Annual Report
2018|2019

PRESENTATION TO THE PORTFOLIO COMMITTEE ON HEALTH

10 OCTOBER 2019

saMRC advancinglife

CELEBRATING 50 YEARS

SCOPE OF PRESENTATION

A. Governance
B. Financial information
C. Human Resources
D. Transformation
E. Annual Performance Plan 2018/19
F. Scientific Impact

GOVERNANCE

OVERVIEW

OUR **MANDATE**

The mandate of the South African Medical Research Council (SAMRC), in terms of the MRC Act 58, 1991 (as amended), is to improve the health and quality of life of South Africans. This needs to be realised through research, development and technology transfer.

IN **BRIEF**

The SAMRC was established in 1969 to conduct and fund health research and medical innovation. We focus on the top ten causes of death and disability and associated risk factors. We acquire the most accurate health information and provide policy makers with the tools to make informed healthcare policy decisions to enhance the quality of life for the people in South Africa.

VISION, MISSION & VALUES

OUR **VISION**

Building a healthy nation through research and innovation

OUR **MISSION**

To improve the nation's health and quality of life by conducting and funding relevant and responsive health research, development, innovation and research translation

OUR **VALUES**

Pioneering

We push the boundaries between the known and the unknown to further our knowledge of human existence.

Collaborating

We celebrate the capacity of collective minds towards a common goal.

Excellence

Distinction is in everything we do.

