration package for doctors and dentists in Gauteng, Eastern Cape, Free State and the Western Cape. For the remainder of the provinces, the non-pensionable cash allowance is the largest allowance. e. The breakdown of remuneration packages and the differences across the provinces require further analysis. 6. The current economic and fiscal outlook in South Africa is bleak. However, various analyses indicate a current and projected shortage of skilled health professionals in South Africa. Due to population growth alone, the shortfall in essential health workers will worsen by 2025 if health workforce expenditure only increases in line with inflation.

Key messages

7. In light of the economic and fiscal constraints, better return on existing health personnel expenditure could be achieved by efficiency improvements in health worker productivity, skills mix, remuneration and utilisation.

8. In 2019, the health workforce inequities at several levels were stark.
    a. The inequity between the public and private health sectors is projected to worsen without concerted policy intervention. For example, the overall national density of medical specialists was calculated as 16.5 per 100 000. However, there are an estimated 7 specialists per 100 000 population employed in the public sector and 69 per 100 000 in the private health sector.
    b. There are also inequities within the public health sector. Rural provinces have significantly lower densities of more skilled health professionals. The inequities for medical specialists, nurses and CHWs are most marked. For example, the Western Cape has 25.8 medical specialists per 100 000 public sector population compared to only 1.4 per 100 000 in Limpopo. Although the location of public sector tertiary and central hospitals influenced this maldistribution, in practice this means that accessing specialist services in Limpopo is extremely difficult in comparison to other provinces.
    c. Provincial inequalities in health worker densities also reflect the variation in skills mix across the country. The public health sector in South Africa is predominantly nurse-driven, with nurses making up 56% of health care providers. This is particularly true of provinces such as the Eastern Cape where nurses make up 63.9% of the health workforce in the public sector. Doctors constitute around 8.6% of the public health workforce. The proportions are lower in Limpopo (4.3%), Mpumalanga (6.1%) and the North West (6.1%), but higher in Gauteng (11.6%) and the Western Cape (14.6%). CHWs play a critical role within the health systems of Northern Cape (36.8%), Mpumalanga (35.3%), North West (34.9%) and Limpopo (31.1%), as compared to other provinces.
    d. The maldistribution of health workers within provinces by district and level of care also requires further analysis and policy attention.

9. The aforementioned problems and dilemmas can only be addressed by a highly skilled and capable HRH function at national level, supported by high quality, timely information on the health workforce in South Africa.

Health workforce needs and costs

Health workforce planning requires up-to-date HRH information and credible quantitative models. Although the 2012/13-2016/17 HRH Strategy for the health sector recommended the establishment of a national intelligence function, able to collect accurate HRH information and do detailed health workforce planning, this has not been realised [39]. Nevertheless, this section presents various analyses of the current and future availability, needs and costs of health workers in South Africa.

Current Health Workforce Stock

An important first step in health workforce planning is to determine the current number and density of health workers in South Africa.

All health professionals in South Africa are required to register annually with their respective professional councils. The most recent data available to us on the total numbers of health professionals registered with the Health Professions Council of South Africa (HPCSA), South African Nursing Council (SANC) and the South African Pharmacy Council (SAPC) are for 2016, shown in Table 3.

However, the Council data over-estimate the stock of working health professionals because it includes professionals that have left South Africa, retired or who work outside their profession. The Councils do not accurately differentiate these categories at present, nor do they have accurate information on current location or sector of work.

Table 3: Numbers of health professionals registered with South African regulatory bodies, 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

Sources: HPCSA [43]; SANC [44]; SAPC [45]

Stock of public sector health workers

The advent of NHI will require more integrated health workforce planning across both the public and private health sectors. Health workers employed in the public sector are captured in the government's Personnel and Salary System (PERSAL). However, there is no similar registry or database of health personnel working in the private sector. Because of data limitations in the private sector, the remainder of this section focuses only on the public sector health workforce. In the current context, it might be appropriate that national health workforce planning focuses mainly on ensuring sufficient health personnel to meet the health care needs of the majority of the South African population that rely on the public sector.

We used aggregated PERSAL data for 22 selected health worker categories from the National Treasury. The total numbers of public sector health workers in each category in South Africa, as at March 2019, are presented in Table 4.

In 2019, the public sector employed 243 684 health workers in the 22 selected categories. Of these, nurses make up the largest proportion of the health workforce (56.0%). The recent increase in CHWs (22.2%) means that they also now make up an important component of the health workforce.

The current public sector densities, for each of the selected health worker categories, are also presented in Table 4.

This is the number of health professionals per 100 000 of the public sector population. We used the Thembisa model for the projected total population [46]. The public sector user population is assumed to be the proportion of the population without health insurance. We estimated this from the 2018 national General Household Survey, which found that 16.5% of the South African population have some private health insurance cover [47]. Hence, we assumed that 83.5% of the population are dependent on the public sector for health care.

In total, there are nearly 503 health workers for every 100 000 public sector users. The density for all nurses combined is 282 per 100 000, whereas there are a total 43 doctors and 30 allied health workers per 100 000 public sector population. The figure of 112 per 100 000 for CHWs equates to one CHW for every 895 members of the population.

Table 4: South African public sector health workforce, 2019

No.	Group	Health worker Category	Total Numbers	%	National density (per 100 000 public sector population)
1	Doctors	Medical Practitioners	16 046	6.6	33.11
2		Medical Specialists	4 827	2.0	9.96
3	Nurses	Professional Nurses	71 707	29.4	147.95
4		Enrolled Nurses	31 039	12.7	64.04
5		Nursing Assistants	33 821	13.9	69.78
6	Pharmacy Practitioners	Pharmacists	5 762	2.4	11.89
7		Pharmacy Assistants	1 783	0.7	3.68
8	Rehabilitation Therapists	Occupational Therapists	1 279	0.5	2.64
9		Physiotherapists	1 504	0.6	3.10
10		Speech Therapists & Audiologists	730	0.3	1.51
11	Dental Practitioners	Dental Practitioners	1 235	0.5	2.55
12		Dental Specialists	146	0.1	0.30
13		Dental Technicians	53	0.0	0.11
14		Dental Therapists	342	0.1	0.71
15		Oral Hygienists	246	0.1	0.51
16	Emergency Workers	Ambulance & Related Workers	12 255	5.0	25.29
17		Emergency Services Related Workers	2 281	0.9	4.71
18	Other professionals	Psychologists & Vocational Counsellors	712	0.3	1.47
19		Radiographers	2 880	1.2	5.94
20		Environmental Health Workers	484	0.2	1.00
21	Other health workers	Community Health Workers	54 180	22.2	111.79
22		Clinical Associates	372	0.2	0.77
Total Health Workers			**243 684**	**100.0**	**502.81**
Skilled Health Professionals (SHPs): Doctors & Nursing Professionals (No. 1-5)			**157 440**	**69.5**	**324.8**

Source: PERSAL [48] for all the selected categories except CHWs which were obtained from the CHW register, as reported in the DHB 2017/18 [49]. Public sector population calculated from Thembisa model [46], StatsSA GHS [47]

Inter-provincial variation in the public health workforce

The national averages mask significant sub-national variation and inequalities. A comparison of health worker densities of the 1st, 3rd, 5th and 9th ranked provinces for each health worker category is shown in Table 5. These represent the provinces with the highest, third-highest, middle, and lowest densities respectively. Mpumalanga has the lowest densities for four categories whereas the Northern Cape has the highest densities for five categories because of its relatively small population. The inequalities for medical specialists, nurses and CHWs are most marked. For example, the Western Cape has 25.8 specialists per 100 000 public sector

population compared to only 1.4 per 100 000 in Limpopo. Although the location of public sector tertiary and central hospitals influenced this maldistribution, in practice this means that accessing specialist services in Limpopo is extremely difficult in comparison to other provinces.

Provincial inequalities in health worker densities also reflect the variation in skills mix across the country. The public sector health system in South Africa is predominantly nurse-driven. This is particularly true of provinces such as the Eastern Cape where nurses make up 63.9% of the health workforce in the public sector. At the same time, there is a two-fold variation in the number of nurses per 100 000 population between the Eastern Cape (189.7) and the Free State (93.6).

Box 5: The case for investing in nursing

1. One in every two health care providers in South Africa's public health sector is a nurse, with nurses constituting 56% of all health care providers. Hence, nurses are central to addressing the burden of disease, the re-engineered PHC approach and improving health system performance.
2. The density for all nurses combined in South Africa's public health sector is 282 per 100 000.
3. Notwithstanding this numerical dominance, nurses' salaries are among the lowest of health worker salaries in South Africa. This could be indicative of a persistent gender wage gap in health.
4. Model I to improve equity suggests a shortage of around 16 000 professional nurses alone to reach the third ranked province's equity target by 2025. Model II on PHC suggests a professional nurse shortage of around 34 000 by 2025.
5. 2020 is the International Year of the Nurse and Midwife, and provides an opportunity to invest in nurses and nursing in South Africa.

Doctors constitute around 8.6% of the health workforce. The proportions are lower in Limpopo (4.3%), Mpumalanga (6.1%) and the North West (6.1%), but higher in Gauteng (11.6%) and the Western Cape (14.6%). Community Health Workers play a critical role within the health systems of Northern Cape (36.8%), Mpumalanga (35.3%), North West (34.9%) and Limpopo (31.1%), as compared to other provinces (Figure 4). Considering fiscal constraints, it is important to consider country case studies of alternative models of service delivery with a greater reliance on mid-level workers. Examples include assistant medical officers trained in obstetrics in Mozambique, and the training of physician assistants in the United States [50-52].

Table 5: 2019 Public sector health workforce - Inter-provincial variation in staffing ratios per 100 000 public sector population

HW Category	National average	1st Rank Province	3rd Rank Province	5th Rank Province	9th Rank Province
Medical Practitioners	33.11	NC: 45.25	KZN: 37.42	GP: 31.89	LP: 25.94
Medical Specialists	9.96	WC: 25.81	FS: 12.99	NW: 3.66	LP: 1.36
Professional Nurses	147.95	EC: 189.67	LP: 174.60	NW: 140.56	FS: 93.60
Enrolled Nurses	64.04	KZN: 97.81	GP: 65.12	WC: 51.76	NC: 24.43
Nursing Assistants	69.78	EC: 90.57	LP: 88.19	WC: 82.23	MP: 36.03
Pharmacists	11.89	WC: 19.54	FS: 14.52	LP: 11.30	MP: 7.85
Pharmacy Assistants	3.68	KZN: 10.59	NW: 4.66	NC: 3.50	WC: 0.00
Occupational Therapists	2.64	NC: 5.88	FS: 3.22	EC: 2.51	KZN: 1.94
Physiotherapists	3.10	NC: 6.29	FS: 3.38	WC: 3.05	MP: 2.63
Speech Therapists & Audiologists	1.51	NC: 2.99	MP: 1.72	GP: 1.52	NW: 0.86
Dental Practitioners	2.55	NC: 4.02	WC: 3.41	EC: 2.68	KZN: 1.58
Dental Specialists	0.30	GP: 0.95	FS: 0.04	MP: 0.02	KZN/NC/NW: 0.00
Dental Technicians	0.11	WC: 0.23	NC: 0.10	NW: 0.06	KZN: 0.02
Dental Therapists	0.71	LP: 2.60	NC: 0.82	GP: 0.39	FS: 0.00
Oral Hygienists	0.51	LP: 1.19	GP: 0.41	KZN: 0.34	NC: 0.21
Ambulance & Related Workers	25.29	NC: 71.84	EC: 42.36	KZN: 27.46	LP: 0.34
Emergency Services Related Workers	4.71	LP: 34.50	NC: 6.18	KZN: 0.45	WC: 0.00
Psychologists & Vocational Counsellors	1.47	LP: 2.34	NW: 1.96	GP: 1.16	KZN: 0.81
Radiographers	5.94	WC: 9.36	EC: 6.55	GP: 6.21	MP: 3.42
Environmental Health Workers	1.00	FS: 2.76	NW: 1.59	LP: 1.21	WC: 0.00
Community Health Workers	111.79	NC: 263.14	NW -178.77	KZN: 99.21	WC: 69.36
Clinical Associates	0.77	MP: 1.65	KZN: 1.23	FS: 0.78	WC: 0.00

Source: PERSAL [48] for all the selected categories except CHWs which were obtained from the CHW register, as reported in the DHB 2017/18 [49]. Public sector population: Thembisa model [46], StatsSA GHS [47].

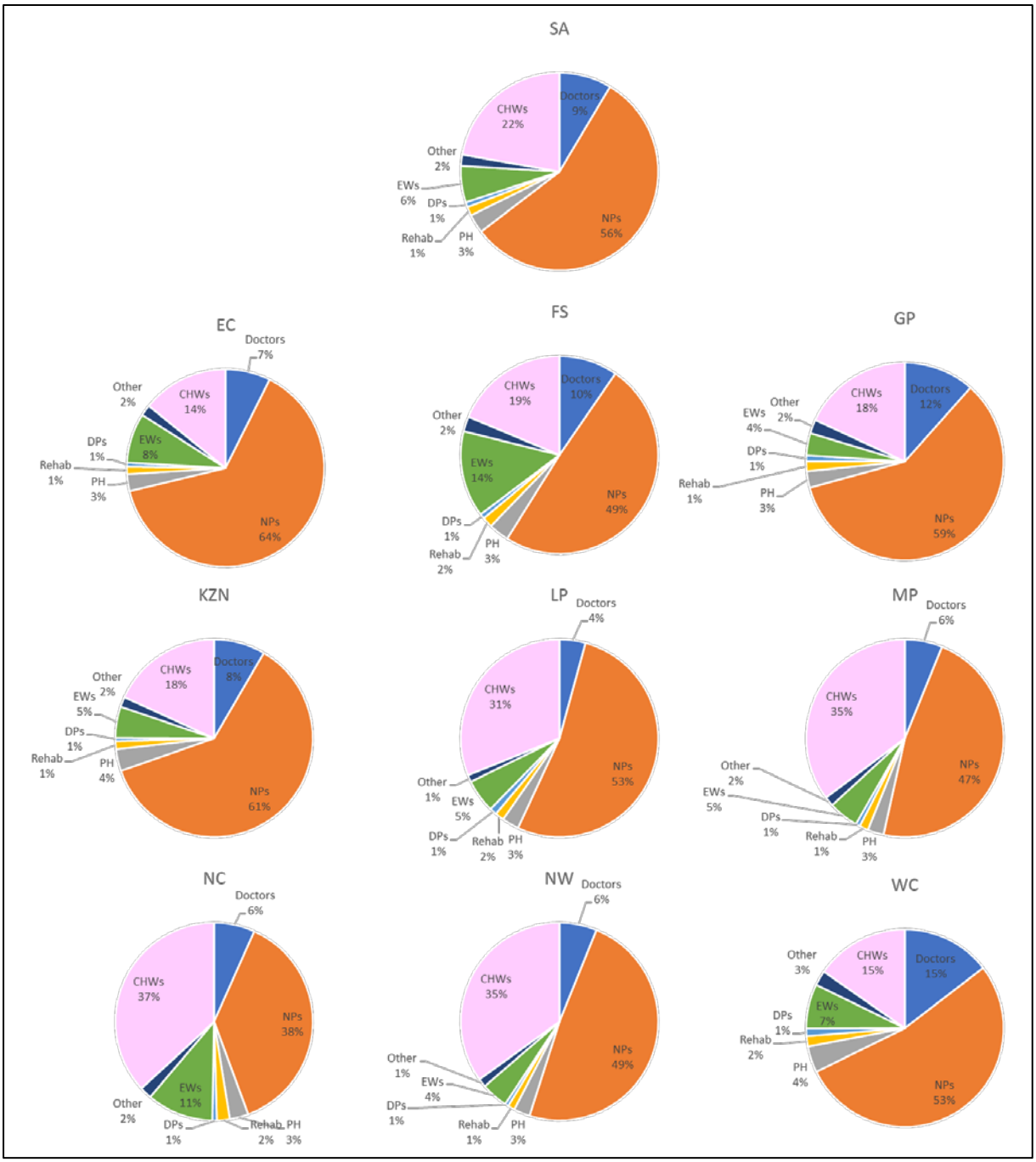

Figure 4: Health worker public sector skills mix by province, 2019

Doctors – Medical Practitioner, Medical Specialists; NPs (nursing practitioners) - Professional Nurse, Enrolled nurse, Enrolled nurse assistant; PH (pharmacists) – Pharmacists, Pharmacy Assistants; Rehab (Rehabilitation Therapists) - Occupational Therapists, Physiotherapists, Speech Therapists – Audiologists; DP (dental professionals) – Dental Practitioners, Dental Specialists, Dental Technicians, Dental Therapists, Oral Hygienists; EWs (emergency workers) - Emergency Services Related Workers, Ambulance and Related Workers; CHW - Community Health Workers; Other – Radiographer, Psychologist, Environmental Health Workers, Clinical Associates

