

South African Medical Research Council (SAMRC)

Annual Performance Plan

2020/21

Date of Tabling

February/March 2020



Executive Authority Statement

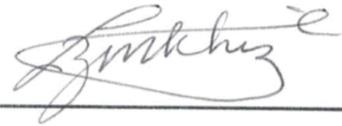
The South African Medical Research Council (SAMRC) 2020/21 Annual Performance Plan (APP) is drawn from the 2020/21 – 2024/25 Strategic Plan. This APP takes into account all the relevant policies, legislation and other mandates of the South African Medical Research Council is responsible for.

The APP accurately reflects the strategic goals and objectives which the South African Medical Research Council will endeavour to achieve over the period 2020 – 2021.

I hereby endorse this South African Medical Research Council Annual Performance Plan (APP) developed by the Executive Management Committee of the South African Medical Research Council under the guidance of Professor Johnny Mahlangu of the SAMRC Board and the SAMRC CEO and President, Professor Glenda Gray

Dr ZL Mkhize, MP
[Minister of Health]

Signature: _____

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Accounting Officer Statement

The South African Medical Research Council (SAMRC) has just celebrated 50 years of its existence. In this past half a century, this dynamic organization can be proud of its health research impacts and outcomes including setting the national research agenda, attracting the financial and human resources to conduct relevant and responsive health research, training a diverse cadre of the next generation of researchers and aligning research effort and activities to the health priorities and needs of the country. As a public entity, the SAMRC has been exemplary in many areas of its mandate including excellence in its fiscal discipline, effective organizational governance characterized by multiyear clean audits and leading the transformation agenda in medical science research. These accolades were all achieved without lowering the high standard of locally impactful and globally competitive research conducted and supported by the SAMRC. The SAMRC 2020/21 – 2024/25 Strategic Plan builds on the successes and considers, the lessons learnt, from the previous Strategic Plans and will chart a new direction – a reimagined organisation set to make further impact in the disease burden in South Africa and globally.

In the past 5 years, Professor Glenda Gray the President and CEO led the implementation of our 2015/16-2019/20 strategic plan. Fast tracking transformation was at the top of her agenda to ensure that the medical and science graduates within the intramural programme are reflective of the demographic of the country. The SAMRC in this period also initiated a research capacity development programme investing in the development of PhD, post-doctoral fellows and mid-career scientists to ensure a robust pipeline of health researchers. By addressing organizational structure and governance the SAMRC was enabled to operate effectively and efficiently.

Transformation in science as Africa's largest funder of health research means responding to the national context, by looking at the science landscape and where interventions are needed to increase the small critical mass of African scientists. The SAMRC's Self-Initiated Research (SIR) grants, a competitive grant funding scheme, was re-engineered to address gender, racial, institutional and geographic parity. In order to fund the type of research that would have an impact and at a scale that the SAMRC's research can influence policy and health guidelines, multiple streams of funding are required. Now in her second tenure as President and CEO, Prof Gray in her first five years, attracted and secured additional funding through joint collaborations with the Bill and Melinda Gates Foundation, UKMRC-Newton Fund and collaborations with the US NIH. This strategy has increased the flow of more than R100 million into the organisation over a three-year period.

A publicly funded institution, the SAMRC will continue to ensure that most of the budget is allocated to research conducted and funded by the entity and less on administrative costs. This is in line with their Strategic Objective of administering the organisation in an effective and efficient manner. With money invested into health research, strengthening the level of research output through outputs such as publications, citations, and policy briefs is imperative. Simultaneously, enhancing research translation activities forms a key part of the SAMRC's mission.

The SAMRC remains committed to decreasing the disease burden in South Africa through cutting edge innovations, the development of novel treatment regimens, especially vaccines, as well as improved diagnostic tools, while localizing the production of new drugs and devices, to improve the health and lives of South Africans.

To enable health innovation, it is critical to fund and develop new human capacity in healthcare. The SAMRC's research capacity development programmes are a key part of transformation in science and capacitating the healthcare sector to shape a better healthcare system for all.

As the Chairperson of the SAMRC Board, I am confident that the SAMRC's Strategic Plan 2020/21 – 2024/25 will support the SAMRC's agenda to lead relevant and responsive medical research in South Africa and to fund research that has impact in diseases affecting people in Africa and globally



Professor Johnny Ndoni Mahlangu

Board Chairperson: South African Medical Research Council

Statement by the President of the SAMRC

The South African Medical Research Council (SAMRC) provides leadership to medical research in South Africa. The country's health is a significant part of economic development: healthy populations live longer; and are more productive. There are many factors that impact on population health, with South Africa facing a quadruple burden of disease: ranging from stagnating mortality in pregnant women and infants to increasing morbidity and mortality associated with non-communicable diseases such as diabetes mellitus and hypertensive heart disease, as well as the epidemics of TB and HIV, that overwhelm our health system.

As the country's Council conducting and funding health research, innovation and development, the SAMRC is posed to decrease the disease burden in South Africa. The Strategic Plan 2020/21 – 2024/25 reinforces our research efforts across five strategic pillars: (1) The administration of health research in an effective and efficient manner; (2) The generation of new knowledge and its translation into policy and practice; (3) Supporting innovation and technology transfer to improve health; (4) Building sustainable health research capacity in South Africa; and (5) Research translation.

Driven by the five key strategic pillars, the SAMRC has pioneered cutting-edge medical innovations, the development of novel treatment regimens, vaccine development, diagnostic tools, new drugs and devices, aimed at the improvement of the health status of people in South Africa.

The Strategic Plan 2020/21 – 2024/25 serves as our guide to deliver on quality research, high impact science and to ensure that medical science flourishes. With strategic direction from the SAMRC Board, the SAMRC is set to strengthen all components of our research endeavour.

The Strategic Plan 2020/21 – 2024/25 also confirms our focus to fund research based on local development priorities, while ensuring that our research is globally relevant. Through Self- Initiated Research grants, the largest set of grant awards, where approximately 45 new three- year awards are made annually, we aim to develop scientific capacity and transformation of the pipeline of researchers. Through the Mid-Career Scientist Programme, we aim to create a new generation of science leaders.

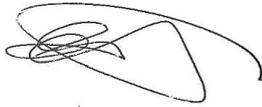
Transformation in science remains an integral part of our strategy, we have over the past five years increased the number of masters and doctoral students supported through our programmes, while developing a cohort of interns and clinicians, which includes the Bongani Mayosi National Health Scholars Programme (NHSP), an ambitious public-private partnership.

The Bongani Mayosi NHSP is a flagship PhD development programme and a national initiative to advance the next generation of African health and clinical scientists. The Programme is funded by the Public Health Enhancement Fund (PHEF), the PHEF is a non-profit entity to leverage and contribute to strengthening the health sector, which will lead to a stronger relationship between public and private sectors to the benefit of all our people. The Bongani Mayosi NHSP has already produced 47 graduates (87% of which are PhDs) in various health professions.

Through a tight fiscal environment, the SAMRC has delivered on impactful science and will continue to do so effectively and efficiently, as guided by the Public Finance and Management Act. As we implement the new Strategic Plan, we will ensure that our budget is spent on funding science and innovation and less on administrative costs.

Partnerships across frontiers, North-South, South-East, South-South, remain critical in furthering our mission as we rollout the Strategic Plan. Among key collaborations is the first Genomics Sequencing Facility on African soil. Part of our agreement with the Beijing Genomics Institute is to create a national asset to contribute to the better understanding of genetics and disease and enabling the SAMRC to harness the science of genomics for personalised medicine.

Our steadfast focus on key strategic pillars guides our teams of scientists and support staff to help us in enabling the Department of Health, to deliver on their commitment and promise of a long and healthy life for all South Africans.



Professor Glenda E. Gray
President & Chief Executive Officer
South African Medical Research Council

Official Sign Off

It is hereby certified that the South African Medical Research Council Annual Performance Plan was developed by the management of the South African Medical Research Council under the guidance of Professor Johnny Mahlangu, Chairperson of the SAMRC Board and President Professor Glenda Gray.

The Annual Performance Plan takes into account all the relevant policies, legislation and other mandates for which the South African Medical Research Council is responsible for.

The document accurately reflects the Impact, Outcomes and Outputs which the South African Medical Research Council will endeavour to achieve over the period 2019/2020 – 2024/25.

Programme 1 - Administration

Mr Nick Buick
Chief Financial Officer

Signature:  _____

Programme 2 – Core Research

Professor Rachel Jewkes
Executive Scientist for Research Strategy

Signature:  _____

Programme 3 – Innovation and Technology

Professor Richard Gordon
Executive Director:
Grants, Innovation and Product Development

Signature:  _____

Programme 4 – Capacity Development

Professor Jeffrey Mphahlele
Vice President: Extra-mural Research

Signature:  _____

Programme 5 – Research Translation

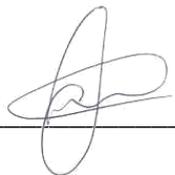
Professor Rachel Jewkes
Executive Scientist for Research Strategy

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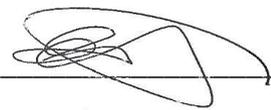
Mr Nick Buick
Chief Financial Officer

Signature:  _____

Dr Mongezi Mdhuli
Official Responsible for Planning

Signature:  _____ **Head**

Prof Glenda Gray
President and Chief Executive Officer

Signature:  _____

Prof Johnny Mahlangu
Chairperson of the Board

Signature:  _____

Approved by:

Dr ZL Mkhize, MP
Executive Authority

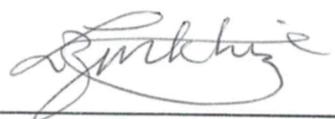
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1 SAMRC Mandate

The mandate of the South African Medical Research Council is legislated in terms of Act 58, 1991 (as amended): ‘the objects of the SAMRC are, through research, development and technology transfer, to promote the improvement of the health and quality of life of the population of the Republic, and to perform such functions as maybe assigned to the SAMRC by or under this Act’.

2 Legislative and Other Policy Mandates

2.1 Constitutional mandate

The South African Constitutional base which supports the SAMRC’s mandate are Chapter 2- Bill of Rights, Chapter 10 - Public Administration and Chapter 13-Finance. The following sections of the Bill of Rights, without limitation, are particularly relevant for the SAMRC.

2.1.1 Chapter 2: Bill of Rights

Section 9: Equality

All the rights contained in this equality section

Section 10: Human Dignity

“Everyone has inherent dignity and the right to have their dignity respected and protected”

Section 12(2)(c): Freedom and Security of the person

“Everyone has the right to bodily and psychological integrity, which includes the right not to be subjected to medical or scientific experiments without their informed consent”

Section 14(a): Privacy

“Everyone has the right to privacy, which includes the right not to have the privacy of their communications infringed”

Section 16(1)(d): Freedom of Expression

“Everyone has the right to freedom of expression, which includes academic freedom and freedom of scientific research”

Section 23: Labour Relations

All the rights contained in this labour relations section

Section 24(a): Environment

“Everyone has the right to an environment that is not harmful to their health or wellbeing”

Section 27: Healthcare, food, water and social security

Everyone has a right to have access to (a) health care services, including reproductive health; (b) sufficient food and water; and social security, including if they are unable to support themselves and their dependants, appropriate social assistance

Section 28(2): Children

“A child’s best interests are of paramount importance in every matter concerning the child”

Section 32: Access to Information

“Everyone has the right of access to any information held by the state”

Section 33(1): Just administrative action

“Everyone has the right to administrative action that is lawful, reasonable and procedurally fair”

Section 36(1): Limitation of rights

The rights in the Bill of Rights may be limited only in terms of law of general application to the extent that the limitation is reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom, taking into account all relevant factors.....”

2.1.2 Chapter 10: Public Administration

Section 195: Public administration must be governed by the democratic values and principles enshrined in the Constitution, including the following principles:

- (a) A high standard of professional ethics must be promoted and maintained.
- (b) Efficient, economic and effective use of resources must be promoted.
- (c) Services must be provided impartially, fairly, equitably and without bias.
- (d) People’s needs must be responded to, and the public must be encouraged to participate in policy-making.
- (e) Public administration must be accountable.
- (f) Transparency must be fostered by providing the public with timely, accessible and accurate information.
- (g) Good human-resource management and career-development practices, to maximize human potential, must be cultivated.

2.1.3. Chapter 13: Finance

Section 217: Procurement

- (1) When an organ of state in the national, provincial or local sphere of government, or any other institution identified in national legislation, contracts for goods or services, it must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective.
- (2) Subsection (1) does not prevent the organs of state or institutions referred to in that subsection from implementing a procurement policy providing for—
 - categories of preference in the allocation of contracts; and
 - the protection or advancement of persons, or categories of persons, disadvantaged by unfair discrimination.
- (3) National legislation must prescribe a framework within which the policy referred to in subsection (2) must be implemented.

2.2 Legislative mandate

2.2.1 The National Health Act (Act 61 of 2003)

The SAMRC is guided by this mandate to prioritize its research programmed and through the SAMRC Board interact with the NHRC and the NDOH and give effect to the mandate

2.2.2 The Medical Research Council Act (Act 58 of 1991)

The South African Medical Research Council was established in 1969 by section 2 of the South African Medical Research Council Act 1969 (Act 19 of 1969). The SAMRC Act 19 of 1969 was repealed and replaced by the South African Medical Research Council Act 1991 (Act 58 of 1991). The SAMRC is a Schedule 3A Public Entity to the Public Finance Management Act (Act 1 of 1999) and reports to the National Ministry of Health.

The SAMRC is guided by South African Medical Research Council Act 1991 (Act 58 of 1991) to

improve the health of the South African population, through research, development and technology transfer, for the people to enjoy a better quality of life.

Based on the mandates given by the National Health Act (Act 61 of 2003) and the South African Medical Research Council Act 1991 (Act 58 of 1991), SAMRC has in the past 5 years been focusing on the top ten causes of death, disability and associated risk factors. We assess how healthcare systems function to strengthen health policy, to improve the impact and efficiency of health systems and services, and provide policy makers with the tools for informed healthcare decisions.

2.2.3 Intellectual Property, Rights from Publicly Financed Research and Development Act, 2008

The SAMRC is guided by this mandate of which its aim is to provide for more effective utilization of intellectual property emanating from publicly financed research and development, to establish the National Intellectual Property Management Office and the Intellectual Property Fund, to provide for the establishment of offices of technology transfer at institutions, and to provide for matters connected therewith.

2.2.4 Other legislations (Acts) that are applied by the SAMRC in their day-to-day activities:

- Employment Equity Act 55 of 1998
- Basic Conditions of Employment Act, 75 of 1997
- Public Finance Management Act, No 29 of 1999
- Relevant Treasury Guidelines
- The Patents Act no. 57 of 1978
- Copyright Act no. 98 of 1978 Trade Marks Act no. 194 of 1993
- POPI Act (when implemented/in force)

2.3 Policy Mandates

2.3.1 National Development Plan-2030 and Medium-Term Strategic Framework 2014-2019

The South African Government adopted the National Development Plan 2030 (NDP-2030) in September 2012. It provides a broad strategic framework to guide key choices and actions, and common focus for actions across all sectors and sections of South African society. The plan presents long term strategy, where in some instances policy(ies) changes may be necessary and other instances just getting basics right, holding people accountable for their actions and finding innovative solutions to complex challenges such as providing affordable access to quality health care while promoting health and wellbeing, and introduction of national health insurance with a focus on upgrading public health facilities, producing more health professionals and reducing relative cost of (private) health care. The plan has identified and adopted the following set of objectives and actions:

- (a) Policy making in a complex environment;
- (b) Demographic trends;
- (c) Economy and employment;
- (d) Economy infrastructure;
- (e) Environmental sustainability;
- (f) Integrated and inclusive rural economy;
- (g) Positioning South Africa in the world;
- (h) Transforming human settlements;

- (i) Improving education, training and innovation;
- (j) Promoting health;
- (k) Social protection;
- (l) Building safer communities;
- (m) Building a capable developmental state;
- (n) Fighting corruption; and
- (o) Transforming society and uniting the country.