THE BOARD

PROF M SATHEKGE
BOARD CHAIRPERSON

PROF QUARRAISHA ABDOOL KARIM
BOARD VICE CHAIRPERSON

DR ZILUNGILE KWITSHANA

PROF JOHNNY MAHLANGU

MS NAFEESA KAWDA

PROF BRANDON SHAW

PROF ELIZABETH BUKUSI

DR PATRICIA HANEKOM

THE BOARD

PROF WILLIAM RAE

PROF LINDA SKAAL

PROF LINDIWE ZUNGU

DR RACHEL CHIKWAMBA

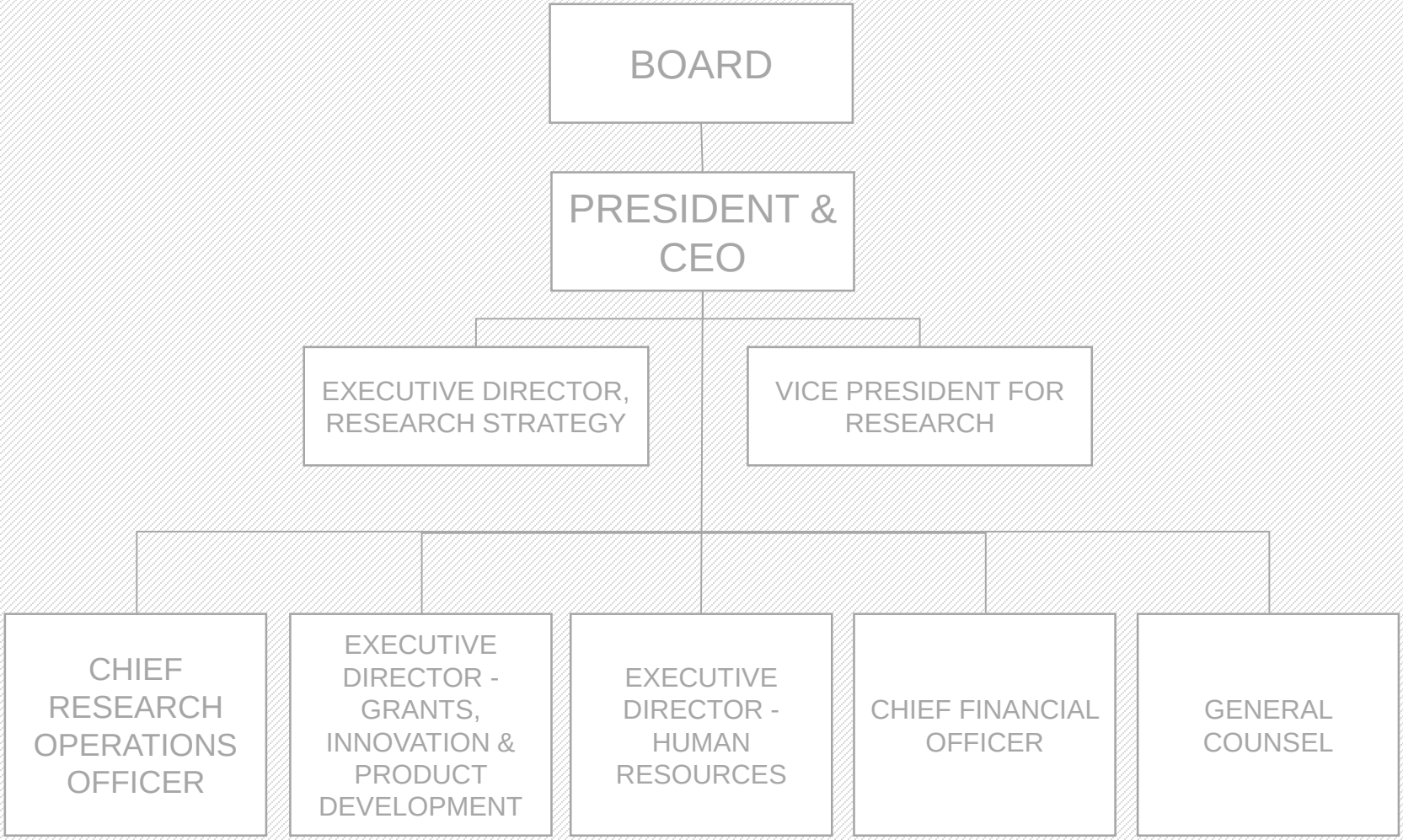
PROF MARK COTTON

PROF SITHEMBISO VELAPHI

PROF THOLENE SODI

PROF GLENDA GRAY
PRESIDENT & CEO

SAMRC ORGANOGRAM



FINANCIAL INFORMATION

STATEMENT OF FINANCIAL PERFORMANCE

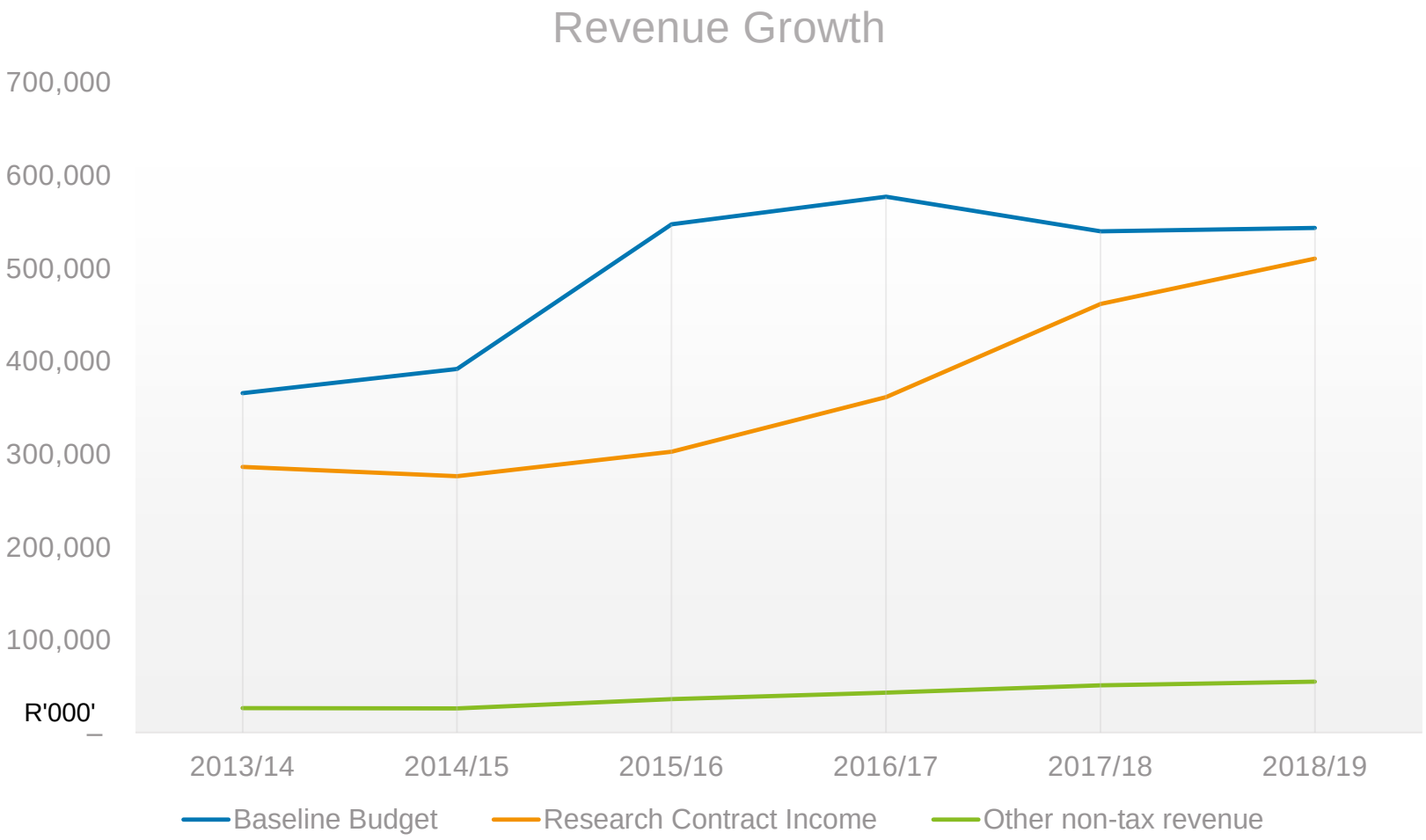
	2018/19	Variance	2017/18
Descriptions	**R**	**%**	**R**
Revenue	1,053,401,277	5.2%	1,000,857,070
Other income	19,942,395	141.2%	8,269,185
Operating expenses	-1,110,908,565	1.2%	-1,097,373,155
Operating deficit	-37,564,893	-57.4%	-88,246,900
Investment income	34,547,490	-18.3%	42,270,230
Fair value adjustments	143,986	-41.5%	246,091
Finance costs	-313,018	-58.3%	-749,868
(Deficit) Surplus for the year	-3,186,435		-46,480,447

STATEMENT OF FINANCIAL PERFORMANCE

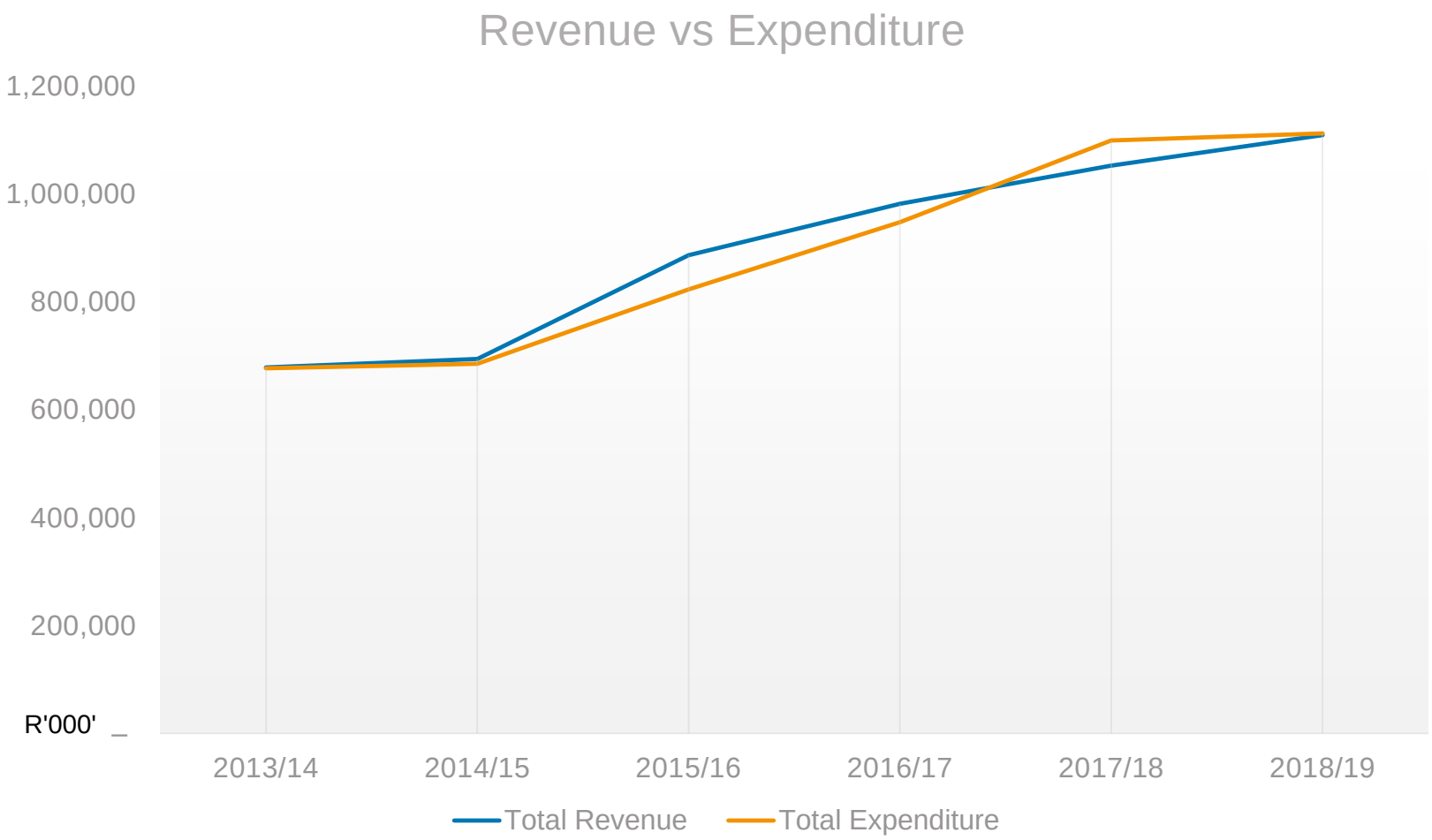
- Revenue increased by 5.36% to R1.1b
  - Baseline increased by 0.72%% to R543m
  - Contract income increased by 10.5%% to R510m
  - Investment income decreased by 18.3% to R34m
  - Value of new research contracts signed R293m