Public Health Workforce Budgets and Expenditure

In 2019/20, the total Compensation of Employees (COE) budgets of provincial departments of health was R 132.7 billion (Table 6). This includes both the Provincial Equitable Shares and Conditional Grants. The COE accounts for 63% of the total provincial health budgets of R 209.5 billion. However, provinces have some autonomy to decide on COE allocations according to local needs. Limpopo allocates the highest proportion of their budget to COE at 76% while Gauteng is the lowest at 58%. Nationally, the COE budget allocation increased with an average compound growth rate of 8% per annum from 2016/17 to 2019/20. The growth was similar amongst provinces. The rising COE budget over this period has been due to increases in the salaries of health workers as well as increases in recruitment, particularly for medical interns and community service doctors.

Table 6: Projected health workforce (COE) budget per province (Billions)

Prov	Actual	MTEF Projection		Projection using Consumer Price Index (CPI)							
	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
EC	R16.96	R18.28	R19.40	R20.33	R21.31	R22.33	R23.41	R24.53	R25.71	R26.94	R28.23
FS	R7.31	R7.88	R8.33	R8.73	R9.14	R9.58	R10.04	R10.52	R11.03	R11.56	R12.11
GT	R29.56	R31.42	R34.64	R36.31	R38.05	R39.88	R41.79	R43.80	R45.90	R48.10	R50.41
KZN	R28.94	R31.62	R33.57	R35.18	R36.87	R38.64	R40.50	R42.44	R44.48	R46.61	R48.85
LP	R15.81	R16.70	R17.67	R18.52	R19.40	R20.34	R21.31	R22.34	R23.41	R24.53	R25.71
MP	R8.47	R9.08	R9.66	R10.13	R10.61	R11.12	R11.66	R12.22	R12.80	R13.42	R14.06
NC	R3.14	R3.35	R3.57	R3.74	R3.92	R4.11	R4.30	R4.51	R4.73	R4.96	R5.19
NW	R7.77	R8.35	R8.92	R9.35	R9.80	R10.27	R10.76	R11.28	R11.82	R12.39	R12.98
WC	R14.71	R15.49	R16.46	R17.25	R18.08	R18.95	R19.86	R20.81	R21.81	R22.86	R23.96
TOT	**R132.67**	**R142.16**	**R152.23**	**R159.53**	**R167.19**	**R175.22**	**R183.63**	**R192.44**	**R201.68**	**R211.36**	**R221.50**

Source: National Treasury – Budget Benchmark Tool. MTEF: Medium-Term Expenditure Framework

For the purpose of the analysis, overall budgets and COE budgets have to be projected to 2030. Given the bleak macro-economic outlook and national fiscal environment, we have assumed that the 2021/22 budgets (published in the 2019 MTEF) will grow by the consumer price index (CPI) rate of 4.8% per year until 2030, rather than the higher historical increases noted above. The projections in Table 6 beyond the MTEF are illustrative and do not represent official spending commitments.

Health workforce salaries

The current average annual salary costs for each health worker category are shown in Table 7. The table also indicates the predicted average salaries for each category in 2025 and 2030. Salary and benefit costs were calculated from Department of Public Service and Administration (DPSA) for April 2019. We also used the CPI of 4.8% per annum to project an annual increment in the salaries.

There is a significant differential in average salary costs across health worker categories (Table 7). For example, compared to the annual salary of enrolled nurses, professional nurses cost 1.6 times more, allied health workers 1.8-2.9 more, doctors 3.3 more, and medical specialists 4.4 times more. Doctors make up a relatively a small part of the workforce (8.6%) but a considerable part of the salary bill (30.9%). The appropriateness of these salary differentials require further interrogation. They also need to be considered in planning the appropriate skills mix of health personnel to meet service delivery needs. Decisions about which level of health worker is needed to deliver care will have an important impact on the affordability of services.

Table 7: Average health worker salaries, 2019

Health worker category	2019	2025	2030
Medical Specialists	R 1 302 849	R 1 726 083	R 2 182 068
Medical Practitioners	R 981 843	R 1 300 798	R1 644 433
Professional Nurse	R 461 759	R 611 762	R 773 373
Enrolled Nurses	R 297 428	R 394 049	R 498 146
Nursing Assistants	R 227 965	R 302 020	R 381 806
Occupational Therapy	R 546 180	R 723 608	R 914 766
Physiotherapy	R 546 180	R 723 608	R 914 766
Speech Therapy & Audiology	R 546 180	R 723 608	R 914 766
Psychologists & Vocational Counsellors	R 876 957	R 1 161 839	R 1 468 765
Radiography	R 546 180	R 723 608	R 914 766
Pharmacists	R 773 730	R 1 025 079	R 1 295 876
Pharmaceutical Assistants	R 253 427	R 335 753	R 424 450
Community Health Workers	R 42 000	R 55 644	R 70 343
Dental Practitioners^	R 823 967	R1 091 634	R1 380 015
Dental Specialists	R 1 302 849	R 1 726 083	R 2 182 068
Dental Technicians	R 398 672	R 723 608	R 914 766
Dental Therapists	R 398 672	R 723 608	R 914 766
Oral Hygienists	R 398 672	R 723 608	R 914 766
Environmental Health Workers	R 398 672	R 723 608	R 914 766
Emergency Services Related Workers^	R 556 454	R 1 009 991	R 1 276 803
Ambulance and Related Workers^	R 334 532	R 607 192	R 767 595

Source: DPSA (2019) and own calculations

^Median salaries were considered due to multiple health worker categories

An analysis of recent trends in employee remuneration [53] indicates that overtime payments constitute a considerable part of the remuneration package for doctors and dentists in Gauteng, Eastern Cape, Free State and the Western Cape. For the remainder of the provinces, the non-pensionable cash allowance is the largest proportion. The breakdown of remuneration packages and the differences across the provinces requires further analysis.

Health Workforce Needs and Gaps

The next step in health workforce planning is to evaluate whether the current stock of health workers is sufficient for national needs, estimate the shortfall or surplus, and identify strategies for correcting it. Ideally the planning model should incorporate predictions for changes in population, burden of disease, service delivery models, service utilisation, and health worker transitions (entrance, exit, migration), amongst others. Such a model is an important priority for health workforce planning in South Africa but has not yet been developed.

Nevertheless, this section attempts to provide some insight into the likely need for health workers in South Africa by presenting three different models that focus on three different priorities:

1. An analysis of national and provincial public sector need based on increasing health worker densities in the lowest ranked provinces to decrease inter-provincial inequities.
2. A detailed evaluation of the need for PHC personnel undertaken by the South African Medical Research Council (MRC) [54].
3. Modelling of the need for medical specialists by PERCEPT [55].

A comparison of these models is shown in Table 8.

Table 8: Features of three models evaluating the shortfall of health workers in South Africa

Parameter	Model I: Health Workforce Needed to Improve Equity	Model II: Health Workforce Needed for Primary Health Care	Model III: National Need for Specialist Doctors
Health worker categories included	▪ 22 categories	▪ 24 categories	▪ 26 medical specialties & 44 sub-specialties
Costing analysed	▪ Yes	▪ Yes	▪ No
Sectors included	▪ Public only	▪ Public only	▪ Private and Public
Levels of care included	▪ Primary, secondary and tertiary	▪ Primary only	▪ Tertiary and Quaternary
Geographical level of forecasting	▪ Provincial, National	▪ Presented for National ▪ Can be done at provincial or district levels	▪ National
Basis	▪ Targets for improved inter-provincial equity-based on historical trends	▪ Needs-based HR model within the context of PHC Re-engineering. ▪ Based on annual per capita utilisation rate of 3.2	▪ Projection of supply of and need for medical specialists
Main Limitations	▪ Does not include private sector ▪ Entrances, exits and transitions not modelled	▪ Reliant on assumptions about coverage and utilisation ▪ Enrolled nurses are modelled only as team leaders for ward-based outreach teams (WBOTs).	▪ Assumes highly specialised level of service provision ▪ Targets based largely on inputs from relevant specialist group ▪ No geographical analysis

Model I: National public health workforce needed to improve equity

For this analysis, we calculated the additional health workers required in South Africa by 2025 to achieve targeted improvements in provincial health worker densities. We show here the results of a historical trends scenario, in which we assume that the recent historical increases (or decreases) in health worker numbers will continue up to 2025. The projections for health workforce numbers are based on historical trends. The budget projections are at inflation as noted above.

We modelled different targets for improvement in health workers densities. Table 9 shows the target ratios required if the densities for the six lowest provinces for each health worker category

were improved to the level of the third highest province - which we term the 3rd Rank Province – (3RP) equity target ratio. We used the third highest province as the target because this would bring the lower two tertiles at least to the minimum level of the first tertile. We calculate the additional health workers required by 2025 to achieve the 3rd RP target ratios and the additional public sector budget needed. All analyses were done individually for the selected 22 health worker categories and individually for each province before being aggregated to produce the national totals.

The result of this analysis are shown in Table 9. The Table also shows the ratios and calculated shortfall by 2025 simply to maintain the status quo where densities remain at current levels. Based on these assumptions and calculations, a total of 96 586 additional health workers will be needed at an additional cost of nearly R40 billion to meet the 3rd Rank Province equity target by 2025. An additional 14 791 health workers and an additional R8.1 billion would be required by 2025 to keep densities at 2019 levels (status quo).

This Model presented an indicative analysis of national health workforce needs and costs for the public sector based only on improving inter-provincial equity. However, there are several limitations of this analysis:

- The modelling to enhance equity remains an elementary analysis. It does not do any of the more sophisticated modelling that is required for realistic health workforce planning for South Africa. For example, the model used does not consider possible changes in the burden of disease, service delivery models, facility planning, facility workloads, skills mix, remuneration systems, or health worker productivity that are all important in projecting future HRH needs and costs.
- Problems remain with the accuracy of PERSAL data [56].
- The model only included 22 categories of health workers. We also did not consider administrative and support staff employed by the Departments of Health, nor health workers employed by local government.
- The analysis focused only on the public sector. It is simple to extend target ratios to the entire population rather than just the uninsured population, but without accurate private sector personnel data it is still not possible to evaluate the national shortfall.

- The target ratios are to improve densities in the least resourced provinces. These targets are not explicitly linked to facility workload, service delivery needs or health outcomes. Also, higher densities may be required in provinces in the top tertile.
- We have not investigated how the required increases might be achieved. This would require more detailed data and analysis of the possible entrances, exits and transitions for each category.

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Table 9: National health worker needs to improve interprovincial equity by 2025

Health worker group	Health worker category	Maintain Status Quo				3rd Rank Province Equity Target			
		Target ratios		Health worker Gap		Target ratios		Health worker Gap	
		Min	Nat Ave	Numbers	Cost (R billion)	Min	Nat Ave	Numbers	Cost (R billion)
Doctors	Medical Practitioners	25.94	33.08	251	R 0.33	37.42	37.88	2 034	R 2.65
	Medical Specialists	1.36	10.12	1 062	R 1.83	12.99	15.18	3 330	R 5.75
Nurses	Professional Nurses	93.6	147.22	2 418	R 1.48	174.6	176.51	15 787	R 9.66
	Enrolled Nurses	24.43	63.96	4 176	R 1.65	65.12	72.67	7 538	R 2.97
	Nursing Assistants	36.03	69.41	3 970	R 1.20	88.19	88.46	13 609	R 4.11
Pharmacy practitioners	Pharmacists	7.85	11.87	138	R 0.14	14.52	15.13	1 511	R 1.55
	Pharmacy Assistants	0	3.64	46	R 0.02	4.66	6.04	1 294	R 0.43
Rehabilitation Therapists	Occupational Therapists	1.94	2.63	214	R 0.15	3.22	3.39	532	R 0.38
	Physiotherapists	2.63	3.09	128	R 0.09	3.38	3.45	243	R 0.18
	Speech Therapists, Audiologists	0.86	1.51	65	R 0.05	1.72	1.78	135	R 0.10
Dental Professionals	Dental Practitioners	1.58	2.84	22	R 0.02	3.41	3.49	486	R 0.53
	Dental Specialists	0	0.19	49	R 0.08	0.04	0.21	60	R 0.10
	Dental Technicians	0.02	0.09	0	R 0.00	0.1	0.13	13	R 0.01
	Dental Therapists	0	0.66	46	R 0.03	0.82	1.05	162	R 0.12
	Oral Hygienists	0.21	0.48	38	R 0.03	0.41	0.57	104	R 0.08
Emergency Workers	Ambulance & Related Workers	0.34	32.28	920	R 0.56	42.36	47.86	8 556	R 5.20
	Emergency Services Related Workers	0	5.49	20	R 0.02	6.18	9.42	2 108	R 2.13
Other professionals	Psychologist	0.81	1.48	133	R 0.15	1.96	2	398	R 0.46
	Radiographer	3.42	5.95	257	R 0.19	6.55	6.9	691	R 0.50
	Environmental Health Workers	0	1.31	71	R 0.05	1.59	1.84	434	R 0.31
Other health workers	Community Health Worker	69.36	111.5	705	R 0.04	178.77	182.59	37 244	R 2.07
	Clinical Associate	0	0.76	61	--	1.23	1.29	317	--
Total				**14 791**	**R 8.11**			**96 586**	**R 39.28**

Model II: Health workforce needed for primary health care services

This analysis completed by the MRC evaluates PHC human resource needs and gaps. It estimates the health workforce required to deliver an improved PHC service to the public sector population [54].