2.3.2 National Health Insurance Policy of 2017 and National Health Insurance Bill of 2019

In 2017 the Minister of Health signed a policy document, a white paper on national health insurance. This policy lays the foundation for moving South Africa towards universal health coverage (UHC) through the implementation of National Health Insurance (NHI) and establishment of a unified health system. The move towards Universal Health Coverage (UHC) through implementation of NHI is derived from the Reconstruction and Development Programme; the Constitutional mandate based on the Section 27 of the Constitution; the 1997 White Paper for the Transformation of the Health System; Vision 2030 of the National Development Plan Vision 2030; Goal 3 of the Sustainable Development Goal and the World Health Organization frameworks on moving towards UHC with health equity and the six pillars of the WHO's health systems strengthening framework.

The aims of the National Health Insurance Bill of 2019 are to achieve universal access to quality health care services in the Republic in accordance with section 27 of the Constitution; to establish a National Health Insurance Fund and to set out its powers, functions and governance structures; to provide a framework for the strategic purchasing of health care services by the Fund on behalf of users; to create mechanisms for the equitable, effective and efficient utilization of the resources of the Fund to meet the health needs of the population; to preclude or limit undesirable, unethical and unlawful practices in relation to the Fund and its users; and to provide for matters connected herewith.

2.3.3 Sustainable Development Goals

The Sustainable Development Goals (SDGs) is a plan created in 2015 after leaders of about 193 countries met and come to a common understanding that there is enough food to feed the world, but that was not getting shared; that there were medicines for HIV and other diseases, but they cost a lot; that earthquakes and floods were inevitable, but that the high death tolls were not; and that billions of people worldwide share their hope for a better future. The SDG builds upon the work started under the eight MDGs, and is an ambitious plan with a set of 17 goals aiming to address poverty and hunger, and effects of climate change by the year 2030.

These SDGs are:

SDG	Description
1.	No Poverty
2.	Zero Hunger
3.	Good Health and Wellbeing
4.	Quality Education
5.	Gender Equality
6.	Clean Water
7.	Affordable and Clean Energy
8.	Decent Work and Economic Growth

9.	Industry, Innovation and Infrastructure
10.	Reduced Inequalities
11.	Sustainable Cities and Communities
12.	Responsible Consumption and Production
13.	Climate Action
14.	Life Below Water
15.	Life on Land
16.	Peace, Justice and Strong Institutions
17.	Partnerships for the Goals

2.3.4 Medium-Term Strategic Framework 2020-2025

SAMRC will take into account the MTSF in the execution of its mandate.

2.3.5 Government to Government Collaborations

The Department of Health has bilateral agreements with a number of countries forming South- South and North-South relations. This opportunity should be fully exploited by the SAMRC in the next five years.

2.3.6 South Africa - SADC and the Rest of Africa

South Africa is signatory to a number of conventions within the Southern African Development Community (SADC), African Union (AU) and WHO. Through these institutions, the department has certain obligations to fulfil some of them involved in health research. The SAMRC is best placed to be government's implementing arm and following up on these on behalf of the department. Closer collaboration and cooperation could for example, result in SAMRC scientists working more closely with WHO-AFRO, AU and similar structures in this region.

2.3.7 South Africa and Global Collaboration

The inclusion of South Africa into the BRIC grouping of countries comprised of Brazil, Russia, India and China in late 2010 puts an African voice at the core of the world's most dynamic economies as they consider a range of pressing global issues. The implications were that a specific health agenda was developed, and health research became a significant part of the agenda. The SAMRC, as a national research body is already collaborating with BRICS in the area of TB, HIV, Child Obesity, NCDs and Genome research.

2.3.8 Communities of Funders

To fulfil its mandate and increase access to health research funding, the SAMRC has developed relationships with local and international funders, including the NRF, NIH, EDCTP, BMGF, Newton Fund, UK-MRC, etc.

2.3.9 Other interventions

Other key interventions to improve health status include inter-sectoral collaboration with government departments responsible for key determinants of health, especially DSI. Community participation and partnerships with civil society and the private sector is highly valued.

2.4 Planned policy initiatives

Policies and Governance

- (a) Research Misconduct Policy
- (b) Knowledge, Information and Data Management Policy
- (c) Guidelines on Gene Editing

- (d) SA-GCP
- (e) Open Access Policy
- (f) Regulatory Compliance Management Policy
- (g) Business Continuity Plan

PART B: SAMRC STRATEGIC FOCUS

3. Situational Analysis

The South African Medical Research Council (SAMRC) is a statutory Science Council and receives its core funding from the National Treasury through the National Department of Health. SAMRC is responsible for conducting and funding relevant and responsive health research in South Africa. The SAMRC has over the past five years positioned itself to set the medical research agenda for the country, become the most significant funder of medical research in South Africa and be the custodian of all the values that embody medical research excellence.

Through research, the SAMRC will continue to facilitate and support the National Department of Health (NDOH) in implementing evidenced-based policies and programmes. The SAMRC research programmes have in the past provided research support to the NDOH programmes through task teams, commissioned research, national surveys and ministerial committees. These have significantly contributed towards assisting the NDOH in progressively realising its set goals. Of great significance is the work undertaken by the SAMRC's Burden of Disease Research Unit that has supported the understanding of morbidity and mortality in South Africa. In terms of the SAMRC Act and any other law, shall, in addition to other functions:

- (a) undertake the investigations or research which the Minister may assign to it; and
- (b) advise the Minister-
 - (i) on the determination of policy and national priorities regarding research; and
 - (ii) on development, promotion, implementation and co-ordination of research on a national basis.

SAMRC role and responsibilities in providing technical support to the Department of Health through appropriate health research, public health and technology innovation is indispensable and contributes towards improving the health status of South Africans

Almost three decades following the birth of its democracy, South Africa is faced with unique and major challenges that threaten the health status of its citizens. One of these challenges is the quadruple burden of disease of which South Africa is still struggling with effective strategies to control these scourges. Chief amongst the quadruple burden of diseases is the communicable epidemics of HIV and TB. South Africa has the largest HIV epidemic accompanied by one of the highest burdens of tuberculosis world-wide. In addition, the republic is faced with the growing threat of non-communicable diseases such as obesity, diabetes and cardiovascular diseases including hypertension. Other huge threats to the nation include an epidemic of violence and injuries. Progress has been made in reducing maternal and infant mortality, but reducing neonatal mortality currently remains a challenge for the country. The growing disparity between the rich and the poor and the mal-distribution of health care resources between the private and public sector poses challenges to achieving universal health coverage. In the next decade, with the implementation of the National Health Insurance, efforts to redress these inequalities will hopefully translate into quality health care for all who live in South Africa.

The SAMRC will in the next five years continue to: 1) prioritise research that addresses the top 10 causes of mortality in South Africa; 2) invest in efforts to reduce morbidity and improve health outcomes; 3) fund innovation and; 4) ensure that capacity development in health research continues. The SAMRC will fund health research from discovery at the bench to implementation at the bedside. South Africa, with its wealth of scientists is uniquely positioned respond on the continent to achieve solutions for the maladies that South Africans suffer from. The SAMRC will

ensure, together with the scientists we fund, that the research conducted is responsive to the needs of the country. The SAMRC will continue to strengthen relationships and collaborations with universities and institutions such as the National Research Foundation, Human Science Research Council, Council for Scientific and Industrial Research and others.

3.1 External Environmental Analysis National Health Research Committee

The National Department of Health established the National Health Research Committee (NHRC) in terms of section 69(1) of the National Health Act, 2003 (Act 61 of 2003). The functions and powers of the NHRC, as stated in the Act include the determination of health research to be carried out by the public health authorities, to ensure that health research agendas and research resources focus on priority health problems; to develop and advise the Minister on the application and implementation of an integrated national strategy for health research; to coordinate the research activities of public health authorities; and to identify and advise the Minister on health research priorities.

NHRC hosted a National Health Summit in 2018 with the aim of moving South Africa beyond focusing only on lessening the burden of disease as a form of improving the health status of the nation, to focusing on the broader determinants of health. The summit made the following recommendations¹:

- a) Prioritisation of the social determinants of health, including the burden of disease, for funding.
- b) Building capacity of health research human resources, along a pipeline, and in line with national transformation imperatives.
- c) Improving health research funding flows and quantification.
- d) Creating a national system of implementing health research with a national-provincial alignment of mandates, including funding.
- e) Creating an evidence-based system of health research information management through collation, monitoring, evaluation and translation of health research.
- f) Improving provision of and access to health research infrastructure, especially in academic health complexes

Coordination and alignment of SAMRC research priority areas in the context of the National Health Research Committee is an instrumental area where the SAMRC can improve and capitalise on some of the Units' contributions and support to the National Department of Health. SAMRC researchers serve on strategic national, regional and international advisory committees and work groups and in doing so provide input that influences policy changes in areas affecting the health and quality of life of South African citizens. This participation culminates in the development of service delivery platforms, tools and guidelines for practice which ensure increased capacity of health workers as they benefit in training at all levels of the health system.

National Department of Health

The SAMRC's research mandate is guided by the SAMRC Act to conduct research that improves health systems, status, processes and health systems performance in terms of effectiveness, efficiency, equity, appropriateness and adequacy of health services. SAMRC health research aims to promote the improvement of the health and quality of life of all citizens of the Republic and others who have residency in this country.

¹ Madela-Mntla EN, Ally MM, Hawkrigde A, et al. 2018 National Health Research Summit Report: Research for Health. Pretoria: Department of Health.

Over the years the SAMRC has conducted a number of studies and surveys that provide information that are used by the department and government in general for planning and assessing progress towards realising government's objectives. Some of these studies have to be conducted at regular intervals as they form part of internationally accepted surveillance systems such as the demographic and health survey. These surveys include:

- Burden of Disease (BOD),
- National Injury & Mortality Surveillance (NIMS),
- Comparative Risk Assessment (CRA),
- the Perinatal Problem Identification Programme (PPIP),
- the Child Healthcare Problem Identification Programme (Child PIP)
- the South African Community Epidemiology Network on Drug Use (SACENDU), and
- the South African Demographic Health Survey (SADHS).
- The TB Prevalence Survey
- HIV seroprevalence surveys

The South African Demographic Health Survey (SADHS) allows for comparative analysis of health systems by the World Health Organisation and other multilateral agencies. Most importantly, it provides information that feeds into the National Planning Commission and similar entities. Statistics South Africa conducts the survey in partnership with the SAMRC, which provides scientific input. Inconsistent funding has resulted in South Africa not being able to conduct the SADHS with consequent inability to monitor trends in priority areas and interventions such as smoking rates, obesity rates amongst others.

The Perinatal Problem Identification Programme (PPIP) and the Child Healthcare Problem Identification Programme are at the core of the NSDA and relate directly to decreasing child mortality and increasing life expectancy. The district clinical specialist teams that are being deployed have to among other things contribute towards the reduction of neonatal, infant and child mortality. This intervention amongst others is a great investment for the health sector.

The SAMRC's 2020/21 – 2024/25 Strategic Plan is aligned to support the NDOH and South Africa's changing health research needs. This will position the SAMRC to respond to the Sustainable Development Goals (SDGs), the National Development Plan (NDP): Vision 2030. The SAMRC aims to conduct research and implement initiatives into the following SDGs:

- (a) SDG 2, by conducting research into the nutritional needs of pregnant women, infants and children;
- (b) SDG 3 by conducting research:
 - that reduces:
 - maternal deaths and preventable deaths of new-borns and children under 5,
 - HIV, TB and other communicable diseases,
 - non-communicable diseases like hypertension, cardiovascular disease and stroke,
 - alcohol and other drug abuse,
 - violence and injury, and
 - sexual and reproductive health issues,
 - in the area of:
 - universal health coverage,
 - environmental health,
 - vaccine and affordable medicine for non-communicable and communicable

- diseases,
 - capacity development, and
 - climate change
- (c) SDG4 and 10 by addressing the SAMRCs fourth goal of developing capacity in health research;
- (d) SDG 5 by focussing on research into gender-based violence and developing interventions to address violence against women and children;
- (e) SDG 6 through collaboration with our extramural unit at the University of Fort Hare on water quality;
- (f) SDG 7,11 and 13 through ongoing research done by our intramural unit that looks at environmental research;
- (g) SDG 8 and 9 by focussing on Goal 3 which is to conduct research into innovation and product development; and
- (h) SDG 17 through research done by our Violence, Injury and Peace Research Unit by collaborating with global research partners.

4th Industrial Revolution

“The Fourth Industrial Revolution (4IR) has been defined as technological developments that blur the lines between the physical, digital and biological spheres. It integrates cyber-physical systems and the Internet of Things, big data and cloud computing, robotics, artificial intelligence (AI)-based systems and additive manufacturing. Compared to previous industrial revolutions, this one is evolving at an exponential rather than a linear pace, with potentially significant impacts on work, services, education and leisure”².

SAMRC will in the next 5 years adapt its business activities to address the challenges and opportunities of the 4th Industrial revolution. One of the areas identified is the digital health. According to the assembly of the World Health Organization, “the transfer of technology and knowledge on mutually agreed terms, as well as technical cooperation, aligned with Sustainable Development Goal 17 (Strengthen the means of implementation and revitalize the global partnership for sustainable development), are important in promoting digital health”³. Among other things, the assembly urged member states to (1) assess their use of digital technologies for health, including in health information systems at the national and subnational levels, in order to identify areas of improvement, and to prioritize, as appropriate, the development, evaluation, implementation, scale-up and greater utilization of digital technologies, as a means of promoting equitable, affordable and universal access to health for all, including the special needs of groups that are vulnerable in the context of digital health; (2) consider, as appropriate, how digital technologies could be integrated into existing health systems infrastructures and regulation, to reinforce national and global health priorities by optimizing existing platforms and services, for the promotion of people-centred health and disease prevention and in order to reduce the burden on health systems; and (3) to identify priority areas where normative guidance and technical assistance and advice on digital health would be beneficial, including, but not limited to, gaps in research, evidence-based standards, support to implementation and scale-up, financing and business models, content, evaluation, cost-effectiveness and sustainability, data security, ethical and legal issues, re-use and adaptation of existing digital health and other relevant tools

² Department of Science and Technology 2019. White Paper on Science, Technology and Innovation - March 2019. Available at https://www.dst.gov.za/images/2019/White_paper_web_copyv1.pdf. Accessed 3 September 2019

³ The Seventy-first World Health Assembly, 26 May 2018. Available at http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_R7-en.pdf. Accessed 11 July 2019

3.2 Internal Environmental Analysis

Since its inception in 1969, the Medical Research Council (SAMRC) has had many laudable achievements and has had a significant impact on public health in South Africa. A review of the organisation by an independent panel of local and international experts in 2017 (the SETI 2017 review) stated that the “SAMRC deserves praise for the revitalisation effort that has been effective in many ways and is currently still underway. The history of the organisation, and its recent focus on scientific excellence and transformation, has assured its continuation as one of South Africa’s most valuable national assets and, seen as a whole, a recognised global leader in health research, defined by competence and integrity, and trusted as a partner by some of the most demanding co-funding research organisations in the world. This resurgence of value is also due to the innovative nature of the modern SAMRC (clearly shown in the success of SHIP), the scientific productivity of the extramural research units and some of the intramural research units receiving enabling funding from the Council. The prestige of the organisation is also enhanced by its leadership, and by the directors and senior staff of the productive intramural units, which play important national (and often international) roles in the biomedical and behavioural research enterprise”⁴.