- Expenses increased by 1.2% to R1.1b
  - Collaborative research costs increased by 0.5% to R515m
  - Travel costs increased by 9.8% to R46m
  - Staff costs increased by 3.8% to R370m
  - Laboratory Operating Costs increase by 14.9% to R52m

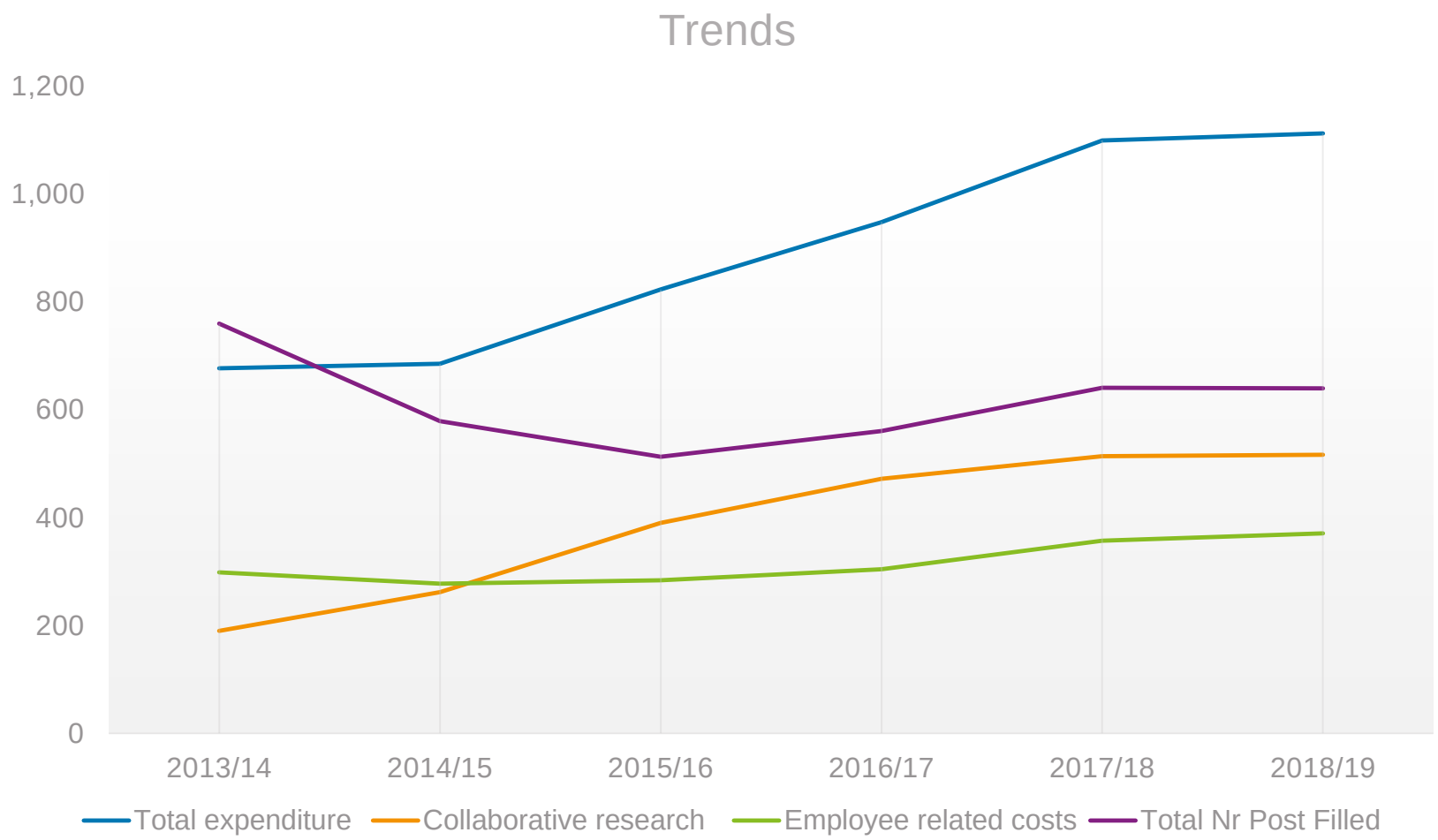
REVENUE GROWTH



REVENUE VS EXPENDITURE



TRENDS


Trends
1,200
1,000
800
600
400
200
0
2013/14
2014/15
2015/16
2016/17
2017/18
2018/19
Total expenditure
Collaborative research
Employee related costs
Total Nr Post Filled

EXPENDITURE PER STRATEGIC OBJECTIVE 2018/19

MRC STRATEGIC OBJECTIVES	SPENDING (R'000'M) YTD	YTD % SPLIT	MTEF ANNUAL TARGET % SPLIT
Research Intra Mural	444,482	40%	60%
Research Extra Mural	194,536	18%	
Innovation	234,914	21%	19%
Capacity Development	57,561	5%	4%
Corporate & Support	178,987	16%	17%