The model includes different components of PHC services: District Clinical Specialist teams, PHC facilities (CHCs, CDCs and clinics), Ward-based Outreach teams (WBOTs), School Health and Environmental Health. The assumed PHC basket of services is as defined in the 2010 document on Revitalising Primary Health Care [57]. Based on burden of diseases and coverage level guidelines from the NDoH, the average utilisation rate for this service package is calculated as 3.2 PHC visits per person per year. That figure excludes medicine collection visits, which would require an additional 1.3 visits per person per year, so a total of 4.5. In comparison, the current 2018-19 public sector PHC utilisation rate is an average of 2.1 visits per person per year. The model then calculates the PHC staff required to provide those visits to the uninsured population using data from a staffing time survey.

The results of the model are summarised in Table 10: to increase the PHC utilisation rate to 3.2 would require 186 362 staff at a total cost to employer of R 54.6 billion in 2019. Table 10 also shows the required number and shortfall of PHC health workers if the analysis is projected to 2025. The model uses the same population projections as previously, a PHC utilisation rate of 3.2, and an annual salary increases of 4.8%. By 2025, the required number of health workers would be 202 740 FTEs at a total cost to employer of R 75.1 billion. That represents a gap of 87 614 health workers which would require an additional budget of R 34.3 billion to employ. The model demonstrates that the serious PHC shortages for medical specialists, medical officers, professional nurses, nursing assistants, pharmacists and pharmacy assistants, psychologists, and dental personnel will worsen by 2025 if nothing is done.

Table 10: PHC HRH needs and costs for 2019 and 2025

Health Worker categories	Actual FTEs (PERSAL) 2019	Total FTEs Required		Total Expenditure (R millions)		Estimated Gap in 2025	
		2019	2025	2019	2025	FTEs	Costs
Specialists	72	208	226	271	373	154	254
M.O.s	939	2 971	3 232	2 917	4 012	2 293	2 846
Specialised Nurses	23 688	13 238	14 401	9 341	12 846	-9 287	-8 284
PN/Midwife	12 570	43 243	47 043	19 968	27 461	34 473	20 123
Staff Nurse	7 022	5 500	5 983	1 636	2 250	-1 039	-391
Nursing Assistant	6 298	18 668	20 308	4 256	5 853	14 010	4 038
Lay Counsellor	-	13 812	15 026	638	878	15 026	878
Pharmacists	440	1 784	1 941	1 380	1 899	1 501	1 468
Pharmacy assistant	1 313	6 134	6 674	1 555	2 138	5 361	1 717
Psychologist	69	657	714	576	792	645	715
Radiographer	155	277	301	151	208	146	101
Optometrist	33	2 441	2 656	1 333	1 834	2 623	1 811
Physio	-	136	148	74	102	148	102
OT	79	68	74	37	51	-5	-4
Speech & Hearing	52	33	35	18	24	-17	-11
Dentist	275	-	-	-	-	-275	-341
Dental Therapist	-	1 037	1 128	562	773	1 128	773
Oral Hygienist	-	1 509	1 642	818	1 125	1 642	1 125
Dental Assistant	443	2 310	2 513	676	930	2 070	766
Nutritionist	300	598	651	327	449	351	242
Health Promoters	-	3 572	3 886	1 951	2 683	3 886	2 683
Env. Health Practitioners	514	3 907	4 250	2 134	2 935	3 736	2 580
CHWs	54 180	55 000	59 833	2 310	3 177	5 653	300
Admin	6 684	9 260	10 073	1 675	2 304	3 389	775
Total	**115 126**	**186 362**	**202 740**	**54 604**	**75 096**	**87 614**	**34 268**

Negative numbers indicate an excess based on current data available

The MRC compared the calculated health workforce needs for clinics and CHCs in their model to those of the workload indicators of staffing need (WISN) model assuming a PHC utilisation rate of 3.5 visits per annum. There are differences in the results of the two models due to differences in the assumptions used. Aligning the relevant assumptions between the two models will be important to ensure consistency in the approaches.

Model III: Need for Specialist Doctors

The aim of this research by PERCEPT [55], commissioned by the Discovery Foundation, was to project the supply and need for medical specialist resources in South Africa with a view to inform the Foundation's planning for the funding of medical specialist training.

This analysis focuses on 26 medical specialties (dental specialties are excluded) and 44 sub-specialties. The model includes both the public and private health sectors and takes account of the dynamics between the sectors.

Based on a novel linking of several datasets, the study estimated that there are currently 9 731 Specialists (FTEs) in South Africa which is considerably less than previous analyses by the SAHR 15 008 (2015), HPCSA 12 776 (2018) and Econex 10 585 (2012). The overall national density of medical specialists was calculated as 16.5 per 100 000. However, there is a significant disparity between sectors, with 7 specialists per 100 000 population employed in the public sector and 69 per 100 000 in the private sector. The total, public and private densities for individual medical specialities are compared in Table 11. The sectoral maldistribution is particularly marked for certain specialities including dermatology, urology and neurology. Shortages of anaesthetists and surgical specialties in the public sector has far-reaching consequences and a short- to medium-term solution needs to be determined to increase availability and access to these skills.

The study also derived recommended target densities for each speciality based on demographic and epidemiological analyses and projections, and in consultation with the relevant specialist groups. shows the recommended target ratios for 2019 as well as the projected national availability and need by 2025. Overall, significant increases in the number of specialists are required by 2025, most targets are 2-3 times the projected availability of specialists. The inequity between the public and private health sectors is projected to persist and this requires specific policy intervention to ensure greater specialist availability in the public sector, and specific specialities.

Table 11: Actual and target ratios of medical specialities per 100 000 population, 2019

Specialties:	Current 2019				Projected 2025	
	Public Sector	Private Sector	SA Total	Recommended Target	SA Total	Recommended Target
Anaesthesiology	0.64	9.69	2.03	5.00	2.48	5.23
Cardiothoracic Surgery	0.06	0.58	0.14	0.40	0.16	0.42
Clinical Pharmacology	0.01	0.10	0.02	0.10	0.05	0.11
Dermatology	0.07	1.33	0.26	1.00	0.34	1.07
Emergency Medicine	0.13	0.17	0.14	1.00	0.42	1.07
Family Medicine	0.66	3.78	1.13	2.00	1.21	2.14
Forensic pathology	0.12	-	0.10	1.20	0.15	1.29
Medical Genetics	0.01	-	0.01	0.21	0.06	0.22
Neurology	0.04	0.71	0.14	0.77	0.20	0.89
Neurosurgery	0.09	1.12	0.25	1.20	0.30	1.25
Nuclear Physician	0.07	0.28	0.10	0.20	0.19	0.21
Obstetrics and Gynaecology	0.62	6.57	1.53	2.40	1.83	2.63
Ophthalmology	0.41	1.91	0.64	1.90	0.64	2.03
Orthopaedic Surgery	0.36	5.30	1.12	2.40	1.26	2.56
Otorhinolaryngology	0.13	1.90	0.40	2.06	0.40	2.20
Paediatric Surgery	0.04	0.08	0.05	0.26	0.13	0.27
Paediatrics	0.89	4.34	1.42	4.00	1.83	4.05
Pathology	0.45	3.39	0.90	2.00	1.12	2.14
Physician	0.95	9.08	2.19	2.80	2.52	3.00
Plastic & Reconstructive Surgery	0.08	1.26	0.26	0.53	0.27	0.55
Psychiatry	0.38	4.98	1.08	3.00	1.30	3.52
Public Health Medicine	0.12	-	0.10	0.25	0.21	0.27
Radiation Oncology	0.08	1.22	0.25	1.28	0.36	2.21
Radiology	0.48	4.65	1.11	2.00	1.14	2.14
Surgery	0.53	4.51	1.14	3.50	1.30	3.73
Urology	0.10	1.85	0.37	1.00	0.37	1.09

Source: Percept, 2019 [55]

The PERCEPT study also identified a number of other relevant findings:

- Around 35% of public sector specialists are currently engaging in remunerative work outside the public service (RWOPS). Anaesthetists and physicians have the highest numbers participating in RWOPS, closely followed by obstetricians/gynaecologists and surgeons. This suggests review of the current RWOPS policy, including regulation and/or management.
- The analysis indicates the feminisation of medical specialists. For example, there is an average projected increase of 259% in female doctors within the surgical specialties. There are also clear differentials in male/female specialty preferences, which have the potential to skew the specialty availability in future. This suggests an imperative for gender-transformative planning and policies that take account of this reality.
- Shifts in the burden of disease, especially the increase in non-communicable diseases, has far-reaching implications for HRH planning.

Towards business unusual:

2030 Goals and Strategies

Box 6: Key messages on 2030 goals and strategies

Key messages
1. The vision is that South Africa invests in the health workforce to ensure quality universal health coverage and a long and healthy life for all people. 2. In order to achieve the vision, there are five strategic goals listed below. a. Goal 1: Effective health workforce planning to ensure HRH aligned with current and future needs. b. Goal 2: Institutionalise data-driven and research-informed health workforce policy, planning, management and investment. c. Goal 3: Produce a competent and caring multi-disciplinary health workforce through an equity-oriented, socially accountable education and training system. d. Goal 4: Ensure optimal governance; build capable and accountable strategic leadership and management in the health system. e. Goal 5: Build an enabled, productive, motivated and empowered health workforce. 3. The goals, objectives and strategies underscore the importance of: a. A capable state, able to plan HRH for the country and ensure a comprehensive HRH information system that covers the entire health system. b. Government taking decisive action to improve equity in the distribution of health care providers, between the public and private health sectors, and between urban and rural areas. c. Transforming and aligning health workforce education and training with health and health system needs, using a combination of legislation, and incentives. d. Improving the performance of the health workforce. e. Taking care of HRH through inclusivity, positive practice environments, and gender-transformative practices.

Vision

South Africa invests in the health workforce to ensure quality universal health coverage and a long and healthy life for all people.

2030 HRH Goals and Objectives

The preceding sections made the case for investing in the health workforce, and described the results of the modelling on needs and costs. With this backdrop the 2030 HRH Strategy, sets out five goals and a set of objectives and strategies to achieve these goals in the decade until 2030. The five goals and linked objectives are shown in Table 12.

Table 12: 2030 HRH goals and objectives

Goals	Objectives
1. Effective health workforce planning to ensure HRH aligned with current and future needs	1. Strengthen strategic health workforce planning capability, methodologies and processes at national, provincial, district and facility levels. 2. Apply strategic health workforce modelling and planning to optimise investments in HRH .
2. Institutionalise data-driven and research-informed health workforce policy, planning, management and investment	1. Institutionalise health workforce data analytics and the standardisation and monitoring of core health workforce indicators and reporting and use at every level of the health system. 2. Build capacity for the collection, analysis and utilisation of HRH data. 3. Develop and coordinate an essential national HRH research agenda.
3. Produce a competent and caring multi-disciplinary health workforce through an equity-oriented, socially accountable education and training system	1. Institutionalise the governance and financing mechanisms that will sustain a transformative and socially accountable health workforce education and training system, covering quality pre-service, in-service and continuous professional education and training. 2. Revolutionise selection and recruitment of health professional students to overcome health workforce inequities, between urban and rural areas, and between the public and private health sectors. 3. Ensure transformed and modernised curricula and training platforms to imbue the health workforce with the requisite values, knowledge and population-centred competencies so that they are able address the

Goals	Objectives
	quadruple burden of disease and meet current and future health system needs. 4. Facilitate the development and innovative expansion of educators (faculty) to ensure the production of a socially-accountable health workforce. 5. Leverage existing and new funding streams and partnerships for adequate and the equitable supply and distribution of human, infrastructural and operational resources.
4. Ensure optimal governance, build capable and accountable strategic leadership and management in the health system	1. Revitalise HRH regulatory structures to enhance the education, performance and accountability of the health workforce. 2. Implement good governance principles and practices in national and provincial Departments of Health and HRH intergovernmental, private sector and civil society structures. 3. Institutionalise a critical mass of empowered, competent, accountable and capacitated HRH leaders and managers at national, provincial and district levels. 4. Encourage distributed leadership and management through teamwork, with collective and holistic, value based competencies (knowledge, skills, attitudes and behaviours), and supported by an enabling working environment and culture of continuous learning and accountability. 5. Ensure role clarity and improved competence and capacity of HR Managers and line managers in HR functions.
5. Build an enabled, productive, motivated and empowered health workforce	1. Embed a positive practice environment and culture, which is based on the values of equity, gender transformation, decent work and respect for rights. 2. Establish, promote and maintain infrastructure and conditions of service that ensure effective and respectful care. 3. Optimise health worker recognition, supervision, performance management and development. 4. Ensure safety and security for both patients and health workers. 5. Engage professional associations and trade unions to achieve a safe and people-centred work environment.

Goal 1: Effective Health Workforce Planning to Ensure HRH Aligned with Current and Future Needs

The Strategic Context

The health workforce accounts for nearly two thirds of all public health expenditure amounting to around R133 billion in 2019. Comprehensive health workforce planning is required to gain maximum value from this investment by getting the right numbers of health workers with the right skills and commitment in the right places in order to provide health services and achieve health targets. Health workforce planning and forecasting is crucial to the planning of training needs, service delivery and health budgets. Various factors influence health workforce planning. Demographic changes towards an ageing population, the burden of disease, and the epidemiological shift from communicable to non-communicable diseases influence the health workforce required. Planning also needs to consider training capacity, the package of services to be provided, the most effective and efficient mix of skills required, and appropriate workloads to ensure quality care.

The establishment of a health workforce planning unit and development of planning capacity in the NDoH envisaged in the previous strategic plans has not yet been realised. There is also no integrated, accurate and timely HRH database and information system to use for health workforce planning (see Goal 2). Nor is there consensus on a National Health Workforce Planning Model. A number of planning models have been developed and used in South Africa, including WISN. These models are based variably on population-based targets, facility staffing plans and/or workload modelling. However, none of them provides a comprehensive and credible model for future planning that covers the entire health system. Most health workforce planning activities rely on target ratios and norms, but in South Africa, there is also no national determination of appropriate staffing ratios or facility staffing norms.

Notwithstanding these limitations, the modelling and analyses in the previous section showed a national shortfall of key categories of health workers, particularly in the public health sector. The analysis also illustrated the stark and unacceptable inequities in the distribution of health workers

between the public and private health sectors, between provinces, and between urban and rural areas.

Modelling of future needs is also hampered by the lack of policy certainty or incomplete implementation of a number of key HRH policies that directly affect health workforce planning. These include policy decisions on the scaling up of mid-level workers, other task-shifting or task-sharing interventions, and the introduction of new nursing categories. Furthermore, the HRH impact of fundamental health sector reforms, such as the implications of new service packages and entitlements under the NHI [58] and the recent report of the HMI remains uncertain [59].