The SETI Report further reveal that the “SAMRC has undoubtedly assisted in the re-focusing of the national research effort on the three inter-related areas identified as the nation’s foremost health priorities: increasing the longevity of the population, addressing maternal and child mortality and morbidity, and fighting the pandemics of HIV and tuberculosis infection. While the favourable outcomes of these campaigns are reflected in all surveillance data, some of these are due to background improvements in the social determinants of health. Even so, we are nowhere close to where South Africa should be in terms of these key priorities.”

In line with health being defined as both a national economic and development goal, SAMRC has reassessed its priorities and will focus on the following areas over the next 5 years:

1. Knowledge Management
2. Research Translation
3. Innovation
4. Transformation,
5. Diversity Management
6. Capacity Development
7. Open Science/Source
8. Data security and sharing
9. Balance academic and social impact of research
10. Environmental health,
11. Maternal and child health
12. Mental health
13. NHI and UHC: Focus on key areas to support roll out of NHI
14. Continue a search for efficacious HIV and TB vaccines
15. Ensure strategic investments in NCDs research
16. Responding to emerging national health needs and global trends
17. Foster ethical research conduct and integrity
18. Explore the possibility of establishing a SAMRC Foundation
19. Continue to invest in infrastructure development

⁴ SAMRC SETI Report 2017

The Department of Science and Technology (Department of Science and Innovation from 2019) in partnership with the SAMRC established Strategic Health Innovation Partnerships (SHIP), based at the SAMRC, in 2013. SHIP funds and manages innovation projects focused on the development of new drugs, treatments, vaccines, medical devices and prevention strategies. SHIP forms part of the Grants, Innovation and Product Development (GIPD) directorate and is the key driver of innovation through the SAMRC-DSI partnership. SHIP funds projects in infectious and non-communicable diseases, preventative medicine, maternal and child health, and medical devices.

In the innovation environment, the SAMRC Innovation Centre has been transformed into a funding and project management department, whose role is to fund new preventions, diagnostics, therapies and devices for priority diseases/health problems, such as HIV, TB, Malaria, and Non-communicable diseases. SAMRC Offices for HIV, TB and Malaria research have been established to stimulate extramural research in these three areas.

Open Science

Open science refers to an approach to research based on greater access to public research data enabled by information and communications technology tools (ICT) and platforms, broader collaboration in science – including the participation of non-scientists – and the use of alternative copyright tools for diffusing research results⁵.

SAMRC support resolutions in the draft national declaration on open access, which states that the Universities and Science Councils resolve to:

1. Work as a national collective involving government, universities, science councils and other knowledge-intensive institutions to achieve the development of open access as a default for all research produced with public funding;
2. Actively strengthen existing and develop new affordable open access models that bolster the quality of scholarly publishing and the research enterprise in South Africa;
3. Take into account the importance of high quality, peer-reviewed journals and to work constructively with other university and science systems around the world to produce new approaches to open access to these journals, in the first instance through a 'pay to publish model' rather than a 'pay to read' model;
4. Insist that the ownership of copyright remain with the authors and not be transferred to the publishing houses;
5. Strengthen existing and if necessary, develop new fully accessible national open access platforms and repositories that will provide for all information and knowledge produced through South African public funding to be freely available; and
6. Engage with high quality South African journal publishers to develop open access business models that will allow them to remain viable.

SAMRC joined cOAlition S, a platform created for accelerating the transition to full and immediate Open Access to scientific publications. A guiding document of cOAlition S is Plan S and aims for full and immediate Open Access to peer-reviewed scholarly publications from research funded by public and private grants. In addition to the scholarly publications, cOAlition S also encourages that research data and other research outputs should be made open as possible and closed as necessary.

⁵ Department of Science and Technology 2019. White Paper on Science, Technology and Innovation - March 2019. Available at https://www.dst.gov.za/images/2019/White_paper_web_copyv1.pdf. Accessed 3 September 2019

Communication

Communication is integral to the effective functioning of the SAMRC. SAMRC values open and transparent communication with all key stakeholders, including the Public, Media, Government, Universities, and Funders.

Research Integrity and Ethics

The SAMRC researchers are required to conduct research in a professional, ethical, safe, responsible, accountable manner, and contribute to uphold the integrity, credibility and reputation/dignity of the SAMRC and its stakeholders. Respect for persons, fairness, competence, integrity, sensitivity, confidentiality and communication are values on which scientific research in the SAMRC is grounded on. The SAMRC research ethics committees will continue to review and monitor research to ensure that (1) it adheres to the, in case of humans, the broad ethical principles of beneficence and non-maleficence, distributive justice (equality) and respect for persons (dignity and autonomy); and (2) in cases of research involving animals, it protects their welfare and interest, and adheres to the principles of reduction, refinement and replacement.

As a way of promoting the responsible conduct of research, the SAMRC encourages all the staff members who have knowledge of occurrence of a breach of research norms and standards or research misconduct or have good reason to suspect that a breach of research norms and standards or research misconduct has occurred to promptly report any reasonable suspicions to the Research Integrity Office of the SAMRC.

SAMRC subscribes to the following principles on ethical research and scholarly publishing practices: (1) responsibility, (2) ethics and integrity, (3) methodology and data, (4) authorship, (5) acknowledgement of contributions, (6) peer review, (7) social awareness, (8) conflicts of interest, (9) editorial, (10) research publishing environment, (11) predatory journals and unethical editorial practices, and (12) quality over quantity⁶.

SAMRC will, in the next five years, embed the research integrity and ethics culture by increasing the offering of applied ethics training workshops, awareness sessions, and amending and/or introducing policies and procedures on research ethics and integrity. In line the Department of Science and Technology's White Paper on Science, Technology and Innovation 2019, SAMRC will produce "ethically acceptable, sustainable and socially desirable research and innovations outcomes which are responsive to a wide range of stakeholders and societal grand challenges, and be sensitive to the values, needs and expectations of South Africans"

SAMRC BOARD

The 2016 – 2019 SAMRC's Board term of office ended in October 2019. A new Board has since been appointed by the Minister of Health, Dr Zweli Mkhize, to oversee the SAMRC from 01 November 2019 to 31 October 2022.

The Board of the SAMRC is committed to ensuring that the organisation executes its mandate through its 5-year strategic plan. The agenda will address the quadruple burden of diseases in terms of promoting innovative and cutting-edge science that addresses basic science, clinical research, public health research and ethics in health care research

⁶ Statement on Ethical Research and Scholarly Publishing Practices jointly issued by Academy of Science of South Africa (ASSAF), Council on Higher Education (CHE), Department of Higher Education and Training (DHET), Department of Science and Technology of South Africa (DST), National Research Foundation (NRF) and Universities South Africa (USAf). 31 July 2019

SAMRC PRESIDENT

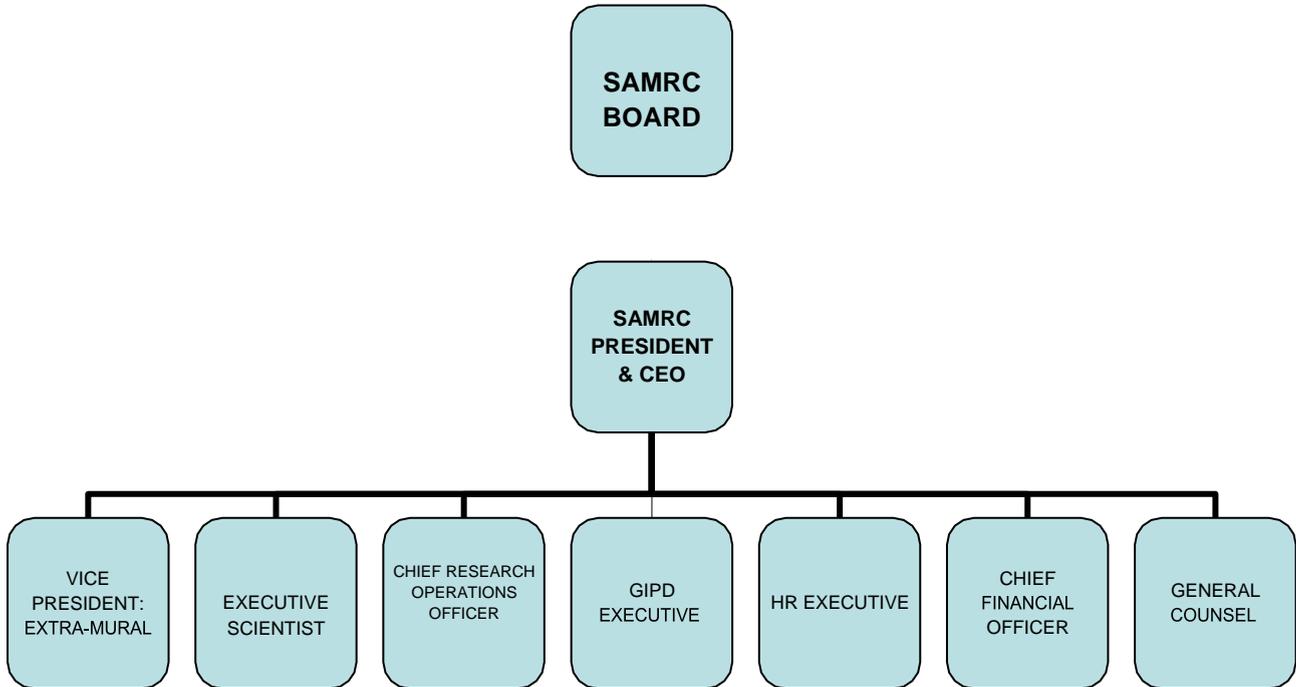
The Board appointed Professor Glenda Gray as the first female President and CEO of the SAMRC. During her first term in office, Professor Gray led the organisation to great strengths in scientific achievements, strong organisational governance and capacity development to build the next generation of scientists in Africa, including the following:

- (a) Excellence in scientific output through an increase in National Research Foundation-rated scientists in the intra-mural units.
- (b) SAMRC partnering with HIV Vaccine Trials Network (HVTN) to conduct vaccine trials in Sub-Saharan Africa.
- (c) Funding the procurement of the national license for Cochrane Library, making South Africa the first licensed country on the continent that has allowed 60 000 people to access these publications
- (d) Developed key collaborations leading to the first Genomics institute in Africa, Cochrane African Network and the BRICS TB Research Network
- (e) Attended to the SAMRC's transformation agenda and invested in increasing the number of masters and doctoral students supported through SAMRC programmes
- (f) Transformed grant funding initiatives that significantly improved funding for young scientists, black African scientists and women
- (g) Adhered to strict corporate governance strategies in administering scientific research and received five consecutive clean audits

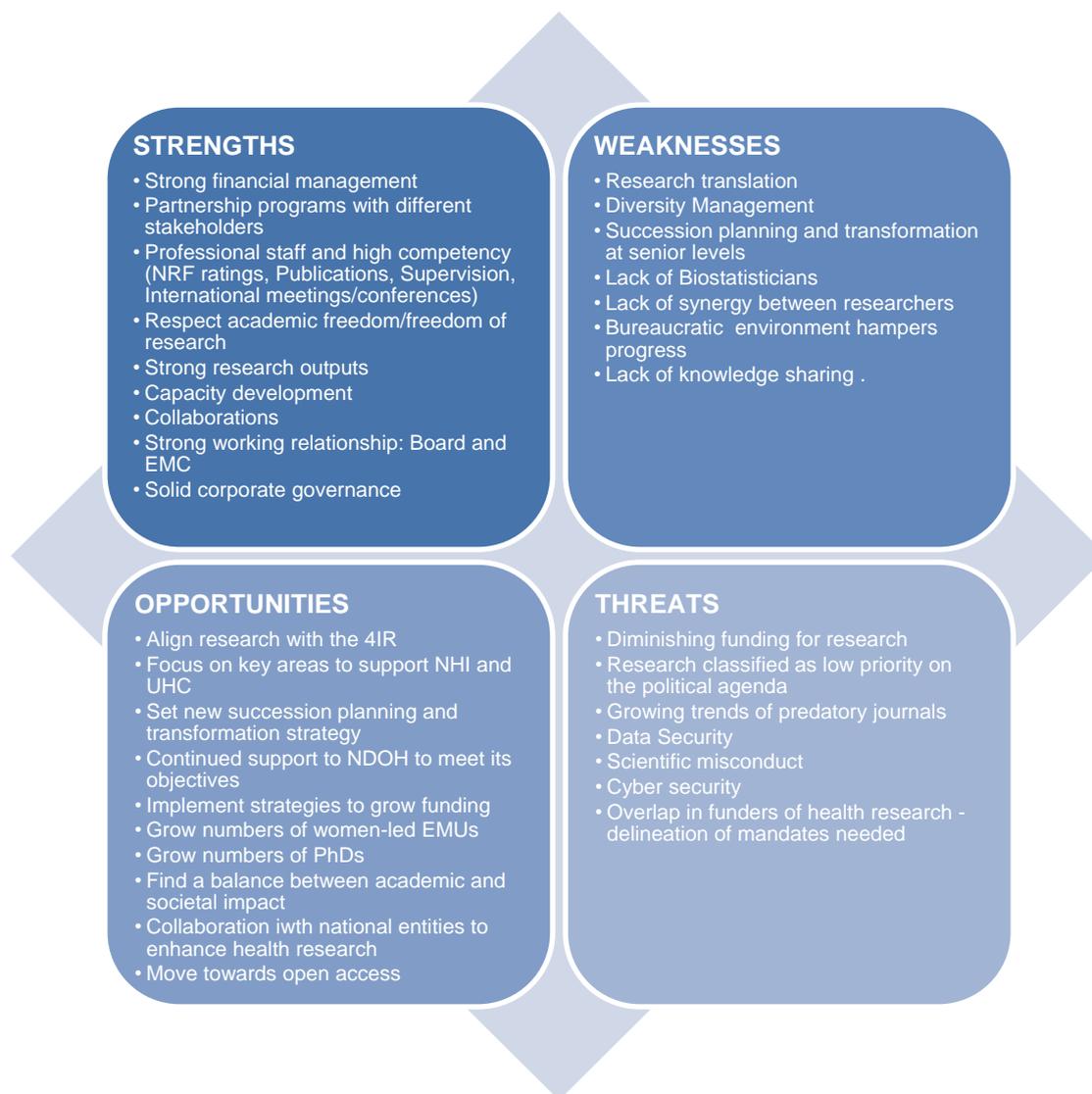
As the first term of the SAMRC President and CEO, Professor Glenda Gray came to an end in March 2019 the SAMRC Board took the decision to re-appoint Professor Gray for a second term as the President of the SAMRC, effective from 1 April 2019. When announcing Professor Gray's second term in office, the SAMRC Board Chairperson, Professor Mike Sathekge, stated that "we have no doubt that Professor Gray's leadership will expand the SAMRC's impact on science and health, her track record has proven that she is not only an outstanding scientist but a visionary whose intentions are always to advance people's lives".

SAMRC LEADERSHIP STRUCTURE

The diagram below depicts how leadership structure of the SAMRC Executive Management Committee is organised.



SWOT Analysis



Human Resource Management

The SAMRC has 639 employees, 49.92% (319/639) of which are African, 14.08% (90/639) Indian, 23.94% (153/639) Coloured and 12.05% (77/639) White. Most of our employees are female (69.33% or 443/639) with a male complement of 30.67% (196/639).