BUDGET TO ACTUAL SUMMARY

	Budget	Actual
	R	R
Total Revenue	1,079,921,840	1,108,035,148
Expenditure	-1,161,347,270	-1,111,221,583
Nett	-81,425,430	-3,186,435

VARIANCES TO BUDGET

- Original Budget: **R81m deficit**
- Final Actual: **R3m deficit**

Income	Original Budget (Rm)	Actual (Rm)	Difference (Rm)
Contract Income	488	437	51
Interest	37	34	3

Expenditure	Original Budget (Rm)	Actual (Rm)	Difference (Rm)
Collaborative Research	533	515	18
Personnel	402	370	32
Consulting	11	8	3
Infrastructure Costs	29	34	(5)
Repairs & Maintenance	18	12	6
Laboratory Operating Expenses	48	52	(4)

STATEMENT OF FINANCIAL POSITION

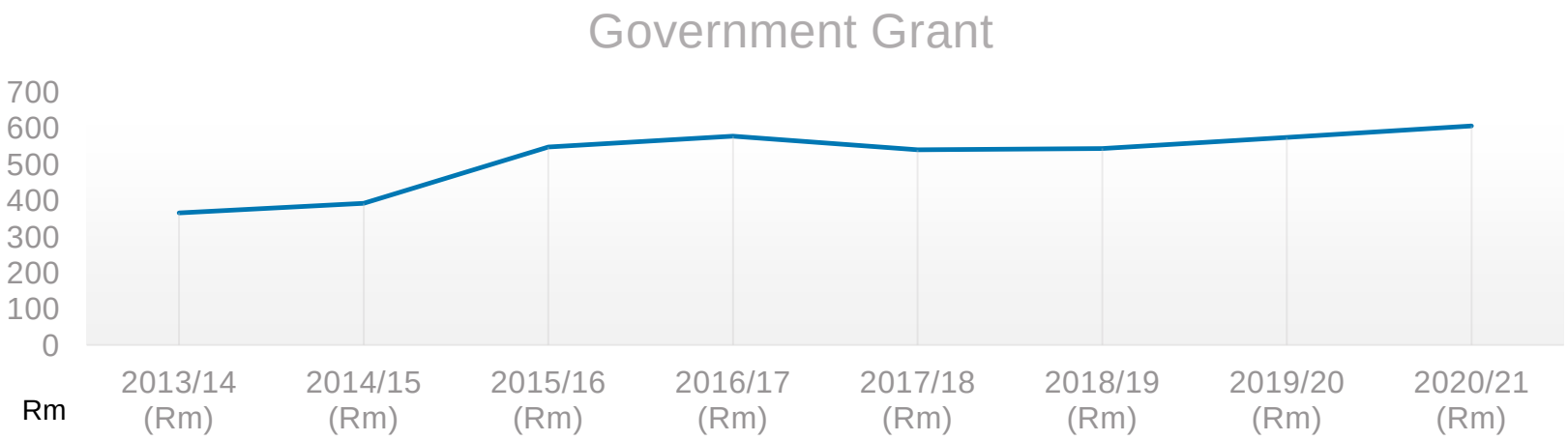
- Cumulative reserves decreased by 1% to R286m
- Total assets increased by 6% to R770m
- Cash & cash equivalents decreased by 5.7% to R463m
- Deferred income increased by 11% to R310m
- Pension Fund & Medical Aid Liability decrease by R13m to R8m

CASH FLOW STATEMENT

- Total Cash Received R1.10 bn
- Operating Cash generated positive R18m
- Investing Cash Flows negative R46m (Capital Expenditure)
- Nett decrease in cash and cash equivalents R27.8m

BASELINE INCOME PROJECTIONS

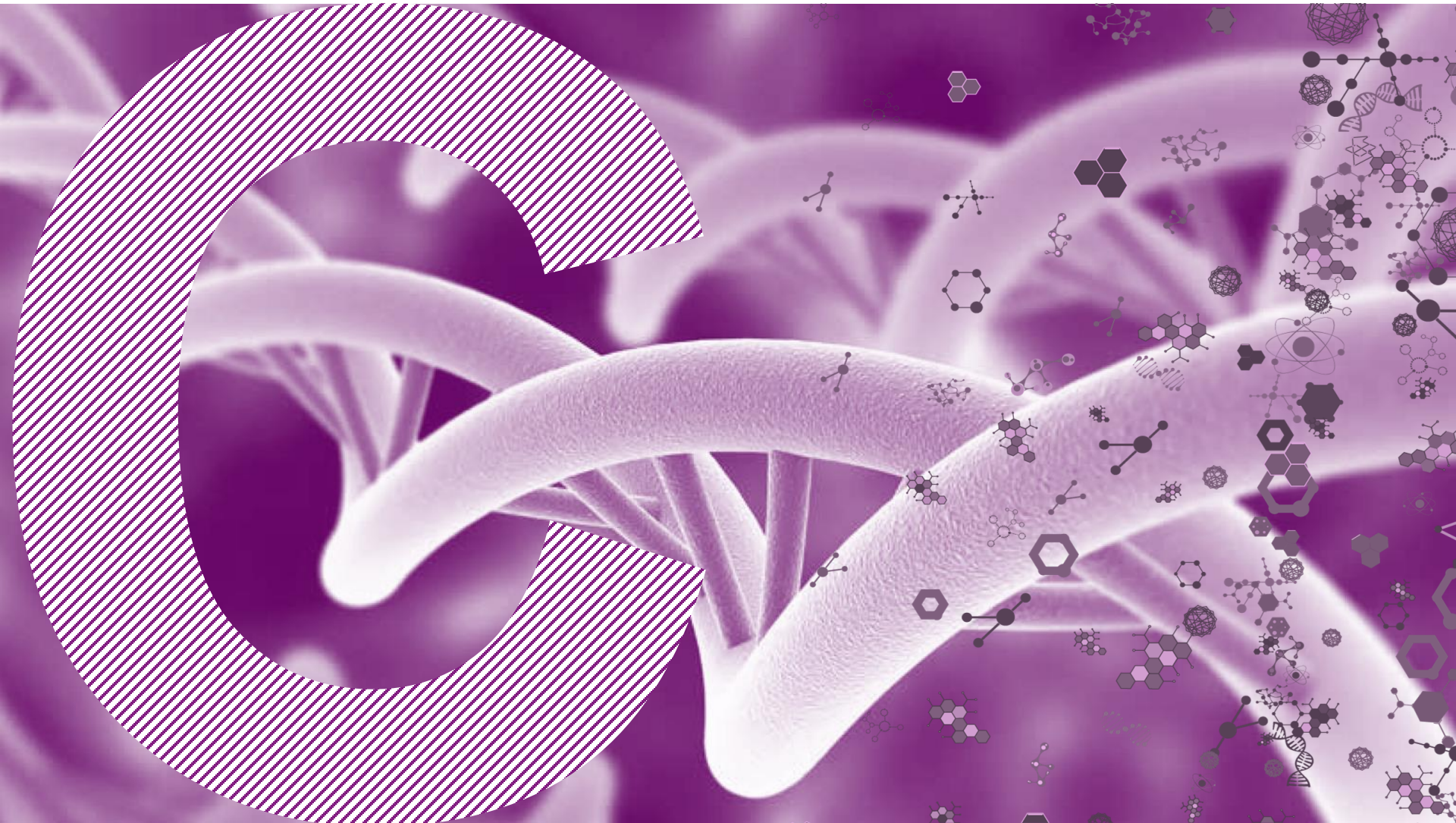
ANNUAL BASELINE ALLOCATION								
	2013/14 (Rm)	2014/15 (Rm)	2015/16 (Rm)	2016/17 (Rm)	2017/18 (Rm)	2018/19 (Rm)	2019/20 (Rm)	2020/21 (Rm)
Government grants & subsidies	365	392	547	577	539	543	574	605
Yr on Yr % Variance	-	7.2%	39.8%	5.4%	-6.5%	0.7%	5.6%	5.5%
Yr on Yr Amt Variance (Rm)	-	26	156	30	-37	4	30	32