Even when a projected need has been determined, the mechanisms and fiscal arrangements required to support the implementation of the HRH plans have been ineffective. Better coordination between the Department of Health, the Department of Higher Education and Training (DHET), National Treasury, professional bodies and training institutions is needed. Linkages between the NDoH and provincial departments exist, but financial instruments and monitoring indicators to support the implementation of national HRH plans at provincial level are lacking. There is also no engagement between the public and private health sectors. Lastly, HRH planning and forecasting also require engagement with social partners and with the Ministry of Employment and Labour to assess and address future needs.

Goal 1

Effective health workforce planning to ensure HRH aligned with current and future needs.

Objectives

1. Strengthen strategic health workforce planning capability, methodologies and processes at national, provincial, district and facility levels.
2. Apply strategic health workforce modelling and planning to optimise investment in HRH.

Rationale

Significant achievements have been made in ensuring more effective and comprehensive coverage of essential services through an appropriate skills base. Despite these successes, the ability to plan strategically, produce, develop, deploy, manage, utilise and retain an appropriate health workforce to provide UHC and deliver on 2030 NDP targets is significantly constrained. The application of traditional population-ratio based workforce-planning limits the ability to identify an ideal best fit, forward-looking, health workforce skills profile for the country.

The Strategic Approach

A functional National Health Workforce Analysis and Planning Function should be established to institutionalise and strengthen planning. It should draw on national and international health workforce planning expertise including labour market analysts. The NDoH should establish a Health Workforce Consultative and Advisory Forum (HWCAF) to consult and obtain inputs and advice from a wide range of stakeholders from all spheres of government, health professions councils, the private health sector, academia, social partners, and relevant civil society organisations. Capacity at provincial and district levels must also be strengthened. The health workforce planning function cannot be successful without a system that provides comprehensive, integrated and accurate information. The National HRH Information System (HRHIS) proposed in Goal 2 will need to be linked to other information sources for effective planning, including health workforce budgets and expenditure, demographic projections, burden of disease trends, health professional training institutions, health service utilisation and health facility planning.

There needs to be an agreed National Health Workforce Planning Model. Although the WISN model provides useful information, there are question about the estimates and affordability that arise from its application. The NDoH should lead a process to consolidate the learning from the set of existing models, and ensure national consensus on a HRH planning model to use for forecasting health workforce needs and costs. The model needs to improve incrementally to incorporate the public and private sectors, demographic and epidemiological trends, changes in skills mix and service delivery models, improvements in productivity, and scenario planning for envisaged health reforms. Due to the geographical inequities, it is vital that the model should be

able to evaluate sub-national HRH shortfalls and inequities. This modelling should be supported by health labour market analyses that investigate the match between population health needs, the supply of, and demand for, health workers in the country and the dynamics affecting these.

South Africa also needs to reach consensus on national target health workforce ratios per category to achieve, with some allowances for variation of such targets across communities. The process should include benchmarking the intended ratios against international recommendations, similar LMICs and Organisation for Economic Co-operation and Development (OECD) countries, taking cognisance of the unique South African circumstances.

To reach a national health workforce aligned with South Africa's needs, the remaining policy uncertainty about the NHI should be resolved, including the proposed service delivery models and service packages. The large health system changes planned for South Africa should not distract from the urgent need to improve HRH planning, especially given the lag between identifying health workforce need and then training the additional professionals required. The alignment with needs should also take account a more equitable distribution of the health workforce, and more integrated public and private health workforce planning.

Considering the global evidence on task shifting and the effectiveness of mid-level workers (MLWs), South Africa needs to adopt a more progressive and active approach than is the case at present. There might be better alignment between the health workforce and the NHI system by increasing training and posts for MLWs as well as creating suitable career paths for these categories. If the tasks shifted to MLWs are appropriate and these MLWs are supervised adequately, they are able to deliver high quality care after shorter training and at lower salaries, and are more likely to work in areas where professionals are scarce [60, 61].

The policy uncertainty around CHWs has largely been resolved. Remaining issues relate to CHW implementation, including the evolution of new salary scales which will affect the cost of the health workforce.

Modelling the number of health workers required is ineffective without clear institutional mechanisms and financing arrangements for implementing health workforce plans and targets. It is clear that an increased financial allocation will be required to achieve improvement in health professional ratios. Getting preferential allocation under the prevailing fiscal constraints will require confidence that the funds will be efficiently deployed to an appropriate skills mix performing optimally, and that the investment produces commensurate returns in health status improvements. To this end, a full investment case should be prepared by the NDoH to demonstrate the likely health and economic returns of improved HRH investment. In addition, given that the bulk of health personnel expenditure is incurred by provinces the implementation of national health workforce plans requires effective coordination between the national and provincial levels and the development of fiscal federal instruments to support the translation of HRH plans into actual posts.

Outputs

1. Long-term health workforce planning is institutionalised at national, provincial, district and facility levels.
2. A comprehensive and approved national model for health workforce forecasting and planning is in place.
3. Appropriate staffing targets and norms are defined for current and future health service needs.
4. Institutional mechanisms and financing arrangements developed to support the implementation of health workforce plans.

Goal 2: Institutionalise data-driven and research-informed health workforce policy, planning, management and investment

The Strategic Context

The ability to plan strategically, produce, develop, deploy, manage and utilise the health workforce requires comprehensive health workforce information. This enables the identification, tracking and measurement of health workforce characteristics, numbers, and distribution. Insufficient information hampers the monitoring and evaluation of HRH plans, contributing to the lack of or inadequate implementation.

South Africa has different HR data sources to measure and track the workforce, which means that the information for evidence-based policies, strategic investment and workforce is incomplete and disjointed. Each data source has its own characteristics, limitations and potential contribution to an integrated national HRHIS. PERSAL is one of four major public-sector systems maintained by the National Treasury, which also maintains a separate Management Information System with an analytical application called Vulindlela. The main challenges with PERSAL are the difficulties in obtaining information in an analysed report format and the lack of integration with other information systems. Provincial departments have implemented a wide range of software solutions and applications that are operated and maintained as separate sub-systems.

The statutory health professional council registers (HPCSA, SANC, and SAPC) collect limited data, specifically on whether registered practitioners are practising, as well as their job location. Importantly data collected by these councils are often restricted to legislative requirements. At present, there is inadequate communication between the NDoH and these councils on an agreed upon minimum data set for collection. Access to private sector data is limited and thus poorly integrated into the national picture.

The District Health Information System (DHIS) software has evolved into a modular, highly configurable web-based, open-source health management data platform, known as *WebDHIS*. It has the potential to integrate health management information with health worker information using a geographical information system (GIS). Currently, the system is limited to using workload

indicators. However, the system has additional functionalities that can provide HRH information to support management and strategic decision-making.

In the preceding three years, there have been encouraging initiatives on the development of a national HRHIS, and the development of an HRH Data Warehouse. This will require adequate infrastructure and resources to operationalise, and end-users with the ability to use the technology successfully. The lack of interoperability of the different data sources and health information systems in HRH will also need to be resolved. There would need to be buy-in from all stakeholders and readiness to adopt the integrated HRHIS.

An HRH Registry using existing data sources is in the early stages of development. South Africa has committed to adopting the WHO National Health Workforce Accounts (NHWA), which is based on a comprehensive health labour market framework for UHC. Currently, the first two modules, Active Health Workforce Stock and Health Workforce in Education are being developed and linked to the HRH Registry. The NDoH plans to add more modules, in line with WHO requirements for NHWA.

Although there is an emerging body of HRH research, there is limited funding and research is not well coordinated to support national needs - nor are the research findings sufficiently translated, disseminated and implemented to achieve changes in policy and practice.

Nonetheless, government's acknowledgment of, and commitment to, the importance and value of quality data, provides a sound foundation for the HRHIS. In addition, the fourth industrial revolution signals a major change in the nature and way of work, including in the health sector. Such transformation ranges from data-driven decisions, along with predictive analytics and artificial intelligence to improve HRH efficiency, to robotics to assist with workload of health workers. Data volumes will increase rapidly as more people, systems and devices produce and share more data across an expanded platform. This will create the data science opportunities for more predictive and intelligent analytics and decisions. Hence, this 2030 HRH Strategy takes into account the opportunities these changes present, while building on the foundation that is being built.

Goal 2

Institutionalise data-driven and research-informed health workforce policy, planning, management and investment.

Objectives

1. Institutionalise health workforce data analytics and the standardisation and monitoring of core health workforce indicators and reporting and use at every level of the health system.
2. Build capacity for the collection, analysis and utilisation of HRH data.
3. Develop and coordinate an essential national HRH research agenda.

Rationale

Evidence-based health workforce policy, planning, management and investment decisions are reliant on the availability of robust and comprehensive data, information and evidence. While the previous three HRH Strategies were ambitious in their scope, they lacked the necessary data and evidence needed to make informed choices on the allocation of scarce resources. HRH planning, forecasting and modelling are reliant on the availability of data on the number, type, and geographic distribution, profile, production, recruitment and retention, licensing, regulation, scope of practice, migration, and employment status of health workers in the entire health system. The absence of quality information inhibits the ability to respond to government cost containment measures and to make informed economic arguments for investment in the health workforce that can help to unlock additional financing.

The Strategic Approach

Human Resource Information Systems are dependent on various data sources that need to be triangulated to provide the required information for evidence-based planning, management, development and monitoring of the health workforce. The strategy for ensuring more robust information, monitoring and evaluation is to establish an integrated, electronic national HRHIS that provides the information necessary to support workforce planning and development, and to contribute to driving economic growth, in line with the National Digital Health Strategy [62] and its implementation milestones. It uses an interoperability framework and a national core set of indicators to provide a comprehensive information environment for evidence-based decision-making.

The HRHIS will provide a platform that drives data science initiatives to support sophisticated decision-making and leadership as the health workforce changes, driven by epidemiological and technological developments and changing health service demands.

The existing efforts on the development of a secure and accessible national HRHIS must be expedited, especially the completion of the HRH Registry of individual worker details, and an HRH Data Warehouse repository of aggregated HRH data from different information sources. This will provide a comprehensive picture at the different levels in the health system; and support implementation of critical initiatives (e.g. the NHI). This system is critical for supporting the development of a comprehensive and credible Health Workforce Planning Model as proposed in Goal 1. Existing related information systems must be strengthened (e.g. PERSAL) and harmonised, starting with a mapping and appraisal of all HRH systems. Ultimately, information on health workforce budgets and expenditure, demographic projections, burden of disease trends, health service utilisation, health facility planning and health system performance should be integrated and be easily accessible. The system should also be able to integrate information on health provider outcomes (e.g. retention, job satisfaction), which is a key component of the *South African Human Resources for Health Conceptual Framework* (Figure 1).

The NDoH should ensure collaboration with primary data source stakeholders, such as the DHET, the Department of Labour, the DPSA, the National Treasury, professional bodies and training institutions and develop a Data Exchange Policy to ensure interoperability between information systems and adherence to information reporting requirements. It is also required to address issues of security, privacy and confidentiality in line with the Protection of Personal Information (POPI) Act and other relevant regulations.

Thus, where required, legal and regulatory frameworks to promote and enforce data sharing and agreements across the national HRHIS platforms, should be developed, revised or enacted. The Statutory Councils are participating in the current HRHIS, and are well placed to collect the data required to meet the information needs at the different levels in health system. The NDoH must make explicit the essential data that it requires from these bodies, and legislate the harmonisation of HRH information. Failure to do so will perpetuate sub-optimal planning due to data deficiencies.

An overarching national HRH M&E framework that covers all levels of the health system must be developed. Clear and measurable indicators for each level of the health system must be formulated to track progress on a quarterly and annual basis. The indicator framework should enable national and international comparisons.

Close and ongoing collaboration between health workforce planners, including labour market analysts and the HRHIS and M&E teams is required, with the inclusion of representatives from each of these areas of expertise in the proposed Health Workforce Consultative and Advisory Structure (see Goal 1).

There should be ongoing appraisal of HRH research and information to identify evidence-based interventions and strategies, to monitor health outcomes and innovation in HRH, and to identify appropriate technological tools. Given the criticality of the health workforce, the country's research output on HRH is limited. The national capacity and funding for evidence-based HRH policy, planning and implementation is limited. An essential health research agenda on HRH should be developed, combined with specific efforts to develop a critical mass of HRH Policy, Planning and Research expertise. In addition to strengthened HRH capacity at all levels of government, the NDoH should consider the creation of additional capacity in the form of HRH-specific academic posts and dedicated research and post-graduate funding.

A biennial HRH Indaba should be considered where all those stakeholders involved in HRH would come together to share, re-energise and focus effort. The Indaba could include a review of progress on the HRH Strategy and sharing of ideas across the country for accelerating success, discussions on how to translate research into policy and practice and capacity building events. This will facilitate a strong community of practice, with South Africa able to share lessons with other countries.

An enabling environment for implementation means investing in a capacity-building plan for existing HR staff, accompanied by a monitoring system for core indicator sets at the different levels of the health system. To ensure implementation, a set of core competencies for all staff and

stakeholders who will work in HRH and with HRH data, has to be developed. The capacity of HRH directorates will require strengthening at all levels of the health system.

Outputs

1. An integrated HRHIS with HRH Registry and Data Warehouse containing HRH Data technology, information, knowledge and research with dedicated and adequate resources and competent staff.
2. Comprehensive National HRH M&E Framework aligned to the National Health Workforce Accounts with a core set of prioritised national indicators and targets measured and tracked annually in the public and private health sectors, professional councils and collaborating institutions.
3. NDoH coordinates and invests in an essential HRH research agenda that informs HR policy, planning, production, management, and investment decisions.
4. A HRH community of practice and sustainable mechanisms to share good practices, both nationally and internationally.

Goal 3: Produce a competent and caring multi-disciplinary health workforce through an equity-oriented, socially accountable education and training system

The Strategic Context

The MTT modelling and analyses (*Needs and Costs Section*) revealed a national shortfall of key categories of the health workforce and stark and unacceptable inequities in the distribution of health workers between the public and private health sectors, among the nine provinces, and between urban and rural areas of South Africa.

The country has established health professional training institutions, and a well-regulated system of health professional education with subsidies and service learning platforms covering most of the costs of training [63]. All higher education institutions are required to submit information on health graduate outputs every year to the DHET. The information is captured in the Higher Education Management System (HEMIS). The most recent data available to the MTT is until 2017 with similar limitations of completeness and accuracy of the data. In addition, CHWs fall outside the formal education reporting system. Table 13 shows the outputs for a few categories of health and social professions.