Table 1: SAMRC Employees

RACE	GENDER	March 2014 – TOP MANAGEMENT	March 2019 TOP MANAGEMENT	March 2014 SENIOR MANAGEMENT	March 2019 SENIOR MANAGEMENT	March 2014 PROFESSIONALLY QUALIFIED & SPECIALISTS	March 2019 PROFESSIONALLY QUALIFIED & SPECIALISTS	March 2014 SKILLED TECHNICAL & ACADEMICALLY QUALIFIED	March 2019 SKILLED TECHNICAL & ACADEMICALLY QUALIFIED	March 2014 SEMI-SKILLED & DISCRETION DECISION MAKING	March 2019 SEMI-SKILLED & DISCRETION DECISION MAKING	March 2014 UNSKILLED AND DEFINED DECISION MAKING	March 2019 UNSKILLED AND DEFINED DECISION MAKING	March 2014 TOTAL BY GENDER	March 2019 TOTAL BY GENDER	March 2014 TOTAL BY RACE	March 2019 TOTAL BY RACE
African	Male	0	3	6	4	9	17	25	33	18	35	21	10	79	102	255	319
	Female	0	0	3	1	29	44	99	105	36	62	9	5	176	217		
Indian	Male	1	0	2	4	7	4	12	13	2	1	4	0	28	22	123	90
	Female	0	0	2	4	39	27	45	31	9	6	0	0	95	68		
Coloured	Male	0	1	3	3	7	11	20	26	7	9	6	3	43	53	133	153
	Female	0	0	5	4	22	27	50	51	6	14	7	4	90	100		
White	Male	1	2	15	12	8	1	2	4	0	1	1	0	27	20	96	78
	Female	0	2	16	14	33	32	17	7	3	3	0	0	69	58		
TOTAL BY LEVEL		2	8	52	46	154	163	270	270	81	131	48	22	607	640	607	640

The Senior Management level (*excluding Top Management*) is made up of 7.04% (45/639) of the total number of employees, and is constituted of 11.11% (5/45) African, 17.77% (8/45) Indian, 15.56% (7/45) Coloured, and 55.56% (25/45) White employees; with 49% (22/45) male and 51% (23/45) female Senior Managers.

Table 2: Senior Management Demographics

2014		2019		2014		2019		2014		2019		2014		2019	
African		African		Indian		Indian		Coloured		Coloured		White		White	
9		5		4		8		8		7		31		25	
17.31%		11.11%		7.69%		17.78%		15.38%		15.56%		59.62%		55.55%	
Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
6	3	4	1	2	2	4	4	3	5	3	4	15	16	11	14
11.54%	5.77%	8.89%	2.22%	3.84%	3.84%	8.89%	8.89%	5.76%	9.61%	6.67%	8.89%	28.85%	30.76%	24.44%	31.11%

The table above excludes Top Management

The SAMRC will continue to pursue transformation in order to change the demographics of the organisation, particularly at the Senior Management and Executive levels. In the realm of Research, particular attention will be on transformation from Chief Specialist Scientist level up to the Unit Director level focusing on the development and appointment of Black Scientists in general, and African Scientists, in particular. The development of management and leadership skills will be emphasized as the SAMRC develops the pipeline of the next generation of Black Scientists. This will be achieved through the continuation of the Deputy Director programme and the Accelerated Development Programme, amongst others.

Diversity will continue to be an important focus area of the Transformation plan. Diversity workshops will continue during the next 5 years in order to develop knowledge about Diversity in the workplace and understanding the value of Diversity in order to create an inclusive, non-racist and gender sensitive organisational culture.

[Investing in Human Capital Development and Capacity in Health Care: Bongani Mayosi National Health Scholars Programme](#)

The National Department of Health (NDOH) and twenty-two (22) private companies, which include pharmaceutical, hospital diagnostic, corporate, healthcare supply chain, and medical scheme administration disciplines, established a vehicle called a Public Health Enhancement Fund (PHEF) to fund different programmes. The National Health Scholars Program (NHSP) is one such program funded by PHEF to leverage and contribute to strengthening the health sector that will lead to a stronger relationship between public and private sectors to the benefit of all the people of South Africa. NHSP is a partnership between the NDoH and PHEF and is a flagship PhD development program and a national asset to advance the next generation of African Health and clinical scientist. Administered by the SAMRC, NHSP has to-date produced 47 graduates (41 PhDs and 6 Masters) in various health professions.

In honour of one of major contributions towards health transformation, Professor Mayosi was honoured for his immense contributions and lasting legacy by renaming the NHSP “Bongani Mayosi National Health Scholars Programme”.

[SAMRC research centres and intra/extramural research units](#)

SAMRC intramural units are largely based at SAMRC campuses and comprise scientists directly employed by the organisation. The scope of these intramural research unit projects includes tuberculosis, HIV/AIDS, cardiovascular and non-communicable diseases, gender and health, and alcohol and other drug abuse. SAMRC extramural research units are established within research institutions (mainly universities in South Africa with the primary goal of generating new knowledge but also to build research capacity in the discipline of health sciences. The extramural units are built on scientific excellence and leadership of an internationally recognised researcher and his/her research team and must contribute to developing the next generation of research leaders for the country. The funding for SAMRC extramural research units represents a secure, discretionary, financial incentive which is approved in 5-year cycles up to a maximum of fifteen (15) years. Research Centres comprise scientists based at tertiary institutions who primarily conducts research on behalf of the SAMRC.

Table 3: SAMRC Health Priorities

SAMRC HEALTH PRIORITIES	
Programme	Purpose
Health promotion and disease prevention	To conduct research using a life course approach to healthy lifestyles, early diagnosis, and cost-effective prevention and management of diseases through health promotion.
Maternal, child and women's health	To improve the health status and quality of life of women and children through high-quality scientific research that informs policy and practice, improves health services, and promotes health.
HIV, AIDS, TB, and other communicable diseases	To conduct research on preventing HIV and related co-morbidities including TB and other infectious diseases, such as malaria. It seeks to contribute to the national and international science system by testing TB drugs and malaria insecticides, carry out the AIDS Vaccine project through coordinating development and test HIV vaccines in South Africa, in partnership with our funders and our regional counterparts.
Health systems strengthening	To contribute to health systems strengthening by undertaking systematic reviews, health policy and health systems research to provide evidence for policy-makers, stakeholders and researchers seeking to address today's most pressing health challenges. The programme aims to take advantage of information and technology by exploring and expanding the role of eHealth (health informatics, digital health, tele health, telemedicine, eLearning, and mobile health) in strengthening health systems.
Public health innovation	To promote the improvement of health and quality of life (impact prevention of ill health, improvement of public health and treatment) in the Republic of South Africa through innovation, and technology development and transfer.
Biomedical research	To conduct basic research, applied research, and transactional research to determine predisposition to disease. This understanding is important for planning effective intervention and disease control.

Table 4: SAMRC intramural and extramural research units

SAMRC Research Sub-programmes	SAMRC Research Units	Unit Director	Institution
HIV, AIDS, TB and other communicable diseases	Centre for the Study of Antimicrobial Resistance	K Dheda	University of Cape Town
	Centre for Tuberculosis Research Unit	R Warren	Intramural Research Unit
	HIV Prevention Research Unit	F. Abdullah (Interim)	Intramural Research Unit
	HIV-TB Pathogenesis and Treatment Research Unit	S Abdool-Karim	Centre for the AIDS Programme of Research in South Africa (CAPRISA)
	Molecular Mycobacteriology Research Unit	V Mizrahi	University of Cape Town
	Respiratory and Meningeal Pathogens Research Unit	S Madhi	Chris Hani Baragwanath Hospital
	Precision Prevention and Novel Drug Targets for HIV-Associated Cancers (PPNDTHAC)	Z Dlamini	University of Pretoria
Health systems strengthening	Biostatistics Research Unit	S. Manda	Intramural Research Unit
	Burden of Disease Research Unit	D Bradshaw	Intramural Research Unit
	Health Services to Systems Research Unit	H Schneider	University of the Western Cape
	Health Systems Research Unit	C Mathews	Intramural Research Unit
	South African Cochrane Centre	C Wiysonge	Intramural Research Unit
	Centre for Health Economics and Decision Science - PRICELESS SA	K Hofman	University of the Witwatersrand

Public health innovation	Drug Discovery and Development Research Unit	K Chibale	University of Cape Town
	Herbal Drugs Research Unit	A Viljoen	Tshwane University of Technology
Biomedical research	Antiviral Gene Therapy Research Unit	P Arbutnot	University of the Witwatersrand
	Bioinformatics Capacity Development Research Unit	A Christoffels	University of Western Cape
	Immunology of Infectious Diseases Research Unit	F Brombacher	University of Cape Town
	Precision and Genomic Medicine	R Ramesar	University of Cape Town
	Stem Cell Research and Therapy Unit	M Pepper	University of Pretoria
	Wound and Keloid Scarring (WAKS) Translational Research Unit	N Khumalo	University of Cape Town

Table 5: SAMRC intramural research units' purpose

INTRAMURAL RESEARCH UNITS	
Unit	Purpose
Alcohol, Tobacco and Other Drug	To generate knowledge and propose policy and other interventions that will lead to a reduction in alcohol, tobacco and other drug use and the associated burden experienced by individuals and society
Biostatistics	To advance the health of the nation through the application, development and promotion of statistical methods in the clinical and health research conducted by the SAMRC and its stakeholders
Burden of Disease	To assess and monitor the country's health status and determinants of disease; to project the future burden of disease in order to provide planning information to improve the health of the nation and to evaluate health information systems
Centre for TB Research	To run a portfolio of world class TB research ranging from basic to applied which includes projects that are laboratory based, clinic based and involves either selected individuals or local populations. Areas of interest include bacteriology, immunology, genetics, bioinformatics, and clinical trials with national and international collaborators
Environment and Health	To conduct population-based research on environmental risks to health, with special emphasis on those living in poverty
Gender and Health	To improve the health status and quality of life of women through high quality scientific research on gender and health that informs the development of policy, health services and health promotion
Health Systems	To conduct health systems research to develop health systems, improve the organisation, efficiency, effectiveness of health systems, and increase the impact of health systems on population health and well-being and to understand and evaluate how health systems function and how they can be strengthened, including how to develop and implement policies and programmes in ways that strengthen, rather than undermine, health systems
HIV Prevention	To address the challenges of the South African HIV epidemic and associated co-morbidities through a combination of biomedical, epidemiological and behavioural prevention, therapeutic and implementation science research agenda
Non-communicable Diseases	To formulate and apply an integrated programme of research and capacity development to improve the prevention, understanding, detection and management of NCDs, with a major focus on cardiovascular disease and metabolic disorders in South Africa
South African Cochrane Centre	To prepare and maintain Cochrane Reviews of the effects of healthcare interventions, and to promote access to and the use of best evidence in healthcare decision making within Africa
Violence, Injury and Peace	To improve the population's health status and quality of life through research and advocacy, aimed at promoting safety and peacefulness through the prevention of death, disability and suffering arising from violence and injury

Table 6 SAMRC extramural research units' purpose

EXTRAMURAL RESEARCH UNITS	
Unit	Purpose
Antibody Immunity	The SAMRC/NICD Antibody Immunity Research Unit conducts research on the development of new vaccines and new approaches to controlling infectious diseases. The Unit's research seeks to establish a deeper understanding of antibody responses to infection in order to design better vaccines for the African region which bears the largest burden of infectious disease. Key focus areas are identifying antibody correlates of vaccine protection; uncovering the genetic diversity in the African antibody repertoire and isolating and engineering antibodies for passive immunity
Antiviral Gene Therapy	Investigation by the AGTRU team is focused on countering viral infections that cause serious health problems in sub Saharan Africa. The long-term objectives of AGTRU are to advance gene therapy for treatment of viral infections, develop human capacity in the field through the training of young scientists, and to translate the unit's technologies into products. Research activities are generously supported by South African and International funding agencies. South African and international partnerships have been established, and these are an important contributor to the group's resource base. AGTRU is equipped as a modern molecular biology research laboratory and has expertise in a range of techniques. These are advanced methods of nucleic acid manipulation, gene transfer to mammalian cells, and use of lipoplex and recombinant viral vectors. AGTRU is set up to investigate efficacy of antiviral compounds <i>in vivo</i> in murine (e.g. HBV transgenic mice) and cell culture models of viral replication.
Bioinformatics Capacity Development	Build bioinformatics capacity in South Africa and across the African continent through research and innovation
Centre for the Study of Antimicrobial Resistance	The Centre for the Study of Antimicrobial Resistance (CAMRA) consists of a multi-disciplinary team of national and international experts focused on addressing specific aspects of bacterial multi-drug resistant pathogens, including tuberculosis. The unit key focus areas are to better understand the pathogenesis of drug resistance by studying pharmacokinetic mismatch i.e. drug gradients and its relationship to minimum inhibitory drug concentrations across lung cavities and bacterial abscesses/collections in TB and non-TB MDR infections; evaluate signal amplification methods as diagnostic tools to detect micro hetero-resistance (rare populations of drug resistant bacteria) in sputum, tracheal aspirates and blood compared to the site of disease i.e. lung parenchyma, cavities, abscesses/fluid collections in TB and non-TB MDR infections and to conduct preliminary studies to determine the levels and efficacy of adjunct inhaled antibiotics at the disease site in TB and MDR bacterial pneumonia, and to develop and test inhaled formulations for future animal and human studies.
Cardiometabolic Health	The Cardiometabolic Health Research Unit (CHRU) based at the Cape Peninsula University of Technology, Department of Biomedical Sciences, Faculty of Health & Wellness Sciences, provides a platform from which a team of researchers collaborate to provide an integrated research programme focusing on cardiometabolic traits (obesity, diabetes, hypertension, metabolic syndrome, and chronic kidney diseases): all with respect to inflammation, genetics, epigenetics, microbiome and oxidative mechanisms. The aim of the unit is to employ a holistic approach to investigate the context specific factors associated with diabetes and related cardiometabolic traits. Key focus areas are to generate population specific data of the pathophysiological derangements involved in the occurrence of diabetes and related complications; develop innovative approaches for risk stratification, prevent the progression to the disease stage among those at high risk, improve detection, and management among those with the disease through the development of population specific biomarkers; characterizing the possible role of emerging research fields (epigenetics, microbiome, etc) linking inflammation to diabetes mellitus and cardiometabolic traits and to build capacity to ensure that innovative research in Africa is conducted in Africa by Africans.
Child and Adolescent Lung Health	The MRC Unit on Child and Adolescent Health focuses on key health concerns affecting children and adolescents in South Africa and in Africa. A primary focus is on child lung health and the intersection of infection with emergence of chronic non-communicable diseases, addressing lung health from birth through adolescence. Studies focus on the epidemiology, aetiology and risk factors for acute and chronic lung disease and the impact of acute disease on child health and on development of chronic disease. Research encompasses a broad range of methodologies from epidemiology to clinical science to laboratory-based methods.