IN SUMMARY

- For 2018/19 the SAMRC baseline allocation increased by 0.7% (R4m) and thereafter increases by CPI
- The continuation of the baseline grant together with the roll-over of the accumulated reserves of R286m, the SAMRC will continue to operate as a going concern
- Reserves will be used to fund research initiatives over the MTEF period however the real decline in the baseline funding will severely impact future research and limit the opportunity to attract leverage funding.

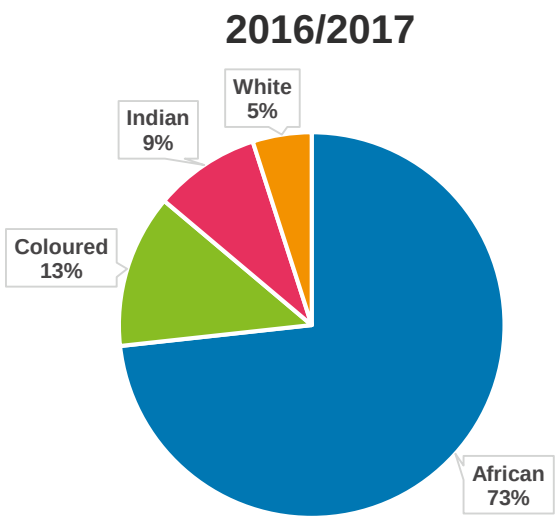
HUMAN RESOURCES

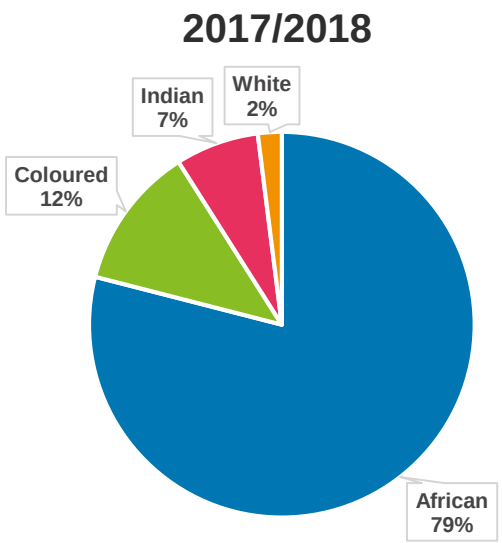


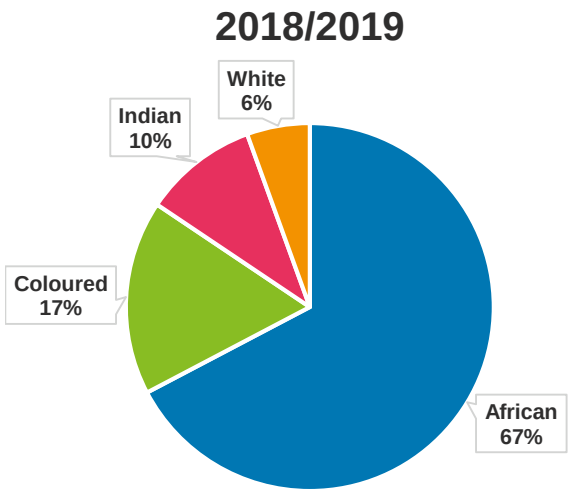
PEOPLE MANAGEMENT

- Transformation Forum
- Deputy Director Programme
- 5 Year Renewable Appointments for Unit Directors
- Diversity Awareness Training
- Coaching
- Disability Awareness Programme
- Succession Strategy for Executives – ‘Stepping aside’
- Employee Wellness

APPOINTMENTS BY RACE

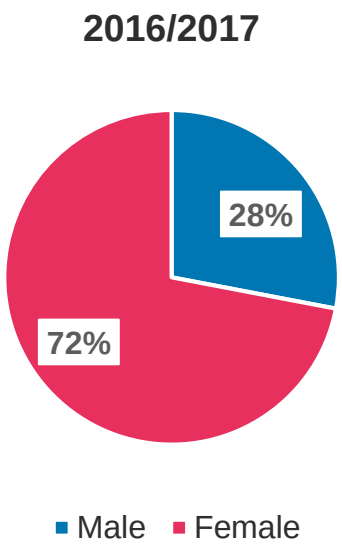


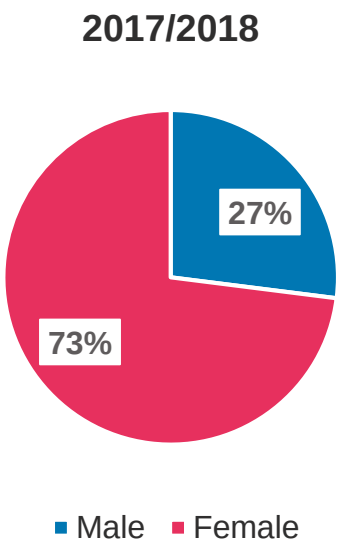


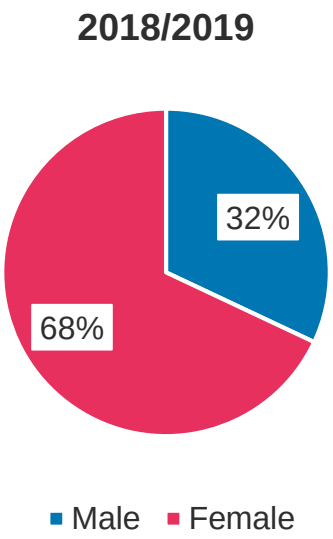


- Appointments aligned with EE targets for the SAMRC
- Regional targets impact appointments made