Table 13: Outputs for selected health and social professions, CESM categories: 2013-2017

Category	2013	2014	2015	2016	2017	Total
Communication disorders sciences and services	216	239	284	279	303	**1 321**
Dentistry	656	689	682	796	805	**3 629**
Health and medical administrative services	725	511	612	511	696	**3 056**
Medicine	629	649	932	1 308	998	**4 516**
Nursing	2 817	3 157	3 242	2 801	3 154	**15 171**
Optometry	108	111	143	158	135	**654**
Pharmacy, pharmaceutical sciences and administration	862	972	1 295	1 373	1 291	**5 794**
Public health	1 219	1 139	1 135	1 264	1 357	**6 114**
Rehabilitation and therapeutic professions	1 043	1 103	1 202	1 313	1 359	**6 019**
Medical radiology	424	431	466	513	451	**2 285**
Psychology	6 756	6 853	6 472	6 654	6 421	**33 156**
Social work	255	2 787	2 875	3 200	3 288	**12 405**

Source: HEMIS outputs for selected health and social professions (all diploma/certificate degree types and qualifications) CESM categories: 2013-2017

The data limitations are illustrated by the variation in the numbers and nomenclature of the data sets between HEMIS and the South African Nursing Council (SANC) (Figure 4). Assuming that the HEMIS and the SANC nomenclature reference the four-year nursing (general, psychiatry and community health) and midwifery diploma or degree, there is some variation in the numbers of students completing this programme at university level for HEMIS and SANC for the 2013-2017 period. Although the aggregated difference of 101 is relatively small, there are considerable variations year on year.

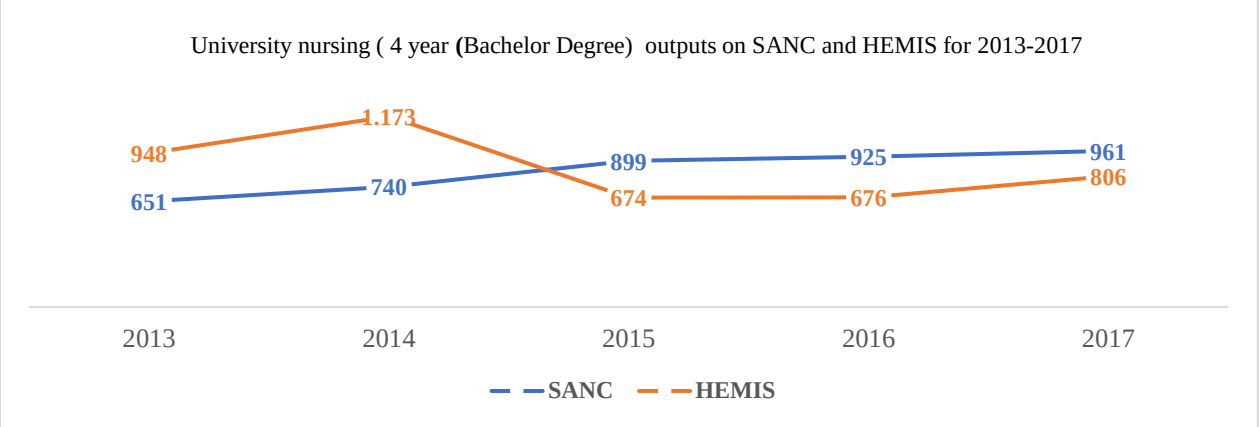

Figure 5: SANC and HEMIS outputs for nursing (1st Bachelor Degree, four years or more) 2013-2017

Sources: HEMIS outputs for selected health and social professions (all diploma/certificate degree types and qualifications) CESM categories: 2013-2017; SANC

Should such variations continue year-on-year across all data sets without correction, the evidence for health workforce planning becomes increasingly less robust. This highlights the urgent need for a common national streamlined HRHIS (see Goal 2) that uses a common nomenclature, connects entities collecting health workforce data across the health workforce trajectory, produces accurate analyses for planning and makes data sets accessible to data users or researchers. As the nursing profession is key to driving and leading the implementation of the re-engineered PHC approach, increasing the production of new professional nurse-midwives with the competencies for independent practice is essential.

Notwithstanding the strengths of the health workforce education and training sector, existing evidence suggests that the sector remains underfunded, exacerbated by the fragmentation of funding sources. Effective scale-up of training is limited by inadequate infrastructure and insufficient clinical supervision capacity. In addition, government is not leveraging its funding sufficiently to shift health workforce education and curricula towards national needs.

There have been efforts to produce and deploy well-qualified, socially accountable graduates with appropriate competencies, including recent increases in the training of doctors. However, existing curricula, teaching and learning platforms and faculty capacity are insufficient for meeting population needs. While production output levels and supply have grown, not enough opportunities or support are given to historically disadvantaged and rural students. Insufficient training is provided in rural and PHC settings and ICT is not sufficiently used to support this, despite the growing body of evidence that shows that education is concentrated mainly in tertiary-level hospitals, contributing to health workforce inequities. Retention of academics, faculty development, inter-professional education and collaborative practice (IPECP) require attention. There are longstanding shortcomings in the collaboration, governance, planning and organisation of health workforce education. There is also a mismatch between current training supply output and the future skills mix and competencies that are required to deliver UHC.

Goal 3

Produce a competent and caring multi-disciplinary health workforce through an equity-oriented, socially accountable education and training system.

Objectives

1. Institutionalise the governance and financing mechanisms that will sustain a transformative and socially accountable health workforce education and training system, covering quality pre-service, in-service and continuous professional education and training.
2. Revolutionise selection and recruitment of health sciences students to overcome health workforce inequities, between urban and rural areas, and between the public and private health sectors.
3. Ensure transformed and modernised curricula and training platforms to imbue the health workforce with the requisite values, knowledge and population-centred competencies so that they are able address the quadruple burden of disease and meet current and future health system needs.
4. Facilitate the development and innovative expansion of educators (faculty) to ensure the production of a socially accountable health workforce.

5. Leverage existing and new funding streams and partnerships for adequate and the equitable supply and distribution of human, infrastructural and operational resources.

Rationale

South Africa's health education and training system is among the most advanced and sophisticated globally. However, the existing health workforce supply pipeline is not fully configured and supported to ensure the optimum skills mix and competency of health workers to address the burden of disease and for the delivery of quality UHC. This underscores the importance of alignment between health workforce education and training programmes and the needs of the population and of the health system. The quality of training output is also influenced by the availability, quantity and quality of skilled educators (faculty), the teaching and learning platforms, the learning environment, the geographical location (urban versus rural) and the selection and throughput of students.

The Strategic Approach

WHO has noted that the success of a radical education and training transformation in any complex system requires political will and champions, strong leaders, as well strong planning capacity, regulation and accountability mechanisms, at all levels of implementation [64]. In addition, any new health workforce education system involves major cultural and organisational changes, and new investments [64]. The case for transforming health workforce education was given additional impetus by the three global reports on quality in 2018 [65, 66]. These reports underscored the gaps in competencies, knowledge, skills, attitudes and behaviours of existing health care providers [66-68], and called for radical reform of pre-service health professional education.

There needs to be greater investment in an equity-oriented, socially accountable health workforce education and training system, through institutionalising the governance and financing mechanisms that enable such a system. In addition to the Health Workforce Planning function, and the Consultative and Advisory Structure proposed in Goal 1, the Forum for Statutory Health Professions Councils in South Africa provides a mechanism in the short-term to coordinate and

harmonise the activities of the statutory bodies towards the transformation of health workforce education of those professionals under their jurisdiction. This Forum should be reviewed, revived and resourced appropriately, and its membership expanded to include other relevant stakeholders. One of its first activities should be the development of a socially-accountable, competency framework that will include joint public health, person-centred care and teamwork competencies and will provide a scaffold for cadre-specific competencies and the re-alignment of scopes of practice. The approved framework will be the requirement for registration with each of HPCSA, SANC and SAPC. The Councils should be required to evaluate and report on the extent to which they protect the public, and whether they meet their regulatory mandates. The desirability and feasibility of a unified Council for all health professionals should be investigated.

Governance and financing mechanisms also require a strong functional partnership between the DHET, NDoH, National Treasury, DPSA, regulatory authorities, and provincial health departments as the main implementing agencies. The Joint Health Science Education Council (JHSEC) is the most appropriate structure. However, there is under-investment and insufficient prioritisation to ensure optimal functioning. Although the Presidential Summit called for public-private partnerships to expand health professional training, the global evidence on the role of the private sector is mixed [10, 69, 70]. Hence, a special task force should be established to determine a strategic framework on the role of the private sector in health workforce education and training.

There is strong evidence that rural backgrounds and/or training of health professional graduates are a predictor of their decisions to practice in rural locations [71-73]. In light of the health workforce inequities, Government should revolutionise the selection and recruitment of health professional students by linking university subsidies to dedicated efforts to recruit, select and support health professional students from rural areas. Additional strategies could include setting quotas for rural students at all health sciences faculties, and funding for innovative rural student/ professional support and retention programmes with proven track record [74].

The strategy to transform curricula envisages a national, community-oriented education model and distributed clinical training platform for all levels of health workforce education, where every single health facility is a training facility, all health professionals and health workers are educators, teamwork is the norm and person-centred practices prevail. Curriculum re-alignment with population health needs, specifically of vulnerable, underserved and rural and remote populations, will lead to changes towards transformative and sustainable outcomes. Transforming curricula as envisaged will have implications for several education inputs and processes, including but not limited to rural and historically disadvantaged student recruitment and selection, enhanced student support, faculty selection and development, clinical training opportunities and community engagement. Inter-health workforce collaboration and education should be the norm and competency frameworks and scopes of practice synergised.

The strategy supports innovative health workforce education and training solutions that are underpinned by sound HRH needs analysis and collaborative planning. In the short-term, solutions should be found for: strengthening the health workforce at the base and middle of the health pyramid (e.g. the development of a national policy framework on MLWs); migration of skilled health professionals; and the use of technology to close education access gaps. In the longer term formalised, iterative joint HRH planning and actions are needed to ensure the scaling up the necessary clinical, academic and public health workforce for the future (See Goal 1).

Outputs

1. Functional and transformed health workforce education and training governance structures and mechanisms, with clear links between needs and training outputs
2. Increased student admission and retention rates from rural areas, accompanied by holistic student support services.
3. Well-coordinated and functional national clinical, rural and community-based training platform for the entire workforce.
4. Curriculum revisions are responsive to community and health service needs, and involves students and relevant stakeholders.
5. Functional service-education partnership framework with clear lines of accountability.

6. Expanded and retained faculty with necessary competencies, who practice innovative pedagogies, and who have opportunities for continuing education.
7. Appropriate infrastructure and training materials.

Goal 4: Ensure Optimal Governance, Build Capable and Accountable Strategic Leadership and Management in the Health System

Strategic Context

HRH governance, management and leadership are three distinct but inter-related practices that anchor a successful health system and health workforce. Since 1994, there have been several policy and legislative reforms, training and development programmes and implementation initiatives to improve governance, leadership and management capability and accountability within the South African health system. While there is some evidence that these have had an impact, many challenges remain.

In the preceding sections, the gaps and weaknesses in HRH governance structures, strategic and technical capability, effectiveness and accountability in the entire health system were highlighted. Weak HRH regulatory structures undermine the education, performance and accountability of the health workforce. This in turn contributes to sub-optimal health system performance.

Strategic leadership capability for the health workforce is essential, and there are many examples of innovation and good practices in the health system. However, leadership competency gaps remain at all levels of the health system and there are shortfalls in strategic, technical and managerial competence, capability and accountability. The prevailing health system culture acts as a barrier to the new styles of leadership needed. Gaps in ethical and values-based leadership contribute to poor quality of care through lack of accountability, corruption and fraud [33]. This prevailing management culture reflects the strong emphasis on centralisation, compliance, adherence to centrally determined processes, rigid classification of tasks, and an entrenched hierarchy. Consequently, there is a reluctance to question higher authority. These mitigate against decentralisation, individual agency, innovation, active engagement, and accountability. Consequently, many health leaders and managers feel unsupported, isolated and unprepared, with reportedly high levels of burnout, stress, low morale and poor motivation, impacting staff, especially at the frontline of service delivery [75].

People management is a core function, yet HRH management practices tend to be weak, with wide variations across provincial health departments and insufficient accountability. Underlying these broader HRH management shortcomings is the limited state of readiness of national and provincial HRH divisions for both strategic and technical functions, with insufficient numbers of competent managers, a general low prioritisation of strategic HR within health departments and the persistent narrowing of HRH to a mainly administrative and operational function with little strategic and decision-making authority.

Goal 4

Ensure optimal governance, and build capable and accountable strategic leadership and management in the health system.

Objectives

1. Revitalise HRH regulatory structures to enhance the education, performance and accountability of the health workforce.
2. Implement good governance principles and practices in national and provincial Departments of Health and HRH intergovernmental, private sector and civil society structures.
3. Institutionalise a critical mass of empowered, competent, accountable and capacitated HRH leaders and managers at national, provincial and district levels.
4. Encourage distributed leadership and management through teamwork, with collective and holistic, value-based competencies (knowledge, skills, attitudes and behaviours), and supported by an enabling working environment and culture of continuous learning and accountability.
5. Ensure role clarity and improved competence and capacity of HR Managers and line managers in HR functions.

Rationale

South Africa has numerous laws, well-established frameworks, policies and procedures that guide the governance, leadership and management of the health system and its human resources. However, the implementation of these remain sub-optimal. Health systems and HRH governance, leadership and management are priority areas that will determine the effectiveness and functioning of South Africa's health system, and its outcomes.

Although two thirds or R133 billion of the public health sector budget is spent on the health workforce, limited attention is given to its optimal governance, planning, financing, and management. At national and provincial government levels, more attention is needed on how this monetary investment translates into measurable gains, implementation efficiencies, and improved health outcomes (see Goal 1).

The Strategic Approach

The heart of the 2030 HRH strategy is to invest in the health workforce, and to elevate HRH to the centre of health sector transformation efforts, envisaged under the NHI [15]. This must start with strengthening the HRH capacity, expertise and capabilities in the NDoH, to ensure that the NDoH can drive, implement and monitor the 2030 HRH Strategy. Strong leadership is needed to promote and protect rural equity, and to ensure gender-transformative policies, accompanied by the necessary resources.

Although South Africa has strong, embedded health workforce regulatory systems, gaps in governance contribute to poor quality of care in the public sector [33], and perverse incentives in the private sector [34], which in turn have an adverse impact on the public sector. There is need for a revitalisation of HRH regulatory structures to enhance the education, performance and accountability of the health workforce.

Regulatory amendments are needed to separate political and administrative decision-making on HRH and to decentralise decision-making where capacity and competencies are in place. The NDoH should engage the DPSA to align the Public Service Act with the Public Finance

Management Act in terms of executing and accounting authorities. HRH is a strategic function and requires expressed attention in the form of key performance areas, resources and competencies to drive and implement this strategy and through leadership investment and independent administrative decision-making authority.

As recommended as part of Goal 1, a Health Workforce Consultative and Advisory Structure should be established, to obtain buy-in and inputs from a broad range of stakeholders. HRH stewardship needs to move beyond firefighting to a pro-active approach. The South African Government must articulate its strong belief in the critical importance of HRH to the success of the NDP and NHI and achieving UHC and other health and health care goals. This must be accompanied by a culture revolution of doing things differently.