Centre for Health Economics and Decision Science-	The SAMRC/WITS Centre for Health Economics and Priority Setting Research Unit is an extramural unit which aims to undertake rigorous and comprehensive analytical work in order to provide evidence to guide priority setting for health in South Africa. By applying innovative priority setting approaches, the Unit aims to support evidence-based resource allocation decisions in a fair and equitable way under the proposed National Health Insurance (NHI). Key focus areas are to produce quantitative and qualitative evidence to inform resource allocation decisions and address policy challenges faced by decision-makers; apply novel economic approaches that account for multiple health sector objectives and health system constraints in South Africa; interrogate and perfect the processes for translating such economic evidence to decision-making; undertake cutting-edge health economics research that addresses a series of policy-relevant questions; develop context-specific priority setting approaches to improve South Africa's resource allocation decisions; build capacity on the application of economics approaches to priority setting in health; identify a set of health issues and associated interventions across the broad disease areas of maternal, new-born and child health (MNCH), non-communicable diseases (NCDs), and injuries in South Africa and to quantify the health, equity, and financial risk protection benefits of interventions selected in Objective 1, and to analyse their distributional consequences among the South African population.
Developmental Pathways for Health	To investigate genetic, physiological, psychosocial and lifestyle determinants of growth and development, risk of disease, and healthy ageing across the life course
Drug Discovery and Development	Establishment of a scientific infrastructure as well as capacity for drug discovery and development in the broad sense; Development of infrastructural and operational systems for new drug discovery and development; Attracting young South African and African scientists thereby contributing to transformation and capacity building; Providing career development opportunities for independent academic and/or research careers
Health Services to Systems	The research of the unit focuses on the mechanisms and processes through which health interventions become integrated into routine institutional environment ("real world settings"); and achieve sustainable coverage and impacts at scale.
Genomics of Brain Disorders Research Unit	The Genomics of Brain Disorders Research Unit is an Extramural Unit of the SAMRC based at Stellenbosch University. The unit aims to identify genomic biomarkers, using a systems biology approach, for a host of brain disorders (e.g. posttraumatic stress disorder, HIV associated neurocognitive disorders, fetal alcohol spectrum disorders, schizophrenia and psychosis spectrum disorders, and Parkinson's Disease) across the lifespans. Key focus areas are to apply multimodal genome and imaging technologies, together with a range of computational and statistical methods to facilitate more precise molecular signatures and characterization of genetically complex brain disorders, that will aid in guiding and tailoring their clinical management; establish a biorepository comprising a wide range of biological samples (e.g. DNA, RNA, skin, hair) collected through an ensemble of projects; create disease-specific neuronal cell lines in order to elucidate molecular and cellular processes related to the biology of brain disorders and to use the unit's expertise and critical mass to train a new generation of clinician and basic neuroscientists versed in genomic, other 'omic', and neuroimaging techniques.
Herbal Drugs	The main aim of the Unit is to conduct technologically advanced scientific research, and to make basic knowledge readily available to stakeholders, in order to promote the quality, safety and efficacy (QSE) of herbal medicines
HIV/TB Pathogenesis and Treatment	The purpose of the MRC HIV-TB Pathogenesis and Treatment Research Unit at CAPRISA is to undertake research to reduce morbidity and mortality from HIV-TB co-infection. This Unit addresses the leading cause of death in HIV infected patients, in a setting where HIV infection is the largest single contributor to South Africa's mortality burden and is among the highest research priorities in the SAMRC Strategic Plan.
Hypertension and Cardiovascular Disease	The central aim of the Extra Mural Unit on Hypertension and Cardiovascular Disease is to directly contribute to new clinical and epidemiological knowledge within the field of <i>hypertension development in black populations</i> in order to facilitate more effective awareness, treatment and prevention programs in the future
Immunology of Infectious Disease	To be a relevant and comprehensive multi-disciplinary team in a centre of excellence embracing basic and applied research, improving capacity, teaching and training in immunology of infectious diseases with a focus on TB and other important human infectious diseases
Maternal and Infant Health Care Strategies	To develop health strategies to improve the quality of care at primary and secondary care levels for mothers and infants by seeking saleable and sustainable solutions;

	thereby reducing maternal, perinatal and infant deaths
Microbial Water Quality Monitoring Centre	The Microbial water quality monitoring centre was established to be a hub for addressing the myriad of challenges in the water sector in the Eastern Cape Province (ECP) within the overarching aim of the research initiatives which is <i>“evaluating some key emerging challenges in microbial water quality and safety as a vehicle for skills and capacity development in water science especially amongst the previously disadvantages demographic groups in the Province”</i>
Molecular Mycobacteriology	To investigate aspects of the physiology and metabolism of M. tuberculosis of relevance to TB drug discovery, drug resistance, mycobacterial persistence and TB transmission
Precision and Genomic Medicine	The SAMRC/UCT Precision and Genomic Medicine Research Unit (PGMRU) is interested in using the exciting developments in the field of genomic sciences to investigate human biodiversity. This quest will contribute to a more proactive and preventive approach to health. Tied closely to this quest is the expansion of research to cover genome-wide investigations pertaining to the burden of disease in Southern Africa and to assess the impact of genomic variants on the health of the indigenous populations of Africa. Its key focus areas are to identify the ancestral groupings detectable in the current populations of Southern Africa, and to compare the genetic lineages/composition of populations of Southern Africa, with those already characterised in Africa, and elsewhere in the world; identify low frequency, possibly functional genetic variants, in the populations of Southern Africa; collate allele frequencies of sample data in order to identify sub-populations and to relate this to susceptibility and resistance to disease; provide a genetic dimension towards understanding the heterogeneity of practically all disorders, and the biology underlying this heterogeneity, towards devising improved clinical management; create an attractive research environment comprising well characterised disease resources; establish a state of the art health ecosystem which has a knowledgeable subject/patient/client at its centre and to enhance public understanding of genetics and genomics.
Respiratory and Meningeal Pathogens Research Unit	To study the causes, management and prevention of pneumonia and meningitis infections with expanded initial focus on pneumococcal disease, to other common bacterial and viral causes of childhood morbidity and mortality, including Group B streptococcus (GBS), rotavirus, Respiratory Syncytial Virus (RSV), pertussis, and influenza virus as well as to integrate clinical, epidemiological and basic science research to improve the health of Africans through vaccines
Precision Prevention and Novel Drug Targets for HIV-Associated Cancers (PPNDTHAC)	The Precision Prevention and Novel Drug Targets for HIV-Associated Cancers (PPNDTHAC) Unit is an SAMRC extramural unit, based at the University of Pretoria, which seeks to map the landscape of cervical and oesophageal cancer in order to understand the underlying causes of these cancers and to discover targets for the development of novel and more effective targeted therapeutics. Key focus areas are to identify and comprehensively characterise the potential common and country-specific risk factors underlying high cervical and oesophageal cancer incidences and mortality rates in South Africa, Tanzania and BRICS countries; define the RNA and splicing landscape of cervical and oesophageal cancers to determine whether splicing and expression alterations differ between and among populations from Low-Middle Income Countries (LMICs) and developed countries by comparing patient samples from South Africa with sequencing data from the US and UK. We will also investigate the effect of licenced drugs, natural products and novel synthetic compounds on these perturbations on cancer cell lines using RNA-sequencing; investigate the therapeutic potential of micro-RNAs and their mRNA and pathway targets in HIV-associated cervical and oesophageal cancer. Regulation of these potential biomarkers could be altered by natural products derived from South African medicinal plants and these could be used for targeted therapy by affecting the entire molecular networks and biological pathways involved in cervical and oesophageal cancer and to conduct pre-clinical and clinical trials of natural products to investigate the anti-tumour and anti-metastasis efficacy using patient derived organoids (PDOs) or patient derived xenografts (PDXs) grown in mice. Grafts will be developed for cervical and oesophageal cancers. This will be a new way to study how well natural and synthetic compounds could be developed as new cancer drugs.
Risk & Resilience in Mental Disorders	The Unit’s mission is to undertake research that encompasses the promotion of clinical research and the translation of basic science into clinical research, to improve diagnosis, prevention and management of mental disorders in South Africa with a focus on risk and resilience factors, as they apply to key conditions in the local context as well as well as the translation of clinical evidence into population-level interventions to improve mental health through primary health care and community initiatives that can be applied in diverse settings across the country and the continent, with a focus on priority illnesses given the local burden of disease.

Rural Public Health and Health Transitions	To better understand the dynamics of health, population and social transitions in rural South Africa and southern Africa to mount a more effective public health, public sector and social response
Stem Cell Research and Therapy	The main focus of this unit is on adult stem cells, namely hematopoietic stem cells (HSCs) and mesenchymal stem cells (MSCs). Our first objective is to use HSCs to generate an HIV-resistant immune system. Although our initial objective has been to use a lentiviral-based approach to knock down CCR5, one of the two HIV co-receptors, we are identifying other potential host targets. We have established a colony of immunodeficient mice at the UP Biomedical Research Centre at Onderstepoort, and will use these mice to generate “humanized mice” i.e. mice which have a human immune system, and which therefore can be infected with HIV, to study not only the efficacy of our gene therapy approaches, but also settings such as HIV and TB co-infection. We hope to use this project to initiate a gene therapy platform, from which gene therapy projects for other diseases will follow.
Wound and Keloid Scarring (WAKS) Translational	The Wound and Keloid Scarring (WAKS) Translational Research Unit is extramural unit based at the University of Cape Town. The unit seeks to optimise tissue culture models for dermal wound healing after injury. Key focus areas are to optimize tissue culture models for cutaneous wound healing with focus on keloid scarring, in order to provide a closer representation of the human skin scarring condition (three-dimensional so called ‘scar in a jar’ models) compared to the current 2D culturing methods of dermal fibroblasts; investigate the effects of specific candidate genes of interest in cutaneous healing through a series of knockdown/neutralizing/peptide addition of the gene/s in both cell and tissue specific keloid models (organoid, organotypic and organ culture models of keloid scars); investigate biomechanics of wound healing initially through the development of a computational model that would examine the biomechanical responses of normal skin, fibrotic scars and keloids followed and validated by in vitro 3D models; show the effects of specific pharmaceutical compounds on target genes implicated in keloid scarring in relevant models. If the compounds are safe and effective, they can potentially be considered for use and evaluation in future clinical human keloid scar trials and to conduct human trials in order to identify biomarkers (genes and proteins) that are highly dysregulated within specific sites in sequential temporal keloid scar biopsies using a focused approach with laser capture microscopy of lesional site-specific wound and keloid scar tissue.

Table 7: SAMRC Platform and specialist scientific services purpose

PLATFORM and SPECIALIST SCIENTIFIC SERVICES		
Unit	Unit Director	Purpose
Biomedical Research and Innovation Platform (BRIP)	J Louw	The Biomedical Research and Innovation Platform (BRIP), is the leading biomedical innovation platform with state-of-the-art equipment and more than 20 years of experience in the field of histology, image analysis, immunocytochemistry, molecular biology and tissue/cell culture systems. BRIP has been leading research into medical innovations for the screening, prevention and treatment of diabetes, cardiovascular disease and obesity. BRIP’s capacity development programme trains the next generation of scientists in the field of Biotechnology with an emphasis on young black scientists from historically under resourced institutions
Primate Unit and Delft Animal Centre	C Chauke	PUDAC is a research support platform that provides the infrastructure to conduct pre-clinical research; scientific and technological research support; the capacity to maintain and utilise animal models (nonhuman primates, horses and rodents) and biomedical research (collaborative and contract). The platform also contributes to research by generating new in-house research to define and validate animal models; laboratory animal science and technology; providing skilled laboratory scientific and technological support. PUDAC’s research is important since this platform provides
SAMRC Office of AIDS & TB Research	F Abdullah	The Office of TB/HIV funds and co-ordinates research in HIV/TB with the aim of optimising research funding in these areas.

SAMRC Office of Malaria Research	R Maharaj	The Office of Malaria Research, funds and facilitates research to understand the social and biological impact of the disease as well as to develop malaria control programmes
TB Platform	M Van Der Walt	The TB Platform oversees the execution of the National TB prevalence survey

SAMRC Research Centres

The SAMRC's Research Centres, based at universities and institutions across the country, identify and gather information on leading health concerns in South Africa like Cancer, HIV, Tuberculosis (TB) and Malaria.

Each Centre is staffed with experts in the same field as the projects they direct. Many of these experts also work with external specialists on the research and funding of international projects. Over the years, the SAMRC's research has provided vital information that is used by the Department of Health and government for health planning and assessing progress towards realising government's objectives.

Table 8: SAMRC Research Centres

SAMRC Research Centres			
Centre	Purpose	Unit	Unit Director
Cancer Centres	The explicit aim of CRCs will be to integrate cancer-related research programmes in fields such as basic laboratory and clinical sciences, prevention and control methodologies, and population-based studies, into a transdisciplinary cancer research centre that may straddle departmental and institutional boundaries	Common Epithelial Cancer Research Centre	P Ruff
		Gynaecological Cancer Research Centre	L Denny
Malaria Centres	The SAMRC established three Malaria Research Centres of Excellence to assist the National Department of Health in reaching their goal of malaria elimination by 2018. Although South Africa has met the World Health Organisation (WHO) criteria for targeting elimination, there are still gaps in our knowledge that need to be filled before we can achieve elimination.	MRC Office of Malaria Research (MOMR)	R Maharaj
		University of Cape Town Collaborating Centre for Optimising Antimalarial Therapy in South Africa (C COAT)	K Barnes
		University of Pretoria Centre for Sustainable Malaria Control (UPCSMC)	C de Jager
		Wits University Collaborating Centre for Multi-Disciplinary Research on Malaria	M Coetzee
HIV/TB Centres	The purpose of the TB HIV Collaborating Centres is to create a national resource with investigators and sites in order to foster, stimulate, and/or expand basic, translational, behavioural and applied research that will advance scientific discovery and engage South African researchers working collaboratively in the areas of TB and HIV/AIDS	Advancing Care and treatment (ACT) for TB/HIV	G Churchyard
		Centre for Tuberculosis Biomarker-Targeted Intervention	M Hatherill
		Clinical and Community HIV-Tuberculosis Research Collaborating Centre	G Meintjes
		Centre for Basic and Translational Human TB Research	A Steyn
		TB Free through Research and Innovation	K Dheda

		Tuberculosis Collaborating Centre for Child Health (TB-CHILD)	M Nicol
		Tygerberg SAMRC Collaborating Centre for HIV Laboratory Research	W Preiser
		Soweto Matlosana SAMRC Collaborating Centre for HIV/AIDS and TB	N Martinson
		Wits Clinical HIV/TB Research Unit, WITS Health Consortium	I Sanne
		Wits RHI Collaborating Centre for HIV/AIDS	H Rees

PART C – MEASURING SAMRC PERFORMANCE

4. Institutional Programme Performance Information

Programme 1: Administration

Purpose: Administer health research effectively and efficiently

Programme 1 - Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output Indicator	Audited/Actual Performance			Estimated performance	MTEF Period		
			2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
1.1. To ensure good governance, effective administration and compliance with government regulations	Clean audit opinion	1.1.1 A clean audit opinion on the SAMRC from the Auditor-General	Unqualified	Clean Audit	Clean Audit	Clean Audit	Clean Audit	Clean Audit	Clean Audit
1.2 To promote the organisation's administrative efficiency to maximise the funds available for research	Efficient expenditure of government allocated budget	1.2.1 Percentage of the government allocated SAMRC budget spent on administration	19%	20%	20%	20%	20%	20%	20%

Programme 1 - Indicators and Quarterly Targets

Output indicators	Annual Target	Quarterly targets			
		1 st	2 nd	3 rd	4 th
1.1.1 A clean audit opinion on the SAMRC from the Auditor-General	Clean Audit				Clean Audit
1.2.1 Percentage of the government allocated SAMRC budget spent on administration	20%	20%	20%	20%	20%

Programme Resource Considerations

Budget Allocation for Programme 1 (R'000)

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
	Actual Outcome	Actual Outcome	Actual Outcome	Budget Estimates	Budget Estimates	Budget Estimates	Budget Estimates
Economic Classification of Budget							
Compensation of Employees	82 638	77 103	77 744	82 408	87 350	92 591	98 147
Goods and Services	106 758	133 953	117 741	111 592	121 185	129 437	145 016
Total	189 396	211 056	195 485	194 000	208 535	222 028	243 163

Programme 2: Core Research

Purpose: Lead the generation of new knowledge

Programme 2 – Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output Indicator	Audited/Actual Performance			Estimated performance	MTEF Period			Outer Year
			2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
2.1. To produce and promote scientific excellence and the reputation of South African health research	Published journal articles, book chapters and books	2.1.1 Number of accepted and published journal articles, book chapters and books by SAMRC affiliated and/or funded authors	865	936	800	800	750	700	700	600
	Published journal articles by SAMRC grant-holders	2.1.2 Number of accepted and published journal articles by SAMRC grant-holders with acknowledgement of the SAMRC	197	196	214	200	200	180	180	170