APPOINTMENTS BY GENDER



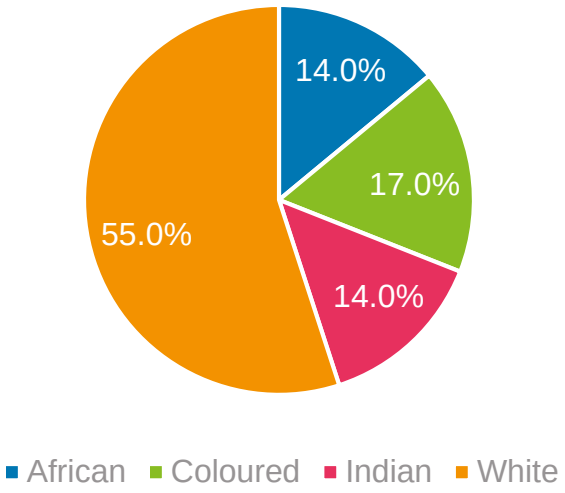




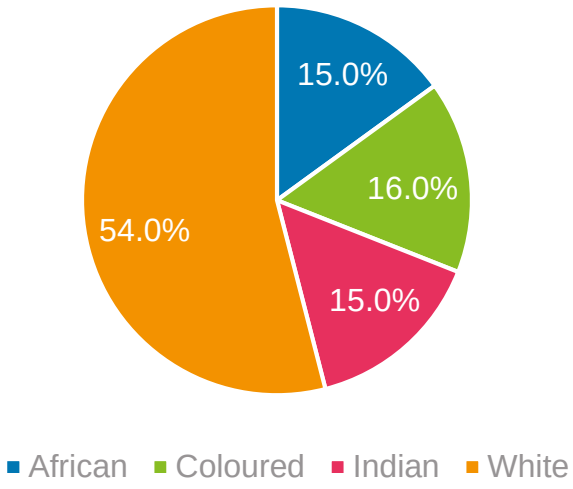
More male employees appointed in an attempt to balance the gender equity

SENIOR MANAGEMENT BY RACE

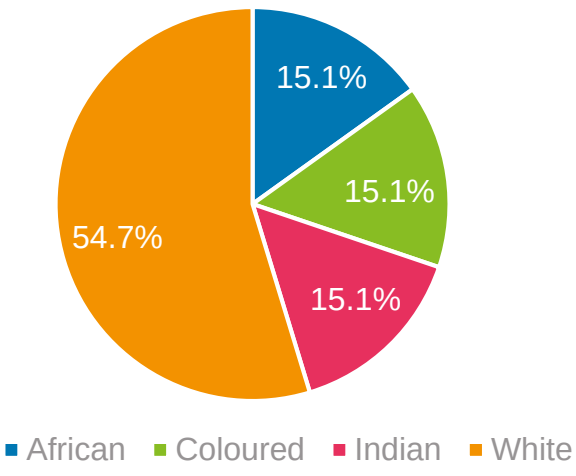
2016-2017



2017/2018



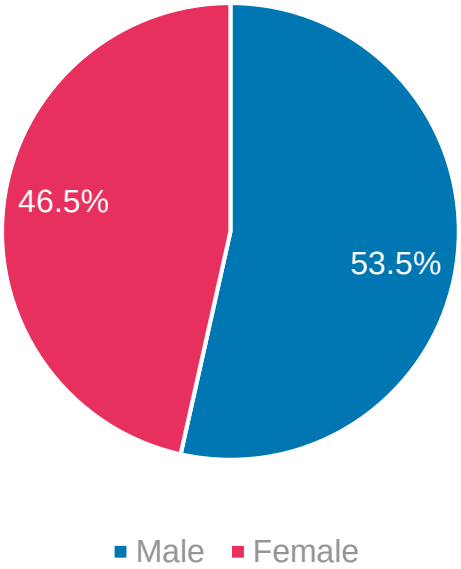
2018/2019



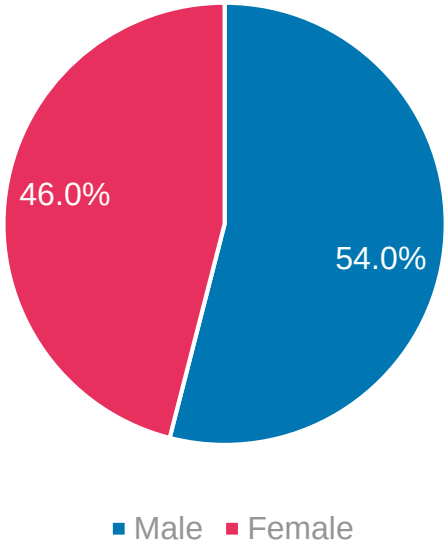
YEAR	WHITE	INDIAN	COLOURED	AFRICAN	TOTAL
2016-2017	32	8	10	8	58
2017-2018	29	8	9	8	54
2018-2019	29	8	8	8	53