The NHI envisages a health system with capable, responsible, ethical and effective leaders and managers [15]. The envisaged NHI District Health Authorities will require managers at every level of the health system to have appropriate skills and measurable competencies [15]. This suggests that line managers should have increased autonomy, within the limits of their budgets, to determine the number of staff and the levels and skills they need to deliver the required results. At the same time, provincial health departments will need to focus on strategic issues, including policy development, oversight and monitoring of implementation. These are massive changes that will need organisational cultures that promote a sense of belonging and strong values that enhance team building, teamwork, and positive and supportive practice environment, including possible coaching and/or mentoring programmes.

The envisaged changes in terms of the NHI also suggest a revised and acceptable performance management and development system (PMDS) that incentivises productivity, teamwork, and innovation, with clear and undisputed objectives and measureable outcomes. The PMDS should ensure alignment between individual, organisational and overall health system goals. There should be ongoing engagement with employees, as well as feedback, development (where relevant), and active management and support. Lastly, the PMDS should be monitored on its effectiveness, and the need for amendments.

HRH capacity in the national and provincial departments of health is focussed on routine HR administration. HRH leadership capacity needs to be developed to address the full spectrum of HR planning, development and management, with an effective national co-ordination structure. Standard tools to enable management will be essential.

Continuous professional development (CPD) and coordinated training and accredited, refresher programmes for middle and operational managers are also needed. At the same time, encouraging 'peer training', 'team learning' and 'learning by doing' may yield positive results. Critical to leadership and management is ensuring the availability and reliability of data used for planning, performance and management outcomes (see Goal 2).

The HRH Strategy calls for a review and implementation of a national Health Leadership and Management Competency Framework (HLMCF). This framework should be used for gap analysis, deciding on individual and team development, and guiding the training, recruitment and selection of leaders and managers. CPD could serve as an effective tool for narrowing the competency gaps in the health workforce, and should be driven through the PMDS. Competencies should enable the effective implementation of health system reform, especially the proposed NHI system.

There should be a particular focus on identifying and growing young leaders through dedicated coaching and mentoring programmes. Given the complexity of the health sector and its policies and governance, political leaders should get formal health orientation and training. A professional body that advocates for and builds health leadership and management including compliance issues should be set up. Given the pressures in health leadership and management, there should be a support programme for prevention of, and referral for counselling for stress-related illness. The selection of leaders and managers with appropriate competencies, skills, and personal attributes is vital. Health leaders and managers must build a culture of compassion, caring and accountability, embodied in a Leadership Behaviour Charter. Conceptually, the Charter should be regarded as a manual that unpacks core organisational values. The Charter will be a powerful tool to support a values-driven culture within the entire health workforce.

Outputs

1. Revitalised HRH regulatory structures that practise good governance and that are accountable (e.g. HPCSA, SANC, and SAPC).
2. Strengthened systems of oversight of key professional regulatory bodies (Forum of Statutory Health Professions Councils).
3. Functional HRH or inter-governmental governance structures, mechanisms, and processes in place (e.g. JHSEC, HWCAF).
4. Synergies and regulatory measures in place to separate political and administrative decision-making on HR appointments, which should be meritocratic.
5. Re-designed national and provincial HRH function/programme based on a strategic HRH orientation and future support for a strengthened DHS.
6. Visionary health leaders with a culture of compassion, caring, ethics, commitment to equity and accountability across all levels of the health system.
7. Strong HRH stewardship and management at all levels, to ensure prioritisation of gender and rural equity, and the learning and growth of young health professionals.
8. Performance standards for strategic health system and HRH leadership and management are institutionalised, revitalised continuously and applied at every level of the system.
9. Monitoring and review of all formal and practice-based training activities, and evaluation of outcomes and impact of individual or team development programmes.

Goal 5: Build an Enabled, Productive, Motivated and Empowered Health Workforce

The Strategic Context

An environment that enables the fair recruitment and retention; equitable distribution; and enhanced performance of the health workforce is dependent on many factors, several of which are positive features of the practice/work environment in South Africa. These include progressive labour legislation which protects workers' rights; free association with trade unions; social protection; and job security in the public sector; as well as a broad range of benefits and opportunities for advancement. Remuneration for some health workforce categories has improved through an occupational specific dispensation (OSD), rural allowances and commuted overtime payments. However, the evidence is unclear on whether these interventions have yielded satisfactory returns on these financial incentives [76-78]. In some instances, they may have resulted in unintended negative consequences and distortions.

The working hours of junior doctors are often raised as a concern, as well as the implementation of the community service policy [79]. The latter is intended as an opportunity for new graduates to provide community-based service as a societal response to the public investment in their education. However, concerns relate to their supervision in the field, availability of medicines and equipment, suitable accommodation, and workload due to staff shortages [79]. In addition, a review found that community service enables the recruitment of health professionals to rural and underserved areas, but is ineffective in retaining them in the absence of complementary longer-term HRH interventions [80].

The Public Service Act makes provision for Remunerative Work Outside the Public Service (RWOPS) [81], on condition that prior permission is obtained, and that the RWOPS does not interfere with patient care and public sector duties. Existing evidence suggests widespread abuse illustrated by unlimited private practice by doctors and moonlighting by nurses [82], exacerbated by inadequate or poor supervision, and inadequate management of absenteeism. The negative impact on public health service delivery requires significant change to how RWOPS is interpreted,

managed, applied and controlled.

Public sector recruitment processes are slow and often centralised and there are concerns about a lack of transparency and nepotism. The performance management and development framework of the DPSA has the potential to ensure the efficiency and performance of public sector health workers. However, the system has been applied inconsistently, or not at all. Yet another major challenge to performance is the limited availability of resources in the health care facilities, with shortfalls in infrastructure, equipment and medicines, which in turn affects staff morale. There are perpetual concerns that the working environment and prevailing culture is insufficiently nurturing, enabling or supportive.

The practice environments in the private sector are considered more positive. The HMI reported that high private sector fee-for-service earnings act as a “pull-factor” for medical specialists out of the public sector [34]. This contributes to the maldistribution of medical specialists between the public and private health sectors. In contrast to doctors, private sector nurses tend to be in salaried posts. Data from the private sector compiled from annual remuneration surveys and reasons for leaving show that junior nurses tend to have higher salaries, while senior nurses may earn less than their counterparts in the public sector (Dr E. Coustas, personal communication, 2019).

Although the number of committed staff in the health sector is a positive feature, there is also need for individual and collective health worker accountability. This will assist with the prevention of medico-legal incidents and litigation. There are specific workplace issues related to burnout and mental health, and the widespread reports on violence in the workplace, as well as on route to work. Addressing these problems will require investments in staff incentives, occupational health and safety and employee wellness programmes, and mainstreaming of work-related safety and security programmes, developed in collaboration with other government departments such as safety and security and police.

The Constitution guarantees freedom of association. However, tensions between organised labour, the employer and the health workforce are too manifest for a conducive work environment and there is insufficient communication and social dialogue to build cohesion.

Goal 5
Build an enabled, productive, motivated and empowered health workforce.

Objectives

1. Embed a positive practice environment and culture, based on the values of equity, gender transformation, decent work, accountability, and respect for rights.
2. Establish, promote and maintain infrastructure and conditions of service that ensure effective and respectful care.
3. Optimise health worker recognition, supervision, performance management and development.
4. Ensure safety and security for both patients and health workers
5. Engage professional associations and trade unions to achieve a safe and people-centred work environment.

Rationale
The conditions of employment as well as the health, safety and wellbeing of the health workforce are essential drivers of quality health care and the overall performance and efficiency of the health system. Multiple progressive initiatives and policy interventions to ensure a positive work culture and enable the optimal utilisation, supervision, motivation and retention of the health workforce have been initiated. However, the effectiveness of these initiatives seems limited. In some instances, the initiatives may have caused unintended negative consequences and distortions. Examples include the application of OSD to junior doctors, and the shortage of nurse educators because many of these nursing experts left the education environment for the clinical setting in order to receive the OSD.

Staff morale is influenced negatively by overwork, reports of burnout, gender discrimination and safety breaches. This is exacerbated by reports of inadequate equipment and drug shortages. These

challenging work conditions affect the productivity, performance, resilience and effectiveness of health workers. Health workers allege that the aforementioned issues influence their adherence to codes of conduct, thereby impacting on the quality of patient care, high medico-legal claims and the costs of malpractice litigation.

The Strategic Approach

The Strategy seeks to: invest in the number, skills and training of health workers that are needed; promote decent working conditions in all health settings; optimise health worker motivation, satisfaction, retention, equitable distribution and performance; improve accountability, and enhance and promote the safety and protection of the health workforce.

A key first step is mainstreaming of gender and ensuring diversity so that all health workers feel they belong, are treated with dignity and that their unique circumstances are accommodated. It evolves to recognise that the health workforce must feel and be safe and treated fairly, which includes integrity in human resource practices, reasonable workloads, rapid recruitment, effective occupational health and wellness programmes and the necessary resources to perform their roles. The rural recruitment and retention strategies require revision to ensure that South Africa achieves its health system goal of equity in access to health professionals.

There needs to be a shift in organisational culture and strategies to boost morale and a commitment to caring and quality. Problematic areas in the conditions of service must be tackled, and a common commitment to caring for one another and for patients engendered through strategies such as social dialogue, transparency and recognition. In turn, all must understand the need for accountability. This should be rooted in competency frameworks and a more effective performance management and development system that facilitates full productivity from all health workers. Management must ensure that employees' abilities match their jobs and the PMDS must be revised to provide a tool of real worth.

The impact on health system performance of excessive and unmanaged RWOPS by all health professionals must be addressed. In the first instance, the NDoH should embark on an urgent

review of RWOPS, its interpretation, application and management. The review should include operational research, negotiation with relevant stakeholders to devise alternative models of employment (such as 5/8 posts or part-time appointments), shift work and the introduction of greater flexibility and choice among all categories of health professionals, taking into account their preferences and balancing those with health service delivery imperatives.

The strengthened HRH function in the NDoH should also conduct an economic analysis of the costs and benefits of internship and compulsory community service programmes, and COE of health professionals.

The health sector needs to work more closely with other sectors of government impacting on the practice environments of health workers (e.g. conditions of service or their living and working arrangements and safety). The NDoH should partner with other government departments (DPSA, Department of Employment and Labour), and social partners (organised labour) to ensure that greater attention is paid to global conventions and policy recommendations. These include: the HRH implications of the SDGs; the social and economic determinants of health; the instruments and guidelines of the ILO; and the policy recommendations of the WHO. Some of the action required is to, firstly, advocate for ratification, and secondly ratify outstanding codes/conventions (e.g. # 149).

Outputs

1. Gender transformative policy, practices and non-discriminatory working conditions are implemented in all health facilities and workplaces.
2. Occupational health and safety policies and practices that cover all health workers are implemented.
3. Critical review of internship, community service, RWOPS and policies on COE, and recommendations implemented.
4. Equitable and accountable conditions of service and codes of conduct are implemented and managed for the mutual benefit of employers and employees.

5. Health worker risks, burnout, attrition and unscheduled absence are tracked, measured and reduced
6. Innovative tools and programmes for maximising health worker supportive supervision, productivity, performance, engagement, wellness and morale are applied, tracked and measured in the workplace.
7. Health workers are attracted to, deployed, supported and retained in rural and under-served communities and facilities.

Ensuring Implementation: Strategic Plan 2020/21-2024/25

Introduction

This five-year Strategic Plan focuses on key implementation activities, for the period from 2020/21 until 2024/25. We use each of the five goals described in the previous section, and highlight the specific actions needed to achieve these goals.

We begin by showing the alignment of the HRH goals and strategic objectives to the SDGs, the relevant Pillars of the Presidential Health Summit compact, and the NDP Implementation Plan for the health sector.

Table 14: HRH Goals aligned to the SDGs, NDP and Presidential Health Compact

HRH Goals	SDG Goals and Targets	NDP Implementation Plan 2019-2024 Goals and Objectives	Presidential Health Compact
1. Effective health workforce planning to ensure HRH aligned with current and future needs	**Goal 3.8** – Achieve Universal Health Coverage **Target 3c:** Substantially increase health financing and recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing states **Goal 4:** Quality education **Goal 5**: Gender equality **Goal 8**: Decent work and economic growth **Goal 10**: Reduced inequalities	Improve equity, training, and enhance management of HRH	**Pillar 1:** Augment National HRH Plan
2. Institutionalise data-driven and research-informed health workforce policy, planning, management and investment			
3. Produce a competent and caring multi-disciplinary health workforce through an equity-oriented, socially accountable education and training system		Improve equity, training, and enhance management of HRH	Re-orientate undergraduate health professionals training to PHC and community engagement including the expansion and resourcing of decentralised training platforms and an emphasis on multi-disciplinary team training.
4. Ensure optimal governance, build capable and accountable strategic leadership and management in the health system		Improve equity, training, and enhance management of HRH	
5. Build an enabled, productive, motivated and empowered health workforce			

Goal 1: Effective Health Workforce Planning to ensure HRH aligned with current and future needs

Objective 1.1 Strengthen strategic health workforce planning capability, methodologies and processes at national, provincial, district and facility levels				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
Institutionalisation of health workforce planning in SA	1.1.1 Long term health workforce planning is institutionalised at national, provincial, district and facility levels.	1.1.1.1 Plan for HRH strategic function at NDoH, adequately resourced and staffed with experts in economics, finance, public health and HRH	NDoH	July 2020
		1.1.1.2 Establish HRH strategic function at NDoH	NDoH	December 2020
		1.1.1.3 Establish Health Workforce Consultative and Advisory Forum (HWCAF) with clear terms of reference, frequency of meetings, and dedicated budget	NDoH	March 2021
		1.1.1.4 Plan for HRH capacity (numbers, skills, competencies) needed at sub-national levels	NDoH, Provincial DoH	March 2021
		1.1.1.5 Establish HRH strategic functions in each province, with HRH focal person in each district and hospital	National, provincial and district levels	July 2021
		1.1.1.6 Implement HRH capacity development plans	National, provincial and district levels with support from HWCAF	March 2022
		1.1.1.7 Develop processes for annual health workforce planning involving provincial health departments and other stakeholders through the HWCAF	NDoH, NHC, HWCAF	March 2022
		1.1.1.8 Ensure 6-monthly meetings of the Health Workforce Consultative and Advisory Forum/ Structure	NDoH	Commencing from its launch in March 2021

Objective 1. 2 Apply strategic health workforce modeling and planning to optimise investment in HRH				
Strategic health workforce modelling and planning implemented	1.2.1 A comprehensive and approved national model for health workforce forecasting and planning is in place	1.2.1.1 Review strengths and weaknesses of available national planning models	NDoH	March 2021
		1.2.1.2 Re-evaluate use of WISN in national HRH planning	NDoH, provincial DoH	March 2021
		1.2.1.3 Map incremental improvements in HRH planning model. Future models need to add functionality for: • Public and private health sectors • Equitable distribution at national, sub-national and facility level • Demographic and epidemiological changes • Changes in HRH and service delivery models • Mainstreaming of nurse planning into HRH planning • Decisions on skills mix, including on mid-level health workers • Migration • Impact of health policy changes, or reforms, and recommendations of major diagnostic reports (e.g. HMI, SA Lancet, etc.) • Improvements in health worker productivity • Task-sharing or task-shifting decisions	NDoH	December 2021
		1.2.1.4 Develop, approve and implement initial functional model	NDoH	March 2022
		1.2.1.5 Pilot health workforce planning model(s)	NDoH & Provincial health departments	December 2022
		1.2.1.6 Achieve consensus on health workforce planning approach or model	NDoH, Provincial DOH and HWCAF	December 2022
		1.2.1.7 Approve health workforce planning approach or model	NDoH, Provincial Health Departments, HWCAF	March 2023
		1.2.1.8 Present or release initial results of health workforce planning model	NDoH	March 2024
	1.2.2 Appropriate staffing targets and norms are defined for current and future health service needs	1.2.2.1 Benchmark current national HW ratios against international recommendations, similar LMICs, OECD countries	NDoH	March 2021
		1.2.2.2 Agreement on principles for establishing target ratios	NDoH, Provincial DoH, HWCAF	March 2021