2.2	To provide leadership in the generation of new knowledge in health	Published journal articles with the first or last author	2.2.1. Number of accepted and published journal articles where the first and/or last author is affiliated to the SAMRC	490	538	550	500	450	420	300	255
2.3	To provide funding for the conduct of health research	Research grants awarded	2.3.1 Number of research grants awarded by the SAMRC	168	176	186	130	140	150	160	170

Programme 2 – Indicators and Quarterly Targets

Output indicators	Annual Target	Quarterly targets			
		1 st	2 nd	3 rd	4 th
2.1.1 Number of accepted and published journal articles, book chapters and books by SAMRC affiliated and/or funded authors	800	200	220	170	210
2.1.2 Number of accepted and published journal articles by SAMRC grant-holders with acknowledgement of the SAMRC	200	50	60	40	50
2.2.1 Number of accepted and published journal articles where the first and/or last author is affiliated to the SAMRC	500	100	110	150	140
2.3.1 Number of research grants awarded by the SAMRC	130				130

Programme Resource Considerations

Budget Allocation for Programme 2 (R'000)

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
	Actual Outcome	Actual Outcome	Actual Outcome	Budget Estimates	Budget Estimates	Budget Estimates	Budget Estimates
Economic Classification of Budget							
Compensation of Employees	187 042	237 639	247 712	262 575	278 330	295 030	312 732
Goods and Services	355 630	401 599	439 409	376 020	405 924	392 069	430 874
Total	542 672	639 238	687 121	638 595	684 254	687 099	743 606

Programme 3: Innovation and Technology

Purpose: Support, through funding and other mechanisms, technology development and implementation, translation of research into policy and practice, and innovations in health and technology delivery to improve health

Programme 3 – Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output Indicator	Audited/Actual Performance			Estimated performance	MTEF Period			Outer Year
			2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
3.1 To support the development of new or improved innovations aimed at improving health and targeting priority health research areas of focus	Innovation projects and platforms funded by the SAMRC	3.1.1 Number of new innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	NEW	NEW	NEW	4	4	4	4	4
		3.1.2 Number of ongoing innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	NEW	NEW	NEW	30	30	30	30	30
3.2 To develop new or improved innovations aimed at improving health priority research areas of focus	Innovation disclosures made through SAMRC funding support	3.2.1 Number of innovation disclosures made by the SAMRC intramural research and innovation	NEW	NEW	NEW	1	1	1	1	1

Programme 3 – Indicators and Quarterly Targets

Output indicators	Annual Target	Quarterly targets			
		1 st	2 nd	3 rd	4 th
3.1.1 Number of new innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	4				4
3.1.2 Number of ongoing innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	30				30
3.2.1 Number of innovation disclosures made by the SAMRC intramural research and innovation	1				1

Programme Resource Considerations

Budget Allocation for Programme 3 (R'000)

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
	Actual Outcome	Actual Outcome	Actual Outcome	Budget Estimates	Budget Estimates	Budget Estimates	Budget Estimates
Economic Classification of Budget							
Compensation of Employees	30 424	40 719	43 731	46 355	49 136	52 084	55 209
Goods and Services	206 157	214 948	204 613	155 585	225 561	236 311	257 282
Total	236 581	255 667	248 344	201 940	274 697	288 395	312 491

Programme 4: Capacity Development

Purpose: Build human capacity for the long-term sustainability of the South African health research

Programme 4 – Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output Indicator	Audited/Actual Performance			Estimated performance	MTEF Period			Outer Year
			2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
4.1 To enhance the long-term sustainability of health research in South Africa by providing funding for the next generation of health researchers	SAMRC bursaries and/or scholarships and/or fellowships provided for MSc, PhD, Postdocs and Early Career Scientists	4.1.1 Number of awards (scholarships, fellowships and grants) by the SAMRC for MSc, PhD, Postdocs and Early Career Scientists	155	141	106	110	130	140	150	130
	Female students and/or Early Career Scientists receiving SAMRC funding	4.1.2 Number of awards by the SAMRC to female MSc, PhD, Postdocs and Early Career Scientists	New	New	New	80	90	100	110	108
	African South African citizens and/or permanent residents students receiving SAMRC funding	4.1.3 Number of awards by the SAMRC to Black South African citizens and permanent resident MSc, PhD, Postdocs and Early Career Scientists classified as African	New	New	New	90	100	105	110	90
	SAMRC scholarships/ fellowships provided for MSc, PhD, Postdocs and Early Career Scientists at HDIs	4.1.4 Number of awards by the SAMRC to MSc, PhD, Postdocs and Early Career Scientists from historically disadvantaged institutions (HDIs)	New	New	New	60	70	75	80	83

	MSc and PhD students graduated or completed	4.1.5 Number of MSc and PhD students graduated or completed	80	47	65	70	75	80	85	50
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Programme 4 - Indicators and Quarterly Targets

Output indicators	Annual Target	Quarterly targets			
		1 st	2 nd	3 rd	4 th
4.1.1 Number of awards (scholarships, fellowships and grants) by the SAMRC for MSc, PhD, Postdocs and Early Career Scientists	110				110
4.1.2 Number of awards by the SAMRC to female MSc, PhD, Postdocs and Early Career Scientists	80				80
4.1.3 Number of awards by the SAMRC to Black South African citizens and permanent resident MSc, PhD, Postdocs and Early Career Scientists classified as African	90				90
4.1.4 Number of awards by the SAMRC to MSc, PhD, Postdocs and Early Career Scientists from historically disadvantaged institutions (HDIs)	60				60
4.1.5 Number of MSc and PhD students graduated or completed	70				70

Programme Resource Considerations

Budget Allocation for Programme 4 (R'000)

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
	Actual Outcome	Actual Outcome	Actual Outcome	Budget Estimates	Budget Estimates	Budget Estimates	Budget Estimates
Economic Classification of Budget							
Compensation of Employees	3 806	3 607	3 538	4 684	4 035	4 270	4520
Goods and Services	56 778	64 076	58 232	93 537	77 695	84 236	91 412
Total	60 584	67 683	61 770	98 221	81 730	88 506	95 932

Programme 5: Research Translation

Purpose: Translate new knowledge into policies and practices to improve health

Programme 5 - Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output Indicator	Audited/Actual Performance			Estimated performance	MTEF Period			Outer Year
			2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
5.1 To facilitate the translation of SAMRC research findings into public understanding, policy and practice	Local or international policies, reports and guidelines that reference SAMRC research	5.1.1 Number of local or international policies, reports and guidelines that reference SAMRC research	9	6	7	5	5	5	6	6
	Reports and guidelines produced by SAMRC intramural authors	5.1.2 Number of reports and guidelines (co)produced by the SAMRC intramural researchers	NEW	NEW	NEW	5	5	5	7	9
	SAMRC researchers invited/serving on national and international bodies/committees	5.1.3 Number of national or international bodies/committees SAMRC employees serving on national or international bodies/committees	NEW	NEW	NEW	50	50	50	50	50
	SAMRC supported conferences, seminars and CPD workshops	5.1.4 Number of conferences, seminars and CPD workshops supported by the SAMRC	NEW	NEW	NEW	10	10	10	10	10

Programme 5 - Indicators and Quarterly Targets

Output indicators	Annual Target	Quarterly targets			
		1 st	2 nd	3 rd	4 th
5.1.1 Number of local or international policies, reports and guidelines that reference SAMRC research	5		2		3
5.1.2 Number of reports and guidelines produced by the SAMRC intramural researchers	5		2		3
5.1.3 Number of national or international bodies/committees SAMRC employees serving on national or international bodies/committees	50				50
5.1.4 Number of conferences, seminars and CPD workshops supported by the SAMRC	10				10

Programme Resource Considerations

Budget Allocation for Programme 5 (R'000)

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
	Actual Outcome	Actual Outcome	Actual Outcome	Budget Estimates	Budget Estimates	Budget Estimates	Budget Estimates
Economic Classification of Budget							
Compensation of Employees	-	-	-	-	1 100	1 155	1 213
Goods and Services	-	-	-	-	1 200	1 260	1 323
Total	-	-	-	-	2 300	2 415	2 536

5. Planned performance over the five-year planning period

Implementation Plan for Biostatistics Capacity Development in Collaboration with Hasselt University

Masters scholarships

Five South African Masters students will be selected to enrol for the UHasselt Master in Statistics program via training combination with distance learning and face-to-face lecturing in 2020. The duration of the program is two years. Upon successful completion and satisfactory performance in the first year of the training program, students will be selected to complete the second year of the program at UHasselt. The criteria for selection of students and the minimum requirements for entry into the program will be jointly decided on with UHasselt and the SAMRC. In view of the performance of South African students previously enrolled in the distance learning program, we have identified that local support in terms of additional in-person lectures and tutorial sessions, may increase the chances of students successfully completing the modules. We therefore propose the following:

- a) Statistics Faculty from within South Africa and its affiliated institutes, with specific expertise in each course module, will be selected by Hasselt University, to deliver additional training for the students in the first year of the program. Our previous experience has shown that full distance learning has proven ineffective. To ensure that the South African faculty are well acquainted with the course material and the examination procedure, we propose short-term training at Hasselt University.
- b) The examinations for the first year of the program will take place at a central examination venue in South Africa.
- c) The research project, to be taken in the second year, will be undertaken with a Co-supervisor from South Africa. This project will focus on real data analysis and methodological area that is highly relevant in the South African or Sub-Saharan African context.

Doctoral scholarships

Between 5-10 South Africans will be awarded scholarships to embark on their studies at Hasselt University. There are two possible alternatives: 1) *Sandwich or Joint PhDs with a local co-promoter and main promoter at Hasselt University*: The scholarship will include a daily allowance and operational funds for a maximum period of twelve months in total (split over four years) in Hasselt University, Belgium. 2) *Full time study at Hasselt University*: The scholarship will cover living expenses, operational costs and tuition fees for a maximum period of four years in Belgium.

Extramural Research Units

The SAMRC has grown the diversity of the extramural research units (EMU). In the next five years, SAMR hope to increase numbers of EMUs, particularly female led.

Collaborating Centres for Cancer

Two collaborating centres for cancer have been funded for 3 years. Progress has been made and the 5-year strategic plan should take into account the value of further investment. Discussions with CANSSA should be considered to leverage limited funds.

TB/HIV Collaborating Centres

These collaborating centres have been very productive and have formed the basis of the TB report programme and demonstrate the value to a clinical network around diseases. May consider rolling

this out for other diseases.

Request for Application (RFAs) for research priorities identified through the strategic planning process and National Priorities.

Driving Transformation and Capacity Development.

Both in intramural domain and extramural domain drive process for achieving this with strategic partners like National Research Foundation (NRF), Public Health Enhancement Fund (PHEF), Department of Higher Education (DHE).

Funding and Budget Related Issue in key areas of savings and reprioritisation

Support and Administration processes is consistently been assessed to improve their efficiency and cost effectiveness. The main aim is to ensure that the SAMRC has divisions that can adequately render professional, cost effective, administrative support to the core business (research) of the SAMRC. In the 2015/16 to 2019/2020 strategic plan, SAMRC targeted 25% spend of the government allocated grant on administration, but the actual spend was 16% during the 2018/2019 financial year end. In line with the strategic objective, this reduction in administration spend reflect administrations efficiency put in place to maximize funds available for the core function (research)

In early 2013, the SAMRC and National Institutes of Health, USA (NIH) entered into a Memorandum of Understanding (MOU) with the intent to:

- Establish or expand long-term relations between scientists from South Africa and the United States, in order to perform high-quality biomedical and behavioural health research;
- Build long-term collaborations in biomedical and behavioural health science between the NIH Institutes and South African universities and other institutions; and
- Explore and support consultation, collaboration and research projects and activities in specific fields of mutual interest.

The funding allocated to this collaboration (SAMRC-NIH) was around R243m over a 5-year period while NIH committed around R255m. SAMRC continued with this collaboration, with the latest MOU signed for the financial 2019/2020. In order to fund the SAMRC's contribution to this joint initiative the SAMRC has secured R135m (excl. VAT) over the MTEF period as follows:

2019/2020 R45m
2020/2021 R45m
2021/2022 R45m

6. Programme Resource Considerations

Statement of financial performance	Budget	Audited Outcome	Budget	Audited Outcome	Budget	Audited Outcome	Budget estimate	Approved budget	Outcome/ Budget Average %	Average growth rate (%)	Expenditure/ total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/ total: Average (%)
R thousand	2016/17	2017/18	2017/18	2017/18	2018/19	2018/19	2019/20	2019/20	2016/17-2019/20	2016/17-2019/20	2016/17-2019/20	2020/21	2021/22	2022/23	2019/20 - 2022/23	2019/20 - 2022/23
Revenue																
Tax revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-tax revenue	356,154	403,921	372,762	512,203	418,386	564,706	424,281	424,281	121.2%	1.7%	42.3%	500,107	528,430	618,874	13.4%	41.2%
Sale of goods and services other than capital assets of which:																
Administrative fees	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sales by market establishment	322,954	366,443	342,414	467,078	387,436	517,258	395,812	395,812	120.6%	2.6%	38.8%	476,057	503,175	591,489	14.3%	39.1%
Other sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other non-tax revenue	33,200	37,478	30,348	45,125	30,950	47,448	28,469	28,469	128.9%	-8.8%	3.5%	24,050	25,255	27,385	-1.3%	2.1%
Interest, dividends and rent on bond	22,300	35,267	23,950	42,271	25,950	34,546	24,600	24,600	141.2%	-11.3%	3.0%	23,350	21,367	23,385	-1.7%	1.9%
Transfers received	657,590	657,590	614,961	614,961	624,826	624,826	686,686	686,686	100.0%	1.5%	57.7%	715,058	751,086	778,854	4.3%	58.8%
Tax benefit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Outside shareholders Interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total revenue	1,013,744	1,061,511	987,723	1,127,164	1,043,215	1,189,534	1,110,927	1,110,927	108.0%	1.5%	100.0%	1,215,165	1,270,496	1,397,728	8.0%	100.0%
Expense																
Current expenses	954,987	948,477	976,185	1,098,082	1,070,580	1,111,219	1,042,330	1,042,330	103.0%	3.2%	92.7%	1,158,248	1,193,690	1,301,521	7.7%	92.6%
Compensation of employees	334,638	303,910	337,545	359,068	361,957	372,725	381,516	396,022	101.1%	9.2%	31.6%	418,851	443,975	470,608	5.9%	34.2%
Goods and services	599,849	625,335	617,640	716,924	687,123	723,590	638,083	623,577	105.8%	-0.1%	59.4%	716,105	726,026	806,463	9.0%	56.6%
Depreciation	20,500	19,013	21,000	21,340	21,500	14,591	22,731	22,731	90.6%	6.1%	1.7%	23,291	23,668	24,450	2.5%	1.9%
Interest, dividends and rent on bond	-	219	-	750	-	313	-	-	-	-100.0%	0.0%	-	-	-	-	-
Interest	-	219	-	750	-	313	-	-	-	-100.0%	0.0%	-	-	-	-	-
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rent on land	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transfers and subsidies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tax payment	80,757	80,756	75,439	75,562	76,733	81,501	90,426	90,426	101.5%	3.8%	7.3%	93,268	92,774	96,207	2.1%	7.4%
Outside shareholders Interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total expenses	1,035,744	1,029,233	1,051,624	1,173,644	1,147,313	1,192,720	1,132,756	1,132,756	103.7%	3.2%	100.0%	1,251,516	1,286,443	1,397,728	7.3%	100.0%
Surplus/(Deficit)	(22,000)	32,278	(63,901)	(46,480)	(104,098)	(3,186)	(21,829)	(21,829)	-187.8%			(36,351)	(6,947)	-	-100.0%	