SENIOR MANAGEMENT BY GENDER

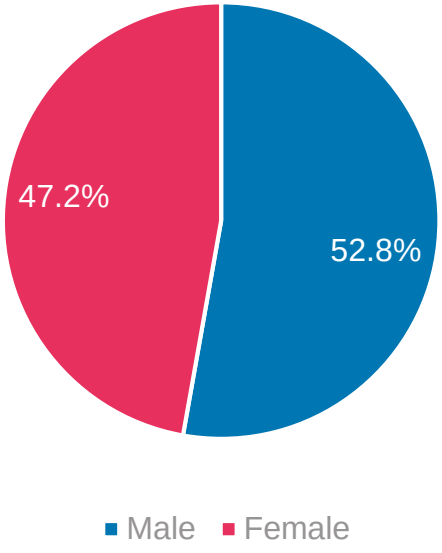
2016-2017



2017-2018



2018/2019



TRANSFORMATION

EXPANDED PORTFOLIO OF SCIENCE PROGRAMS

Phenomenal growth in number of EMUs

- Growth from 17 to 25 Units (1 Oct 2014 vs. 1 April 2019)
- Only 8 of 17 old Units are still in existence (3 of 8 were extended for another 5-year term)
- Closed down 9 Units that existed for more than 15 years (2 of 9 were re-established, with new unit names and mandates)
- Two more Units will be closed down in the next three (3) years:
  - Prof Brombacher's UCT Immunology of Infectious Diseases Research Unit (31 March 2021)
  - Prof Mizrahi's NHLS/UCT Molecular Mycobacteriology Research Unit (31 March 2022)
- **As at 1 April 2019, established 16 new EMUs between 2015 and 2019**
- **VIPRU transition from Intra- to Extramural Research Unit in progress**

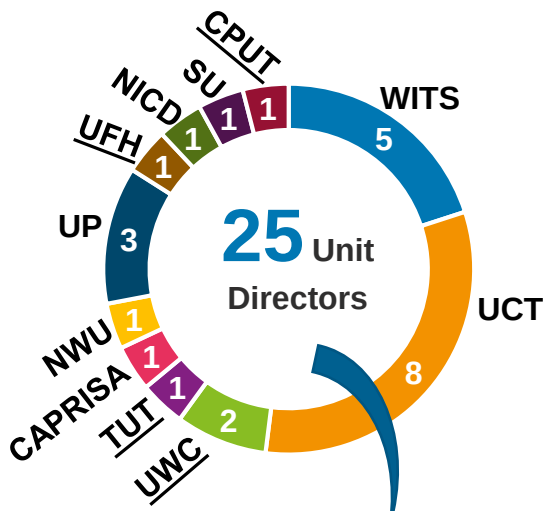
LAUNCH OF SEVEN NEW Research Units

- SAMRC/NICD/WITS Antibody Immunity (AIU) Research Unit: **Prof Lynn Morris**
- SAMRC/SUN Genomics of Brain Disorders Research Unit: **Prof Soraya Seedat**
- SAMRC/UCT Wound and Keloid Scarring Translational Research Unit: **Prof Nonhlanhla Khumalo**
- SAMRC/WITS Centre for Health Economics and Decision Science- PRICELESS SA: **Prof Karen Hofman**
- SAMRC/CPUT Cardiometabolic Health Research Unit: **Prof Tandi Matsha**
- SAMRC/UP Precision Prevention and Novel Drug Targets for HIV-Associated Cancers: **Prof Zodwa Dlamini**
- SAMRC/UCT Centre for the Study of Antimicrobial Resistance Research Unit: **Prof Keertan Dheda**

4 SEPTEMBER 2019, JOHANNESBURG

EMUS AS AT 1 APRIL 2019 - HOSTING INSTITUTIONS AND LEADERSHIP PROFILE

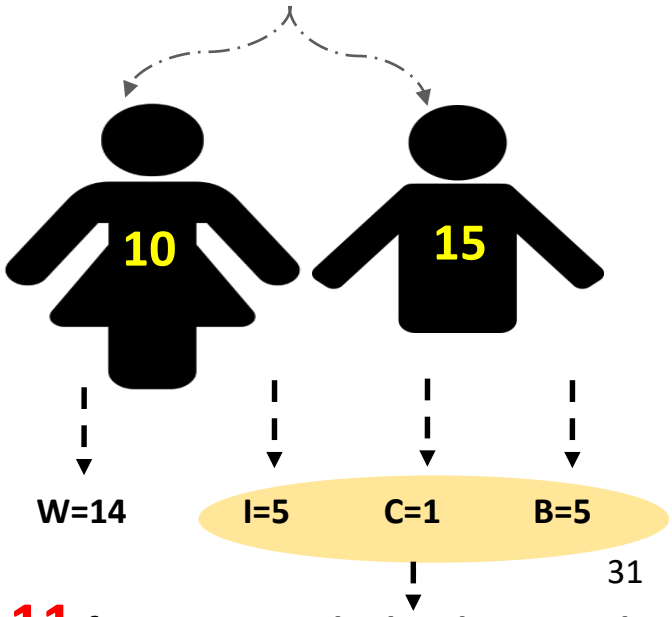
Unit by Institution (N=11)



5 Units at **HDIs** out of **25** Units

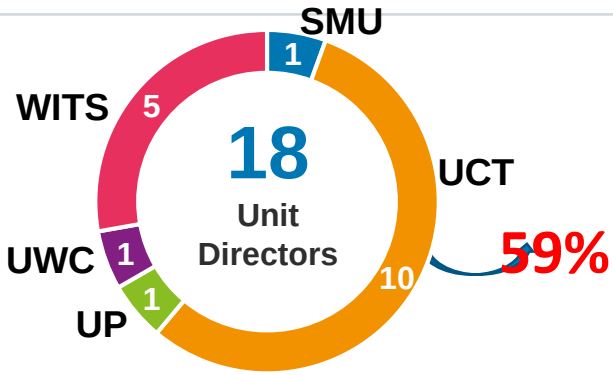
UD by Gender and Race

Of the **25** Units & Unit Directors



11 from previously disadvantaged

TRANSFORMATION & DIVERSITY (2014 versus 2019)