		1.2.2.3 Achieve consensus on target ratios	NDoH, Provincial DOH HWCAF	December 2021
		1.2.2.3 Develop norms for every nursing function at different levels of the health system; establish standardised, approved and funded nursing structures at provincial and district management levels, establish actual (reliable) numbers of the different categories of nurses available, and complete a gap analysis to facilitate nursing education reforms and basic and post-basic training in nursing	NDoH, Provincial DoH, HWCAF, SANC	March 2023
		1.2.2.4 Updated target ratios for current 5-year plan (2025/26-2030/31	NDoH	March 2023
		1.2.2.5 Proposed target ratios for next 5-year plan	NDoH	December 2023
		1.2.2.6 Develop strategy on achievement of targets of health workforce ratios by 2030	NDoH	December 2024
	1.2.3 Institutional mechanisms and financing arrangements developed to support implementation of health workforce plans	1.2.3.1 Finalise the investment case for HRH, including detailed cost –benefit analysis	NDoH	December 2020
		1.2.3.2 Establish HRH strategic function at NDoH	NDoH	December 2020
		1.2.3.3 Ensure dedicated budget available for HRH strategic function	NDoH	March 2021
		1.2.3.4 HRH strategic function cascaded down to provincial level, with HRH strategic focal points at district and hospital levels, appropriately staffed and with dedicated budgets	NDoH, Provincial Departments of Health	July 2021
		1.2.3.5 Review current fiscal federal arrangements and instruments for funding HW	NDoH, Provincial Departments of Health, National Treasury	March 2022
		1.2.3.5 Propose and implement changes in fiscal federal arrangements and instruments to better support HW plan implementation	NDoH, Provincial Departments of Health, National Treasury	March 2023

Goal 2: Institutionalise data-driven and research informed health workforce policy, planning, management and investment

Objective 2.1 Institutionalise health workforce data analytics and the standardisation and monitoring of core health workforce indicators and reporting and use at every level of the health system				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
Institutionalisation of data-driven and research informed health workforce policy, planning, management and investment	2.1.1 An integrated HRHIS with HRH Registry and data warehouse containing HRH data, technology, information, knowledge and research with dedicated and adequate resources	2.1.1.1 Establish health workforce information system structures at National, Provincial and District levels	NDoH Provincial DoH	March 2021
		2.1.1.2 Embark on cleaning, verification and quality check of PERSAL data	NDoH Provincial DoH	December 2020
		2.1.1.3 Develop mechanisms for periodic data quality checks on PERSAL	NDoH Provincial DoH	December 2020
		2.1.1.4 Training of all HRH staff on features and utilisation of PERSAL	NDoH in consultation with national Treasury & Provincial DoH	December 2020
		2.1.1.5 Develop an information exchange policy to facilitate sharing of data across national human resource information systems platforms	NDoH Professional Councils DHET DPSA Treasury Private health sector	March 2021
		2.1.1.6 Identify and review existing HRH data sources to expand the HRIS Architecture and develop the Data Warehouse	NDoH Provincial DoH HWCAF	March 2021
		2.1.1.7 Identify and review existing HRH systems used, including strengths and limitations	NDoH Provincial DoH HWCAF	March 2021
		2.1.1.8 Prescribe harmonised information to be collected by HPCSA, SANC and SAPC	NDoH	March 2021

		2.1.1.9 Identify software and hardware requirements to harmonise existing data from different information sources	NDoH Provincial DoH HWCAF	March 2022
		2.2.1.10 Develop a Data Warehouse that stores and analyses HRH data	NDoH	December 2022
		2.1.1.11 Develop data quality improvement plans for the different data sources in the Data Warehouse	NDoH Provincial DoH	December 2022
		2.2.1.12 Develop a capacity improvement plan to implement and maintain the data warehouse	NDoH	March 2023
		2.2.1.13 Identify the software and hardware components for the HRHIS architecture	NDoH Provincial DOH HWCAF	March 2023
		2.2.1.14 Expand the HRH Registry to include all cadres	NDoH	December 2021
		2.2.1.15 Expand the adoption of NHWA to include all modules	NDoH	December 2021
	2.1.2 Comprehensive National HRH M&E framework aligned to the National Health Workforce Accounts with a core set of priority national indicators and targets measured and tracked annually in the public and private sectors, professional councils and collaborating institutions	2.1.2.1 Develop M&E system of HRH at the different levels of the health system	NDoH	June 2020
		2.1.2.2 Formulate clear and measurable indicators for monitoring selected HRH variables in the health sector	NDoH	June 2020
		2.1.2.3 Develop and implement mechanisms for reporting on HRH indicators	NDoH	December 2020

Objective 2.2 Develop and coordinate an essential national HRH research agenda				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	2.2.1 NDoH coordinates and invests in an essential HRH research agenda that informs HRH policy, planning, management and investment decisions	2.2.1.1 Organise HRH Indaba to present, appraise HRH research, technology and innovation in South Africa and identify critical gaps and to share best practices	NDoH	December 2021
		2.2.1.2 Develop an essential HRH research agenda	NDoH in consultation with Provincial DoH and HWCAF	March 2022
		2.2.1.3 Source and allocate funding for essential HRH research, including post-graduate funding	NDoH	April 2022
		2.2.1.4 Call for proposals or commission essential HRH research	NDoH	June 2022
		2.2.1.5 Develop mechanisms for knowledge translation and disseminate of key research findings, innovation and tools to key stakeholders	NDoH HWCAF	June 2022
		2.2.1.6 Capacity development at the different levels in the national health system on the use of information and research for the management, planning, monitoring and evaluation of HRH.	NDoH Provincial DoH HWCAF	March 2023
	2.2.2 A HRH community of practice and sustainable mechanisms to share good practices, both nationally and internationally.	2.2.2.1 Institutionalise biennial HRH Indaba (see above)	NDoH Provincial DoH HW Consultative and Advisory Forum Other stakeholders	Commencing with HRH Indaba by December 2021, successive Izindaba would be held in 2023 and 2025.

Goal 3: Produce a competent and caring multi-disciplinary health workforce through an equity-oriented, socially accountable education and training system

Objective 3.1 Institutionalise the governance and financing mechanisms that will sustain a transformative and socially accountable health workforce education and training system, covering quality pre-service, in-service and continuous professional education and training				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
Sustainable governance and financing system for health workforce education and training	3.1.1 Functional and transformed health workforce education and training governance structures and mechanisms, with clear links between needs and training outputs	3.1.1.1 Review and revitalise the JHSEC with clear terms of reference, dedicated budget, and functioning secretariat	NDoH, together with DHET, National Treasury a	December 2020
		3.1.1.2 Cleaning, verification and quality check of HEMIS data on health science students	NDoH, together with DHET	March 2021
		3.1.1.3 Develop a publicly available minimum national dataset of HRH education information	JHSEC NDoH DHET	October 2021
		3.1.1.4 Investigate the role and responsibilities of the private health sector in health sciences education	JHSEC NDoH DHET	March 2022
		3.1.1.5 Ensure synergies between JHSEC decisions and development of health workforce planning model	NDoH DHET	March 2022

Objective 3.2 Revolutionise selection and recruitment of health sciences students to overcome health workforce inequities between rural and urban areas, and between the public and private health sectors				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
Increased number and retention of health professionals in rural and under-served areas	3.2.1 Increased student admission and retention rates from rural areas, accompanied by holistic student support services	3.2.1.1 Develop a framework for the funding of health sciences students, with prioritisation of the selection of students from rural and underserved areas.	JHSEC	December 2021
		3.2.1.2 Set targets for all Health Science Faculties for the proportion of students from rural and underserved areas.	JHSEC	April 2022
		3.2.1.3 Reorient government bursary schemes towards the selection and support of health sciences students from rural and underserved areas.	NDoH, Provincial DoH DHET NRF	April 2023

Objective 3.3 Ensure transformed and modernised curricula and training platforms to imbue the health workforce with the requisite values, knowledge and population-centred competencies so that they are able to address the quadruple burden of disease and meet current and future health system needs				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	3.3.1 Well-coordinated and functional national clinical, rural and community-based training platforms for the entire workforce.	3.3.1.1 Develop criteria for decentralised training platforms (DTPs) in health sciences education	JHSEC, NDoH, DHET HWCAF Health Professions Councils	July 2021
		3.3.1.2 Determine resource requirements and mechanisms for DTPs in health sciences education	JHSEC	July 2021
		3.3.1.3 Obtain formal approval for the criteria, resources, and implementation mechanisms	NDoH DHET National Treasury	November 2021
		3.3.1.4 Allocate resources in MTEF to the establishment or designation of DTPs that meet the national criteria	National Treasury	March 2022
		3.3.1.5 Establish or designate DTPs at PHC level, in rural, remote and other under-served areas to increase student's exposure to the health needs of underserved groups and communities and to contribute to closing service access gaps	NDoH Provincial DoH	December 2022
		3.3.1.5 Engender greater use of ICT to augment classroom tuition, particularly in support of DTPs to rural and underserved communities.	Health Science Faculties/ Training institutions	December 2022
		3.3.1.6 Develop a decentralised district level clinical supervision and support network for students at DTPs and	Health Science Faculties/ Training institutions	December 2022

		capacitate network members to provide quality training	National and Provincial health departments	
		3.3.1.7 Establish holistic (financial, academic and psychosocial) student support structures and mechanisms in all education and training institutions to translate access into throughput and success and incorporate this as part of accreditation requirements within a policy environment that tracks student retention rates and incentivises institutions to improve such rates.	Education and Training Institutions and Professional Councils	April 2021
		3.3.1.8 Establish partnerships between education and training institutions and health departments to provide professional support to the HWF, especially those working in rural or underserved areas to reduce attrition during training.	Education and Training Institutions and Provincial DoH	April 2021
		3.3.1.9 Implement a continuous quality improvement approach to continually reflect upon and improve the quality and effectiveness of the DTPs and the district-level clinical supervision and support network.		
	3.3.2 Curriculum revisions are based on needs, and teamwork, and influenced by local communities, health services and students and new, needs based health workforce programmes	3.3.2.1 Establish a partnership forum for education programme planning and curriculum evaluation with stakeholders - from local health services who train and employ graduates, other health workforce cadres, service user groups, students, faculty and community representatives - of the geographical area within which the institution resides.	Institution/programme heads with clinical service counterparts.	December 2021
		3.3.2.2 Develop a curriculum evaluation framework for socially accountable health workforce education for institutions to evaluate and revise existing curriculum content and education processes (for clinical, primary healthcare, public health, inter-professional collaboration and	Professional Councils, Health Science Training Institutions heads and clinical service counterparts.	April 2022

		leadership competencies) and the expansion of clinical training in PHC and settings where health needs are most significant.		
		3.3.2.3 Develop and implement equity-oriented student recruitment, selection, retention and support guidelines to supplement existing policies.	HEIs & FETs offering HWF E&T	March 2021
		3.3.2.4 Review, revise and/or supplement faculty appointment policies to ensure that faculty and clinical supervisors reflect the diversity of the communities the institution serves and all levels of the health system.	HEIs & FETs offering HWF E&T	March 2021
		3.3.2.5 Engage with professional councils to develop a unitary approach to core competency curricula for all health workforce education programmes.	NDoH and Provincial DoH DHET Professional Councils Health science training institutions HWCAF	December 2021
		3.3.2.6 Achieve consensus on core competency curricula for all health workforce education programmes.	NDoH and Provincial DoH DHET Professional Councils Health science training institutions HWCAF	June 2023

Objective 3.4 Facilitate the development and innovative expansion of educators (faculty) to ensure the production of a socially-accountable health workforce				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	3.4.1 Expanded and retained faculty with necessary competencies, who practice innovative pedagogies, and who have opportunities for continuing education	3.4.1.1 Expand the existing requirements for an educational qualification for nurse educators to include all professional and health workforce educators.	Health Science Education Institutions	December 2022
		3.4.1.2 Develop a competency framework for the education and continuing development of trainers within the health system that acknowledges the different competency requirements for each level of the health system and the common core competency of capacity for change agency.	NDoH, JHSEC, DHET Health Science Education Institutions	December 2022
		3.4.1.3 Facilitate the development of communities of practice for health workforce educators across all levels of the health system	NDoH, JHSEC, DHET Health Science Education Institutions	December 2022
		3.4.1.4 Establish a national database that allows educators to access support and link various practitioners electronically.	NDoH, JHSEC, DHET Health Science Education Institutions	December 2023

Objective 3.5 Leverage existing and new funding streams and partnerships for adequate and equitable supply and distribution of human, infrastructural and operational resources				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	3.5.1 Functional service – education partnership framework with clear lines of accountability	3.5.1.1 Expand the definition of academic health complexes (AHCs) to include higher and further education institutions and training sites across all levels of care prioritising development of rural, underserved and community sites	NDoH	June 2021
		3.5.1.2 Promulgate regulations to institutionalise the expanded AHC platform as a national competence.	NDoH	December 2021
		3.5.1.3 Develop and implement an accountability framework for the leadership and management of clinical and community-based health training at the DHET/NDoH interface and the Provincial Health/Health Science Education and Training Institutions	JHSEC, NDoH, DHET, Provincial DoH	December 2021
		3.5.1.4 Increase the use of simulation and ICT at training and service sites on the platform, including distributed service/training ecosystems, to enhance training and increase education access.	Health Science Education and Training Institutions	December 2021
	3.5.2 Appropriate infrastructure and training materials	3.5.2.1 Develop and implement a framework of minimum standards for the platform's clinical and community-based health training sites that includes the principles of community engagement, opportunities for inter-cadre education and	JHSEC, NDoH, DHET HWCAF Health Professions Councils	July 2021

		practice, development of competencies for quality service and programme delivery, supportive clinical supervision network.		
		3.5.2.2 Leverage the Health Professional Training and Development and Clinical Training Grants and other relevant funding to optimally resource AHCs across the health continuum including rural and underserved facilities equitably distributed across provinces.	Health science education and training institutions	December 2021
		3.5.2.3 Introduce performance-based programme budgeting, which more regularly adjusts the higher education funding formula for volume increases in line with enrolment plans and achievement of national targets.	National Treasury DHET NDoH	April 2022

Goal 4: Ensure optimal governance, and build capable and accountable strategic leadership and management in the health system