7. Key Risks which may affect achievement of the outcomes

Key outcome	Key risk context	Key mitigation measures
Programme 1: Administer health research effectively and efficiently in South Africa		
To ensure good governance, effective administration and compliance with government regulations	Potential non-compliance to legal and regulatory requirements as well as policies and procedures	<ul style="list-style-type: none"> • Policies, guidelines and SOPs • Legal & Compliance Services • Occupational Health and Safety support
	Sustainability of the Defined Benefit (DB) fund	<ul style="list-style-type: none"> • Freeze on increase in DB pensionable salary in excess of annual increase
	Lack of a broader SAMRC business continuity programme	<ul style="list-style-type: none"> • Environmental monitoring devices • Back-up generators and UPS • IT Disaster Recovery Policy and Plan • Daily back-ups
To promote the organisation's administrative efficiency to maximise the funds available for research	Inefficiencies within various corporate processes	<ul style="list-style-type: none"> • Management oversight • Online helpdesk services and technology • Contracts for major procurement spends • Ongoing engagement with stakeholders • Policies, processes, SOPs • Career Progression and Advancement process

Key outcome	Key risk context	Key mitigation measures
		<ul style="list-style-type: none"> • Roll out of leadership interventions, coaching and mentoring programmes • Organizational performance monitoring
	Insufficient facility management, including movable and immovable assets	<ul style="list-style-type: none"> • Asset management and verification • Capital project refurbishment • Preventative maintenance plans • Revamping office space in Ridge Road building
	Loss / theft of data	<ul style="list-style-type: none"> • Layer 7 firewall implemented • Segmented networks • Monitoring of internet traffic • Periodic penetration tests
	Relationship between SAMRC and organised labour	<ul style="list-style-type: none"> • Standing monthly meetings with Union • Strengthened industrial relations within SAMRC • Union recognition agreement
Programme 2: Lead the generation of new knowledge		
To produce and disseminate new scientific findings and knowledge on health	Poor research governance	<ul style="list-style-type: none"> • Established research integrity office • Research policies, guidelines and SOPs • Human and animal ethics committees established • Oversight over the conduct of human and animal research
	Inferior quality of research output of extramural research units	<ul style="list-style-type: none"> • Approved EMU management strategy • Scientific Advisory Committees • Contracts and guidelines • Performance reviews of EMUs
To promote scientific excellence and the reputation of South African health research	Inefficiencies within various research processes	<ul style="list-style-type: none"> • Management oversight • Ongoing engagement with stakeholders • Policies, processes, SOPs
	Maintaining research integrity	<ul style="list-style-type: none"> • External and internal quality review process • Scientific advisory committees • Research Integrity Office • Quality review process for externally funded projects
To provide leadership in the generation of new knowledge in health	Transformation and diversity challenges	<ul style="list-style-type: none"> • EE Strategy and Plan • Appointment of Intra-Mural Unit Deputy Directors • Diversity intervention initiatives / programs • Succession planning
To provide funding for the conduct of health research	Inability to sustainably grow funding	<ul style="list-style-type: none"> • Dedicated on-going investigation for further international funding opportunities
Programme 3: Support, through funding and other mechanisms, technology development and implementation, translation of research into policy and practice, and innovations in health and technology delivery to improve health		

Key outcome	Key risk context	Key mitigation measures
To provide funding for the conduct of health research	Ineffective support for, collaborative partnerships, platforms and technology development	<ul style="list-style-type: none"> • IP Policy and strategy • Grant awarding processes and SOP • Spending model with long term return defined • Dedicated on-going investigation for further international funding opportunities
	Lack of further development and commercialization of (a) SAMRC-owned and (b) SAMRC-funded innovations	<ul style="list-style-type: none"> • IP Policy and strategy • Commercialisation plan • External partnerships assistance with commercialization and progressing innovations to market
Programme 4: Build human capacity for the long-term sustainability of the South African health research		
To enhance the long-term sustainability of health research in South Africa by providing funding for the next generation of health researchers	Limited research capacity	<ul style="list-style-type: none"> • Capacity building strategy for supporting the development of HDI research scientist • Scholarship and bursary programs • Strategic relations with institutions for collaboration and accessing researchers to build clinical research capacity
Programme 5: Translate new knowledge into policies and practices to improve health		
To facilitate the translation of SAMRC research findings into public understanding, policy and practice	Lack of research impact on strengthened policy and practice	<ul style="list-style-type: none"> • Spending model with long term return defined • Dedicated on-going investigation for further international funding opportunities • Workshops on research translation

8. Public Entity Description:

Name of the Public Entity	Mandate	Outcomes	Current Annual Budget (R thousand)
South African Medical Research Council	To improve the health of the country's population, through research, development and technology transfer	Refer to sections 7.1 to 7.5 of this strategic plan	R597 101 (excl VAT)

9. Infra-structure Projects

No.	Project name and description	Programme	Output	Project start date	Project completion date	Total Estimated cost	Current year Expenditure
1	Replace air-conditioning in all	Programme 1	Upgraded air-conditioning			800,000.00	
2	Internal renovations and construction - Cape Town Building	Programme 1	Well maintained buildings			13 000 000	
3	Relocation and installation of generators Delft & Medicina	Programme 1	Well maintained buildings			1,000,000	
4	Solar power plant – Medicina and NIVS	Programme 1	Well maintained buildings			18,000,000	
5	Furniture for renovated areas	Programme 1	Well maintained buildings			800,000	
6	Minor building works	Programme 1	Well maintained buildings			1,000,000.00	
7	Replacement of boundary fence - Delft	Programme 1	Well maintained buildings			4,000,000	
8	Construction of coral cages for non- human primates	Programme 2	facility for research subjects			5,000,000	
9	Pretoria - new roof installation and collection of rain water	Programme 1	Well maintained buildings			1,800,000	
10	Pretoria - internal renovations - 1st floor west and toilets	Programme 1	Well maintained buildings			8,500,000	
11	Internal renovations - Ridge Road	Programme 1	Well maintained buildings			10,000,000	
12	Firewalls: <ul style="list-style-type: none"> • Firewall (CTN) • Firewall (Ridge Road) 	Programme 1	Secure communication channels			1,700,000.00	

No.	Project name and description	Programme	Output	Project start date	Project completion date	Total Estimated cost	Current year Expenditure
13	Switches: <ul style="list-style-type: none"> Switch replacement - Ridge Road (Cisco 9200) Switch replacement - JHB (Cisco 9200) Switch replacement - PTA (Cisco 9500) Switch replacement - Delft (Cisco 9200) 	Programme 1	Secure communication channels			1,300,000.00	
14	SAN storage and servers: <ul style="list-style-type: none"> Parow - VM Cluster (Purchased 2014) PTA - VM Cluster Ridge Road - SAN EMC NS120 (MRC-53322 Purchased 2010) 	Programme 1	Secure communication channels			1,900,000.00	
15	Backup Storage and Veeam Licencing: <ul style="list-style-type: none"> DataDomain VE 20Tb – KZN DataDomain VE 20Tb - PTA 	Programme 1	Secure communication channels			1,700,000	

PART D – TECHNICAL INDICATOR DESCRIPTIONS

Programme 1 - Administration

Indicator Title	1.1.1 A clean audit opinion on the SAMRC from the Auditor-General
Definition	Audit opinion expressed by auditor general
Source of Data	Documented Evidence: Annual Report; Auditor General's Report
Method of Calculation/Assessment	No calculation required
Means of Verification	Final audit report determines the validity of the performance
Assumptions	All records and evidence presented to the Auditors are reliable and valid
Calculation Type	Non-cumulative
Reporting Cycle	Annual
Desired Performance	To achieve a clean audit opinion from the Auditor General
Indicator Responsibility	CFO

Indicator Title	1.2.1 Percentage of the government allocated SAMRC budget spent on administration
Definition	Percentage of baseline (government) funding that is spent on salaries and operations of all corporate administrative functions.
Source of Data	Documented Evidence: Financial Records
Method of Calculation/Assessment	Count
Means of Verification	Management reports received from Finance
Assumptions	The financial records at the SAMRC is reliable and valid
Calculation Type	Non-cumulative
Reporting Cycle	Quarterly
Desired Performance	20%
Indicator Responsibility	CFO

Programme 2 - Core Research

Indicator Title	2.1.1 Number of accepted and published journal articles, book chapters and books by SAMRC affiliated and/or funded authors
Definition	Total number of accredited publications in which one of the authors has a listed affiliation as the SAMRC, usually because the author is an SAMRC intra- or extramural unit, funded through baseline or contract funds. Publications are full length papers, short communications, letters, editorials and commentaries. Publications are regarded as accredited when they are published in journals
Source of Data	KIMS
Method of Calculation/Assessment	Count the number of published journal articles, book chapters and books with an author declaring employment by, affiliation to an entity of, or funding support from SAMRC
Means of Verification	<ul style="list-style-type: none"> • Submissions received by the due date will be included in the relevant quarter. • The earliest publication date on the publication is the date used for allocation of publication to a specific quarter of the financial year. • Each publication can only be counted once.

	<ul style="list-style-type: none"> • In cases where the article is published electronically, e.g. e-pub; published ahead of print, and there is a print version of the same article to follow, the earliest date of publication will be considered for counting. • In cases where the researcher is both the author/editor of the book but also published a chapter in a book, it can be counted either as a chapter or a book, and not
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Quarterly
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	CROO/VP: Research/Executive Scientist for Research Strategy

Indicator Title	2.1.2 Number of accepted and published journal articles by SAMRC grant-holders with acknowledgement of the SAMRC
Definition	Total number of accredited publications that mention SAMRC funding. Publications are full length papers, short communications, letters, editorials and commentaries. Publications are regarded as accredited when they are published in journals. These publications must mention the SAMRC by name in the acknowledgement section of the journal article. The authors may or may not be affiliated with the SAMRC
Source of Data	KIMS
Method of Calculation/Assessment	Count the number of published journal articles by SAMRC grant-holders during the reporting period, with an acknowledgement of SAMRC
Means of Verification	<ul style="list-style-type: none"> • Submissions received by the due date will be included in the relevant quarter. • The earliest publication date on the publication is the date used for allocation of publication to a specific quarter of the financial year. • Each publication can only be counted once. • In cases where the article is published electronically, e.g. e-pub; published ahead of print, and there is a print version of the same article to follow, the earliest date of publication will be considered for counting. • In cases where the researcher is both the author/editor of the book but also published a chapter in a book, it can be counted either as a chapter or a book, and not both.
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Quarterly
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	CROO/VP: Research/Executive Scientist for Research Strategy

Indicator Title	2.2.1 Number of accepted and published journal articles where the first and/or last author is affiliated to the SAMRC
Definition	Total number of publications (original articles, editorials, commentaries or letters) where the first author has a listed affiliation as the SAMRC, usually because the author is in an SAMRC intra or extramural research unit, funded through baseline or contract funds
Source of Data	KIMS
Method of Calculation/Assessment	Count the number of published journal articles with the first or last author declaring employment by, affiliation to an entity of, or funding support from SAMRC
Means of Verification	<ul style="list-style-type: none"> • Submissions received by the due date will be included in the relevant quarter. • The earliest publication date on the publication is the date used for allocation of publication to a specific quarter of the financial year. • Each publication can only be counted once. • In cases where the article is published electronically, e.g. e-pub; published ahead of print, and there is a print version of the same article to follow, the earliest date of publication will be considered for counting. • In cases where the researcher is both the author/editor of the book but also published a chapter in a book, it can be counted either as a chapter or a book, and not
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Quarterly
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	CROO/VP: Research/Executive Scientist for Research Strategy

Indicator Title	2.3.1 Number of research grants awarded by the SAMRC
Definition	Total number of Research grants awarded to academic institutions by the SAMRC
Source of Data	Departmental records
Method of Calculation/Assessment	Count the number of research grants awarded by the SAMRC
Means of Verification	EMC submission and approval; Letter/signed contract of renewal/new award and spreadsheet from SIR, SHIP, Office for AIDS, TB and Malaria Research, SAAVI and Flagship. Team validate the source documents to check whether the new/renewal research grant falls within the reporting period
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Quarterly
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	Director: GIPD

Programme 3 - Innovation and Technology

Indicator Title	3.1.1 Number of new innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions
Definition	Total number of Projects funded by the SAMRC that are aimed at developing new diagnostics, vaccines, etc.
Source of Data	Unit records
Method of Calculation/Assessment	Count the number of innovations developed or co-developed by SAMRC intramural research units
Means of Verification	<ul style="list-style-type: none"> EMC approval (sign off) to indicate the number of innovation and technology projects that have been funded by the SAMRC to develop new diagnostics, devices, vaccines and therapeutics during the reporting period signed contracts and proof of payment
Assumptions	Evidence presented to AGSA is valid and reliable
Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	Exec Director: GIPD

Indicator Title	3.1.2 Number of ongoing innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions
Definition	Total number of research partnerships awarded by the SAMRC
Source of Data	Departmental records
Method of Calculation/Assessment	Count of the number of individual research grants awarded by the SAMRC to researchers during the financial year. These are new awards rather than renewals and relate to Self-Initiated Grants, awards made by SHIP and the Offices for AIDS, TB and Malaria Research, and SAAVI; and Flagship awards
Means of Verification	<ul style="list-style-type: none"> EMC approval (sign off) to indicate the number of innovation and technology projects that have been funded by the SAMRC to develop new diagnostics, devices, vaccines and therapeutics during the reporting period signed contracts and proof of payment
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	Exec Director: GIPD

Indicator Title	3.2.1 Number of innovation disclosures made by the SAMRC intramural research and innovation
Definition	Promote the improvement of health and quality of life in the country through innovation, technology development

	and transfer (invention disclosures, patents filed and licenses concluded)
Source of Data	Departmental records
Method of Calculation/Assessment	Count of the number of new diagnostics, devices, vaccines and therapeutics progressed to the next stage of development during the reporting period (examples of Innovations are vaccines; drug models; molecules, etc.)
Means of Verification	Evidence of the number of disclosures made
Assumptions	Evidence presented to AGSA is valid and reliable
Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	Exec Director: GIPD

Programme 4 - Capacity Development

Indicator Title	4.1.1 Number of awards (scholarships, fellowships and grants) by the SAMRC for MSc, PhD, Postdocs and Early Career Scientists
Definition	Total number of total or part scholarships/ fellowships and grants funded by the SAMRC for post-graduate study at masters, doctoral and post-doctoral levels
Source of Data	RCD records
Method of Calculation/Assessment	Count of the number of scholarships/fellowships/grants funded by the SAMRC to enhance sustainability of health research in South Africa
Means of Verification	<ul style="list-style-type: none"> • EMC submission and approval (sign off) to indicate the number of scholars funded • signed contracts and proof of payment • list of declined awards to verify that those scholars were not included in the list submitted to SPMO
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	VP: Research Management

Indicator Title	4.1.2 Number of awards by the SAMRC to female MSc, PhD, Postdocs and Early Career Scientists
Definition	Total number of total or part awards by the SAMRC to female recipients for post-graduate study at masters, and doctoral levels
Source of Data	RCD records
Method of Calculation/Assessment	Count of the number of grants/scholarships/fellowships awarded to female recipients by the SAMRC
Means of Verification	<ul style="list-style-type: none"> • EMC submission and approval (sign off) to indicate the number of female scholars funded • signed contracts and proof of payment • list of declined awards to verify that those scholars were not included in the list submitted to SPMO
Assumptions	The evidence presented to the auditors is reliable, relevant and valid

Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	VP: Research

Indicator Title	4.1.3 Number of awards by the SAMRC to Black South African citizens and permanent resident MSc, PhD, Postdocs and Early Career Scientists classified as African
Definition	Awards by the SAMRC to Black South African citizens and permanent resident MSc, PhD, Postdocs and Early Career Scientists classified as African
Source of Data	RCD records
Method of Calculation/Assessment	Count of the number of awards to African South African citizens and permanent resident students receiving SAMRC funding
Means of Verification	<ul style="list-style-type: none"> • EMC submission and approval (sign off) to indicate the number of scholars funded • signed contracts and proof of payment • list of declined awards to verify that those scholars were not included in the list submitted to SPMO
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	VP: Research

Indicator Title	4.1.4 Number of awards by the SAMRC to MSc, PhD, Postdocs and Early Career Scientists from historically disadvantaged institutions (HDIs)
Definition	Total number of scholarships/fellowships for students or SAMRC grant holders from previously disadvantaged institutions (HDIs)
Source of Data	RCD records
Method of Calculation/Assessment	Count of the number of scholarships/fellowships for students or SAMRC grant holders from previously disadvantaged institutions (HDIs)
Means of Verification	<ul style="list-style-type: none"> • EMC submission and approval (sign off) to indicate the number of scholars funded • signed contracts and proof of payment • list of declined awards to verify that those scholars were not included in the list submitted to SPMO
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	VP: Research

Indicator Title	4.1.5 Number of MSc and PhD students graduated or completed
Definition	Develop human capital within the organisation to ensure excellence in all areas of operation
Source of Data	RCD records
Method of Calculation/Assessment	Count the number of MSc and PhD students graduated or completed
Means of Verification	Documentary evidence received from the relevant academic institution or copy of certificate from graduate
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	VP: Research

Programme 5 - Research Translation

Indicator Title	5.1.1 Number of local or international policies, reports and guidelines that reference SAMRC research
Definition	Total number of local/international policies, reports and guidelines that have been influenced by SAMRC research
Source of Data	Unit records
Method of Calculation/Assessment	Count the number of local/international policies and guidelines that reference SAMRC research
Means of Verification	<ul style="list-style-type: none"> Units are required to have their updated publication lists and documentary evidence (publication / journal) uploaded to the SAMRC Homepage. All outputs must be verifiable for audit purposes. This indicator has external interdependencies hence the SPMO team having to physically search for the publications where the SAMRC is referenced.
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Bi-annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	VP: Research

Indicator Title	5.1.2 Number of reports and guidelines (co)produced by the SAMRC intramural researchers
Definition	Total number of reports and guidelines produced by SAMRC intramural researchers
Source of Data	Unit records/Internet search
Method of Calculation/Assessment	Count the number of reports and guidelines produced by authors within the SAMRC intramural research units
Means of Verification	<ul style="list-style-type: none"> Publications sourced by the due date will be included in the relevant quarter. The earliest publication date on the publication is the date used for allocation of publication to a specific quarter of the financial year.
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative

Reporting Cycle	Bi-annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	VP: Research

Indicator Title	5.1.3 Number of national or international bodies/ committees SAMRC employees serving on national or international bodies/committees
Definition	Total number of SAMRC intramural researchers who have been invited or is serving on national or international bodies or committees
Source of Data	Unit/HR records
Method of Calculation/Assessment	Count the number of SAMRC researchers contributing to understanding of research findings, guiding policy and service improvement processes, or influencing research funding, through serving as technical advisors, committee members, giving invited (non-conference) presentations at local, Provincial, National and global levels (UN bodies, including but not limited to WHO, UN Office on Drugs & Crime, and World Bank, major funders)
Means of Verification	Valid proof of membership
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	VP: Research

Indicator Title	5.1.4 Number of conferences, seminars and CPD workshops supported by the SAMRC
Definition	Total number of conferences, seminars and CPD workshops supported by the SAMRC
Source of Data	Unit/HR records
Method of Calculation/Assessment	Count the number of SAMRC seminars and CPD workshops which the SAMRC supported financially
Means of Verification	Proof of payment; evidence of CPD points allocated for attendance and participation
Assumptions	The evidence presented to the auditors is reliable, relevant and valid
Calculation Type	Cumulative
Reporting Cycle	Annual
Desired Performance	To achieve the target for the reporting period
Indicator Responsibility	VP: Research

ANNEXURES

Annexure A: Consolidated Indicators

Outcome	Outputs	Output Indicator	Annual Target
1.2. To ensure good governance, effective administration and compliance with government regulations	Clean audit opinion	1.1 A clean audit opinion on the SAMRC from the Auditor-General	Clean Audit
1.2 To promote the organisation's administrative efficiency to maximise the funds available for research	Efficient expenditure of government allocated budget	1.2 Percentage of the government allocated SAMRC budget spent on administration	20%
2.1. To produce and promote scientific excellence and the reputation of South African health research	Published journal articles, book chapters and books	2.1.1 Number of accepted and published journal articles, book chapters and books by SAMRC affiliated and funded authors	800
	Published journal articles by SAMRC grant-holders	2.1.2 Number of accepted and published journal articles by SAMRC grant-holders with acknowledgement of the SAMRC	200
2.2 To provide leadership in the generation of new knowledge in health	Published journal articles with the first or last author	2.2.1 Number of accepted and published journal articles where the first and/or last author is affiliated to the SAMRC	500
2.3 To provide funding for the conduct of health research	Research grants awarded	2.3.1 Number of research grants awarded by the SAMRC	130
3.1 To support the development of new or improved innovations aimed at improving health and targeting priority health research areas of focus	Innovation projects and platforms funded	3.1.1 Number of new innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	4
	Strategic partnerships initiated, implemented and/or renewed	3.1.2 Number of ongoing innovation and technology projects funded by the SAMRC aimed at developing, testing and/or implementing new or improved health solutions	30

3.2	To develop new or improved innovations aimed at improving health priority research areas of focus	Innovations developed through SAMRC funding support	3.2 Number of innovation disclosures made by the SAMRC intramural research and innovation	1
4.	To enhance the long-term sustainability of health research in South Africa by providing funding for the next generation of health researchers	SAMRC bursaries and/or scholarships and/or fellowships provided for MSc, PhD, Postdocs and Early Career Scientists	4.1 Number of awards (scholarships, fellowships and grants) by the SAMRC for MSc, PhD, Postdocs and Early Career Scientists	110
		Female students and/or Early Career Scientists receiving SAMRC funding	4.2 Number of awards by the SAMRC to female MSc, PhD, Postdocs and Early Career Scientists	80
		African South African citizens and/or permanent residents students receiving SAMRC funding	4.3 Number awards by the SAMRC to Black South African citizens and permanent resident MSc, PhD, Postdocs and Early Career Scientists classified as African	90
		SAMRC scholarships/ fellowships provided for MSc, PhD, Postdocs and Early Career Scientists at HDIs	4.4 Number of awards by the SAMRC to MSc, PhD, Postdocs and Early Career Scientists from historically disadvantaged institutions (HDIs)	60
		MSc and PhD students graduated or completed	4.5 Number of MSc and PhD students graduated or completed	70
5.	To facilitate the translation of SAMRC research findings into public understanding, policy and practice	Local or international policies, reports and guidelines that reference SAMRC research	5.1 Number of local or international policies, reports and guidelines that reference SAMRC research	5
		Reports and guidelines produced by SAMRC intramural authors	5.2 Number of reports and guidelines (co)produced by the SAMRC intramural researchers	5
			5.3 Number of national or international bodies/committees SAMRC employees serving on national or international bodies/committees	50
		SAMRC researchers invited/serving on national and international bodies/committees	5.4 Number of conferences, seminars and CPD workshops supported by the SAMRC	10

Annexure B – SAMRC’s Materiality and Significance Framework 2020/21

The proposed Materiality and Significance Framework for the SAMRC, in terms of the Treasury Regulation 28.3.1 and the National Treasury Practice Note on Applications under of Section 54 of the Public Finance Management Act (PFMA), is as follows –

Section 50: Fiduciary duties of accounting authorities:

1) The accounting authority for a public entity must –

PFMA Section	Quantitative [Amount]	Qualitative [Nature]
(c) on request, disclose to the executive authority responsible for that public entity or the legislature to which the public entity is accountable, all material facts, including those reasonably discoverable, which in any way may influence the decisions or action of the executive authority or that legislature;	Disclose all material facts.	The Board will disclose to the National Department of Health all material facts as requested and all material facts not requested, including those reasonably discoverable, which in any way may influence the decisions or action of the National Department of Health, at the discretion of the Board.

Section 51: General responsibilities of accounting authorities:

1) An accounting authority for a public entity –

PFMA Section	Quantitative [Amount]	Qualitative [Nature]
(g) must promptly inform the National Treasury on any new entity which that public entity intends to establish or in the establishment of which it takes the initiative, and allow the National Treasury a reasonable time to submit its decision prior to formal establishment; and	Disclose all material facts timeously.	Full particulars to be disclosed to the Minister of Health for approval after which it is to be presented to Treasury.

Section 54: Information to be submitted by accounting authorities:

2) Before a Public Entity concludes any of the following transactions, the Accounting Authority for the Public Entity must promptly and in writing inform the relevant Treasury of the transaction and submit relevant particulars of the transaction to its Executive Authority for approval of the transaction:

PFMA Section	Quantitative [Amount]	Qualitative [Nature]
a) establishment of a company;	Any proposed establishment of a legal entity.	Full particulars to be disclosed to the Minister of Health and Minister of Finance (National Treasury) for approval (simultaneous submission).
b) participation in a significant partnership, trust, unincorporated joint venture or similar arrangement;	Qualifying transactions exceeds R15Mil (based on 2% of total average SAMRC assets, as at 31 March 2019). This includes research collaborative arrangements	
c) acquisition or disposal of a significant shareholding in a company;	Greater than 20% of shareholding.	
d) acquisition or disposal of a significant asset;	Qualifying transactions exceeds R15Mil (based on 2% of total average SAMRC assets, as at 31 March 2019). Including Financial Leases	Any asset that would increase or decrease the overall operational functions of the SAMRC, outside of the approved strategic plan and budget.
e) commencement or cessation of a significant business activity; and	Any activity not covered by the mandate / core business of the SAMRC and that exceeds the R15Mil transaction value (based	Full particulars to be disclosed to the Minister of Health and Minister of Finance (National

PFMA Section	Quantitative [Amount]	Qualitative [Nature]
	on 2% of total average SAMRC assets, as at 31 March 2019).	Treasury) for approval (simultaneous submission).
f) a significant change in the nature or extent of its interest in a significant partnership, trust, unincorporated joint venture or similar arrangement.	Qualifying transactions exceeds R15Mil (based on 2% of total SAMRC assets, as at 31 March 2019)	

Section 55: Annual report and financial statements

- 2) The annual report and financial statements referred to in subsection (1) (d) (“financial statements”) must:
- a) fairly present the state of affairs of the Public Entity, its business, its financial results, its performance against predetermined objectives and its financial position as at the end of the financial year concerned;
 - b) include particulars of—

PFMA Section	Quantitative [Amount]	Qualitative [Nature]
(i) any material losses through criminal conduct and any irregular expenditure and fruitless and wasteful expenditure that occurred during the financial year:	All instances	<ul style="list-style-type: none"> • Report quarterly to the Minister of Health. • Report annually in the Annual Financial Statements
(ii) any criminal or disciplinary steps taken as a consequence of such losses or irregular expenditure or fruitless and wasteful expenditure;		
(iii) any losses recovered or written off;		
(iv) any financial assistance received from the state and commitments made by the state on its behalf; and		
(v) any other matters that may be prescribed.	All instances, as prescribed	

Section 56: Assignment of powers and duties by accounting authorities

PFMA Section	Quantitative [Amount]	Qualitative [Nature]
1) The accounting authority for a public entity may— (a) In writing delegate any of the powers entrusted or delegated to the accounting authority in terms of this Ac, to an official in that public entity (b) Instruct an official in that public entity to perform any of the duties assigned to the accounting authority in terms of this Act.	Values excluded from the Delegation of Authority Framework Policy.	Instances that are excluded from the Delegation of Authority Framework Policy.
2) A delegation or instruction to an official in terms of subsection (1)— (c) Is subject to any limitations and conditions the accounting authority may impose; (d) May either be to a specific individual or to the holder of a specific post in the relevant public entity; and (e) Does not divest the accounting authority of the responsibility concerning the exercise of the delegated power or the performance of the assigned duty.	Values excluded from the Delegation of Authority Framework Policy.	Instances that are excluded from the Delegation of Authority Framework Policy.

Treasury Circulars and Guidelines related to Supply Chain Management

- 1) National Department of Health and National Treasury are to be notified of procurement transactions exceeding R15 Million;
- 2) Obtained prior written approval from National Treasury for variation amounts in excess of:
 - a. 20% or R20 Million (including applicable taxes) for construction related orders; and
 - b. 15% or R15 Million (including applicable taxes) for goods / service related orders

The materiality level mentioned above was calculated using the guidance practice note of the National Treasury. Using these parameters the SAMRC materiality level calculation outcomes were as follows:

Element	Max. % to be applied against R value	Unaudited Value at 31 March 2019	Max. Calculated Materiality & Significance Value
Total Assets (1%-2%)	2%	R770 852 959	R15 417 059

The SAMRC materiality and significance value will be R15 Million based on the percentage range of the total asset element and the significant fluctuations in the month-to-month total asset value. This is the most stable element, given the performance statement outcomes associated with the current economic climate challenges.

Annexure C: Acronyms

4IR	4 th Industrial Revolution	NIH	National Institute of Health
AIDS	Acquired Immuno Deficiency Syndrome	NIMS	National Injury & Mortality Surveillance
AU	African Union	NRF	National Research Foundation
BOD	Burden of Disease	NSDA	Negotiated Service Delivery Agreement
BRIC	Brazil, Russia, India and China	PhD	Philosophiae Doctor
CANSA	Cancer Association of South Africa	PFMA	Public Finance and Management Act
CEO	Chief Executive Office	PHEF	Public Health Enhancement Fund
CRA	Comparative Risk Assessment	POPI	Protection of Proprietary Information
CSIR	Council for Scientific and Industrial Research	PPIP	Perinatal Problem Identification Programme
DHE	Department of Higher Education	Prof	Professor
DR	Doctor	RFA	Request for Application
EE	Employment Equity	SACENDU	South African Community Epidemiology Network on Drug Use
EMU	Extramural Research Units	SADC	Southern African Development Community
HIV	Human Immunodeficiency Virus	SADHS	South African Demographic Health Survey
HR	Human Resource	SAMRC	South African Medical Research Council
HRMS	Human Resource Management System	SDG	Sustainable Developments Goals
HSRC	Human Sciences Research Council	SETI	Science, Engineering, & Technology Institution
HVTN	HIV Vaccine Trials Network	SHIP	Strategic Health Innovation Partnerships
MDG	Millennium Development Goals	SIR	Self-Initiated Research
MOU	Memorandum of Understanding	SP	Strategic Plan
Mr	Mister	TB	Tuberculosis
MTEF	Medium Term Expenditure Framework	UKMRC	United Kingdom Medical Research Council
MTSF	Medium-Term Strategic Framework	UHC	United Health Care
NCD	Non-Communicable Disease	UN	United Nations
NDoH	National Department of Health	US	United States
NDP	National Development Plan	USA	United States of America
NHI	National Health Insurance	VAT	Value Added Tax
NHRC	National Health Research Committee	WHO	World Health Organisation
NHSP	National Health Scholars Programme		