Objective 4.1 Revitalise HRH regulatory structures to enhance the education, performance and accountability of the health workforce				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	4.1.1 Revitalised HRH regulatory structures that practice good governance and that are accountable	4.1.1.1 Develop a set of indicators on good governance to ensure that HPCSA, SANC and SAPC meet their legislative mandates	NDoH	December 2021
		4.1.1.2 Facilitate the training of members of the Council of each health professional regulator in good governance principles	NDoH Forum of Statutory Health Professions Councils	December 2021
		4.1.1.3 Encourage each Council to conduct an annual evaluation in line with the principles of good governance	NDoH	April 2022
		4.1.1.4 Ensure each Council reports on its annual evaluation every year	NDoH	Commencing December 2022
		4.1.1.5 Conduct a review of strengths and gaps in existing professional regulation, and the feasibility, operational and resource requirements of establishing one Council for all health workers.	NDoH	December 2023
		4.1.1.6 Report on necessity of legislative reform of health professional regulation	NDoH	March 2024
	4.1.2 Strengthened systems of oversight of professional regulatory bodies	4.1.2.1 Revitalise the Forum of Statutory Health Professions Councils, with clear terms of reference, clarity of roles and responsibilities, and adequate resources	NDoH	December 2020
		4.1.2.2 Ensure that the Forum reports on its oversight functions every year	NDoH	Commencing December 2021

Objective 4.2 Implement good governance principles and practices in National and Provincial Departments of Health and HRH inter-governmental, private sector and civil society structures.				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
All HRH structures fulfil all the requirements of good governance	4.2.1 Functional HRH or inter-governmental governance structures, mechanisms and processes in place	4.2.1.1 Generate database of all relevant structures (JHSEC, Forum of Statutory Health Professions Councils, etc.), including the mandate, roles, responsibilities, current human and financial resources associated with each structure	NDoH	December 2021
		4.2.1.2 Conduct a desk review of each structure, and whether appropriate and fit for purpose	NDoH	December 2021
		4.2.1.3 Develop a plan for the restructuring or revitalisation of each structure	NDoH	April 2022
		4.2.1.4 Implement a plan for the restructuring or revitalisation of each structure (where relevant)	NDoH	April 2023

Objective 4.3 Institutionalise a critical mass of empowered, competent, accountable and capacitated HRH leaders and managers at national, provincial and district levels				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	4.3.1 Synergies and regulatory measures in place to separate political and administrative decision-making on HR appointments	4.3.1.1 Request DPSA to revise or revitalise guidelines aimed at eliminating political interference in staff appointments,	NDoH	April 2021
		4.3.1.2 Determine whether appointments in the public health sector are based on merit, and in line with the provisions of the Public Service Act and other relevant legislation	NDoH DPSA	March 2022
		4.3.1.3 Engage DPSA on possible alignment of the Public Service Act and Public Finance Management Act	NDoH	March 2022
	4.3.2 Re-designed national and provincial HRH function/programme based on a strategic HRH orientation and future support for a strengthened DHS.	4.3.2.1 Design a strategic HRH structure capable of directing and implementing the 2030 HRH strategy, based on identified needs (including NHI) and international benchmarking with similar countries (e.g. Brazil, Thailand)	NDoH NHI unit	July 2020
		4.3.2.2 Implement HRH structure that corresponds to key priorities, with requisite staff, expertise and resources	NDoH	December 2020
		4.3.2.3 Re-designed provincial HRH function/ programme based on a strategic HRH orientation and future support for a strengthened DHS, with roles, responsibilities and accountability clearly defined, understood and implemented.	NDoH Provincial DoH	July 2021
		4.3.2.4 Conduct an assessment of learning needs of staff to fulfil their functions	NDoH Provincial DoH	March 2022
		4.3.2.5 Ensure continuing education of staff in line with learning needs	NDoH Provincial DoH	April 2023

		4.3.2.6 Strengthen the governance, coordination and monitoring of HRH between national and provincial HRH functions and programmes		March 2022

Objective 4.4 Encourage distributed leadership and management through teamwork, with collective and holistic value-based competencies (knowledge, skills, attitudes and behaviours), and supported by an enabling working environment and organizational fit-for purpose culture.				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	4.4.1 Visionary leaders with a culture of compassion, caring, ethics, commitment to equity and accountability across the entire health system	4.4.1.1 Ensure all health managers' recruitment is based on merit and core competencies	NDoH Provincial DoH	Immediately
		4.4.1.2 A national social mobilisation campaign to increase the knowledge and awareness of health leaders, managers and health workers on core values of ethics, caring, compassion, integrity, fairness and accountability	NDoH Provincial DoH HWCAF Health sciences education and training institutions Professional Councils	March 2021
		4.4.1.3 Review, and finalise the Health Leadership and Management Competency Framework (HLMCF), using evidence-based, contextually relevant comprehensive leadership competencies, with an expanded view of leadership, and leadership competency encompassing more than individuals, to include teams and an enabling system	NDoH Academy of Leadership and Management in Health (ALMH) HWCAF	December 2021
		4.4.1.4 Conduct a competency assessment of key post holders	ALMH	December 2022

		4.4.1.5 Develop a national strategy for leadership and management development to address the gap, including resource requirements and sources.	NDoH Provincial DoH ALMH	December 2023
		4.4.1.6 Ensure HLMCF requirements are implemented consistently in the recruitment and selection process for all new leadership and management appointments	NDoH Provincial DoH ALMH	April 2022
		4.4.1.7 Develop minimum criteria for training curricula aligned with the HLMCF	ALMH	December 2023
		4.4.1.8 Explore innovative approaches, with specific focus on interventions to develop and support rural areas, and those that can be delivered at scale.	NDoH Provincial DoH ALMH	December 2023
		4.4.1.9 Develop and maintain an inventory of accredited health leadership and management training programmes, activities, tools and resources, categorised according to HLMCF	ALMH	December 2024
	4.4.2 Strong HRH stewardship and institutionalised leadership, to ensure prioritisation of gender and rural equity, and the learning and growth of young health professionals.	4.3.3.1 Review delegated responsibility and authority mechanisms at national, provincial, district and facility levels (delegated powers).	NDoH Provincial DoH	December 2022
		4.3.3.2 Revise guidelines on, and implementation of, delegations	NDoH Provincial DOH	March 2023
		4.3.3.3 Develop a national capacity development plan to implement the revised delegations of authority	NDoH Provincial DOH	March 2023
		4.3.3.4 Implement guidelines on delegation of authority	Provincial DOH	April 2023
		4.3.3.5 Explore non-monetary rewards for managers and staff who have implemented	NDoH Provincial DoH	April 2023

		delegation of authority and demonstrated improved performance		
		4.3.3.6 Develop guidelines and strategies to achieve gender and rural equity in the SA health system	NDoH Provincial DoH HWCAF	March 2021
		4.3.2.7 Establish mechanisms of benchmarking and sharing lessons on gender and rural equity across districts and provinces	NDoH Provincial DoH	December 2021
		4.3.2.8 Develop a framework for "growing the next generation of health leadership" programme	NDoH Provincial DoH	April 2023
		4.3.2.9 Explore coaching and/or mentoring as a strategy to facilitate and improve leadership and management competencies, decision-making and delivery.	NDoH Provincial DoH	April 2023

Objective 4.5 Ensure role clarity and improved competence and capacity of HR Managers and line managers in HR functions				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	4.5.1 Performance standards for strategic health system and HRH leadership and management are institutionalized and continuously developed and applied at every level of the system	4.5.1.1 Conduct an audit of the existing skills and capacity of HR units at national, provincial, district and institutional levels	NDoH Provincial DoH DPSA	April 2021
		4.5.1.2 Determine the roles and responsibilities of HRM staff and relevant line managers	NDoH Provincial DoH DPSA	April 2021
		4.5.1.3 Review the application of the existing performance management system, including strengths, limitations, and constraints	NDoH Provincial DoH DPSA	April 2022
		4.5.1.4 Engage organized labour and professional associations in mechanisms to achieve equity, gender transformation and improved health system performance	NDoH Provincial DoH	April 2022
		4.5.1.5 Implement recommendations from the review	NDoH Provincial DoH	April 2023
		4.5.1.6 Ensure all managers have formal labour relations training	NDoH Provincial DoH	December 2023

Goal 5: Build an enabled, productive, motivated and empowered health workforce

Objective 5.1 Embed a positive practice environment and culture based on the values of equity, gender transformation, decent work, accountability and respect for rights				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	5.1.1 Gender transformative policy, practices and non-discriminatory working conditions are implemented in all health facilities and workplaces.	5.1.1.1 Use a gender lens to review employment conditions, remuneration and non-financial incentives (e.g. leave benefits, training and development for succession planning, etc.)	NDoH Provincial DoH DPSA	April 2022
		5.1.1.2 Develop database for recording gender- based discrimination, violence and harassment in the workplace	NDoH	April 2023
		5.1.1.3 Develop gender-transformative guidelines and practice tools (including training manuals) for HR Managers, and middle and senior management.	NDoH DPSA	April 2023
		5.1.1.4 Determine the cost and benefits of providing work environments that are welcoming and conducive for women's special circumstances e.g. flexible working hours, expectant mothers, single mothers with young children, etc	NDoH Provincial DoH DPSA	April 2024
		5.1.1.5 Youth friendly workplace environment: intergenerational equity as part of the comprehensive diversity management and inclusivity	NDoH Provincial DoH DPSA	April 2024

Objective 5.2 Establish, promote and maintain infrastructure and conditions of service that ensure effective and respectful care				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	5.2.1 Equitable and accountable conditions of service and codes of conduct are implemented and managed for the mutual benefit of employers and employees.	5.2.1.1 Promote and ensure fair terms for all health workers irrespective of category, level, sphere of government, etc.	DPSA NDoH Provincial DoH	April 2022
		5.2.1.2 Communicate social protection policies to the workforce using all platforms including social media	NDoH Provincial DoH Local Government	Immediately
		5.2.1.3 Review internship and community service policies	NDoH Provincial DoH Health Professions Councils HWCAF	December 2022
		5.2.1.4 Implement recommendations of review of internship and community service policies	NDoH Provincial DoH Health Professions Councils Health science education and training institutions	April 2024
		5.2.1.5 Identify gaps in service provision for health care workers , including risk factors for workplace illnesses and suicide.	NDoH Provincial DoH Local Government	April 2022
		5.2.1.6 Address staff morale and organisational development by implementing innovative and inclusive ways to engender a greater culture of care, respect and appreciation at all	NDoH Provincial DoH Local Government	April 2022

		levels of the health service delivery value chain.		
		5.2.1.7 Align HR planning and budgeting with service delivery models, priorities, fair workload and performance and productivity.	NDoH Provincial DoH	April 2023
		5.2.1.8 Establish a health service charter /code of conduct in which all the health workforce bodies achieve consensus on a common basic code for behaviour in the health workplace/institution	NDoH Provincial DoH Organised Labour/ professional associations	December 2022
	5.2.2 The effective management, monitoring and impact assessment of RWOPS, OSD and Rural allowances and other incentives are applied and reported on and policies are reviewed accordingly.	5.2.1.1 Conduct district level and institutional financial analysis of OSD, Commuted Overtime and Rural Allowance)	NDoH Provincial DoH	December 2021
		5.2.1.2 Conduct national review of the implementation, and management of RWOPS	NDoH	December 2021
		5.2.1.3 Conduct economic analysis of alternative models of HW employment and performance based- remuneration	NDoH DPSA Treasury	March 2022
		5.2.1.4 Implement recommendations of financial incentives and RWOPS review	NDoH Provincial DoH	April 2023
	5.2.3 Health workers are attracted to, deployed, supported and retained in rural communities and facilities	5.2.3.1 Review of rural recruitment and retention strategies to achieve equitable distribution of health care workers	NDoH Provincial DoH HWCAF	April 2022
		5.2.3.2 Review the rural allowance and harmonise its geographical application	NDoH Provincial DoH	April 2023
		5.2.3.3 Develop national strategy on rural recruitment and retention strategies to achieve equitable distribution of health care workers	NDoH Provincial DoH	December 2022

Objective 5.3 Optimise health worker recognition, supervision, performance management and development				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	5.3.1 Innovative tools and programmes for maximising health worker supportive supervision, productivity, performance, engagement, wellness and morale are applied, tracked and measured in the workplace	5.3.1.1 Ensure managers at all levels engage and consult with, and provide feedback to frontline staff on their rights and responsibilities	NDoH Provincial DoH	Immediately
		5.3.1.2 Develop criteria for, and strategies to achieve positive practice environment in the health sector	NDoH	April 2022
		5.3.1.3 Implement an improved performance management and development system with increased consequence management	NDoH Provincial DoH	April 2023

Objective 5.4 Ensure safety and security for both patients and health workers				
Desired **Outcome(s)** of the Strategy (measurable achievements at the end of year 5)	**Output(s)** to achieve the outcome (List the outputs that would be produced to derive the outcome)	Key **Activities** required to achieve the outcomes	**Responsibility** (National, Provincial and District)	**Timeframes**
	5.4.1 Occupational health and safety policies and practices that cover all health workers are implemented.	5.4.1.1 Develop and implement a policy to ensure safety for staff and patients in collaboration with other relevant government departments	NDoH Provincial DoH	December 2021
		5.4.1.2 Develop social compacts with communities on the safety and security of health workers at institutions and providing emergency services in the communities and with both workers and communities on the prevention of vandalism and other destructive acts on health property	Provincial DoH, Institutional heads Organised Labour Civic society organisations	December 2021
		5.4.1.3 Review, update or develop specific occupational health and safety programmes for health workers, including on mental health and work-related violence and harassment a	NDoH, Provincial DoH, Institutional heads Organised Labour Civic society organisations	December 2022
		5.4.1.4 Implement programmes as developed	NDoH Provincial DoH	April 2023
	5.4.2 Health worker risks, burnout, attrition and unscheduled absence are tracked, measured and reduced	5.4.2.1 Analyse PERSAL data on leave patterns (including sick absenteeism) and factors that influence these patterns	NDoH Provincial DoH	December 2022
		5.4.2.2 Develop criteria to identify health workers at risk	NDoH Provincial DoH	April 2023

Conclusion

The implementation of this HRH Strategic Framework: 2030 and the five-year HRH plan that it informs is a priority.

The first step in Strategy implementation is to ensure that the HRH function is elevated to a senior level in the NDoH. The function should be headed by an individual with the HRH expertise, passion and belief in the critical importance of HRH to the success of the NDP, the NHI and health sector reforms. The function should include the full spectrum of HR planning, development, management, and monitoring and evaluation, as enunciated in the conceptual framework. The function should act as the secretariat for the Health Workforce Consultative and Advisory Committee (Goal 1).

The NDoH should ensure extensive communication on the HRH Strategy and Plan. The 2030 HRH Strategy must be widely distributed from national, to provinces and district level to achieve buy-in from health workers on the ground. This in turn will facilitate implementation.

The case for investing in HRH has never been stronger, with the potential for a positive impact way beyond the South African health system.

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