As at 1 April **2014**; **5** institutions

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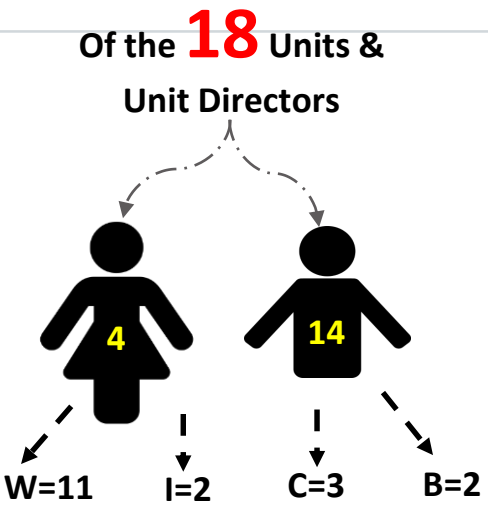
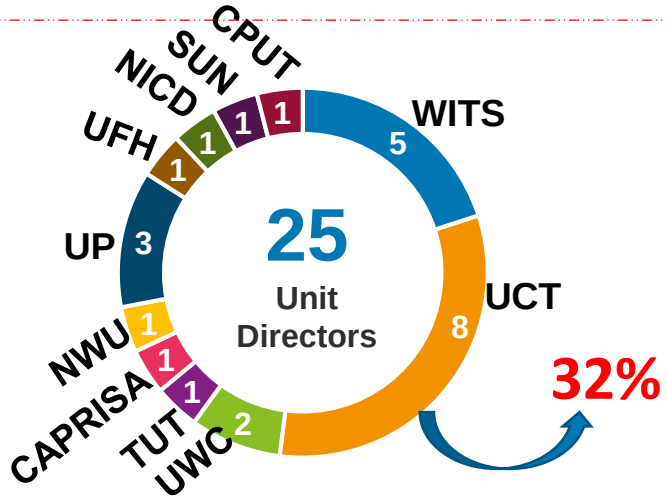
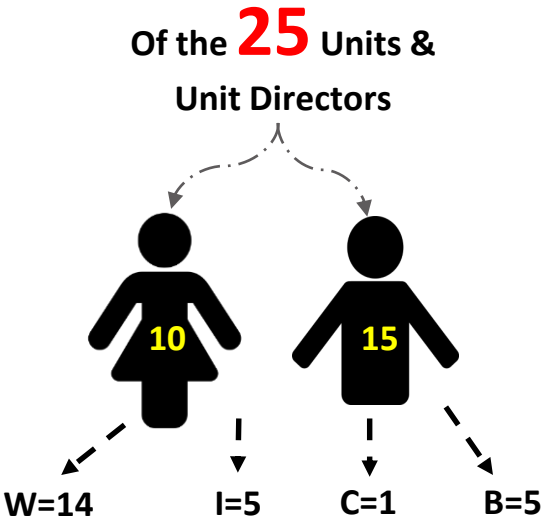


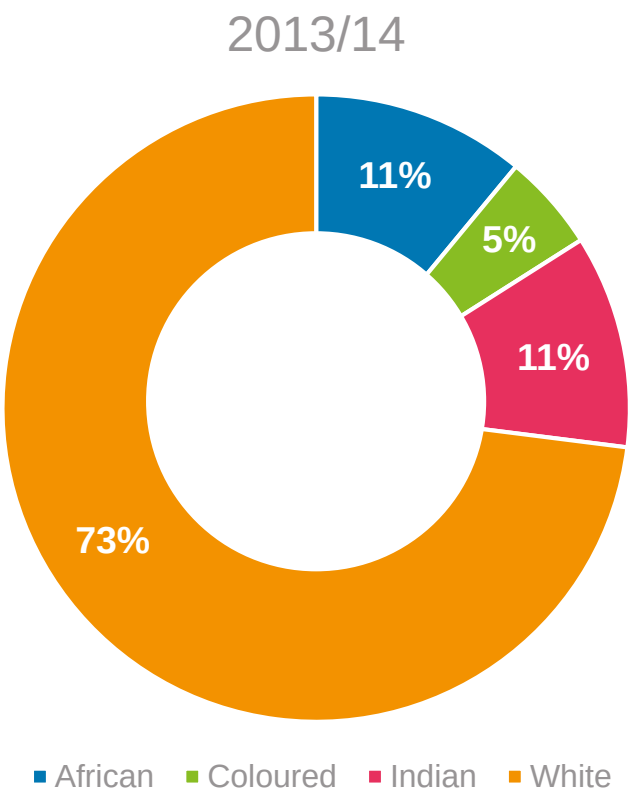


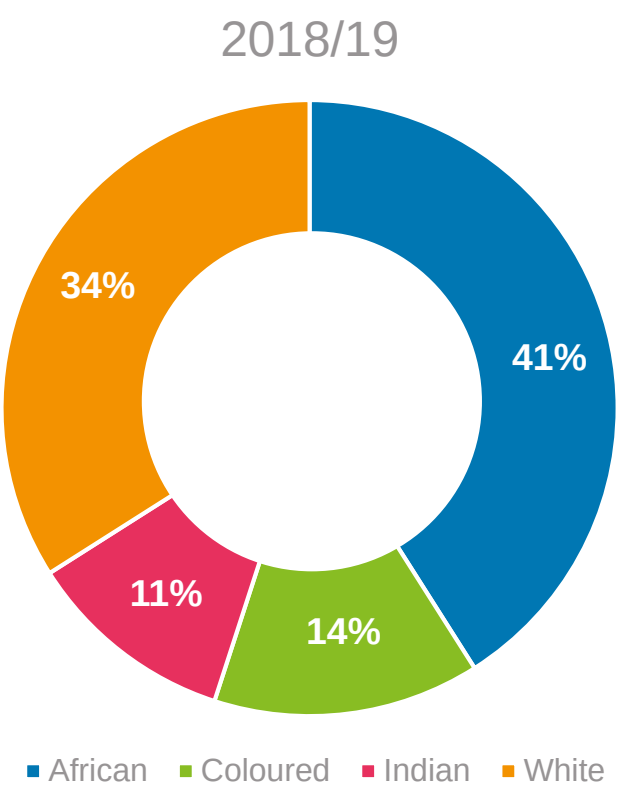
As at 1 April **2019**; **11** institutions

→



SELF-INITIATED RESEARCH GRANTS





RESEARCH CAPACITY DEVELOPMENT

SAMRC FUNDED MASTERS AND PhDs IN 2018/19

AMOUNT FUNDED
R1,356,204.00
8 MSCs

AMOUNT FUNDED
R27,478,635.20
45 PhDs

MSC AND PhDs JOINTLY FUNDED BY THE SAMRC IN 2018/19

AMOUNT FUNDED
R1,550,000.00
6 MSCs

AMOUNT FUNDED
R1,660,000.00
4 PhDs

RESEARCH CAPACITY DEVELOPMENT

SCIENTISTS AND PROGRAMMES IN 2018/19

BENEFICIARY	AMOUNT INVESTED	NAME OF PROGRAMME
14 PIs	R8,000,000.00	SAMRC Research Capacity Development Initiative (RCDI)
15 Intramural Postdocs	R5,250,000.00	SAMRC Intramural Postdoctoral fellowship Programme
5 Career Development Awards	R1,500,000.00	Career Development Award
5 Mid-Career Scientists	R6,100,000.00	Mid-Career Scientist

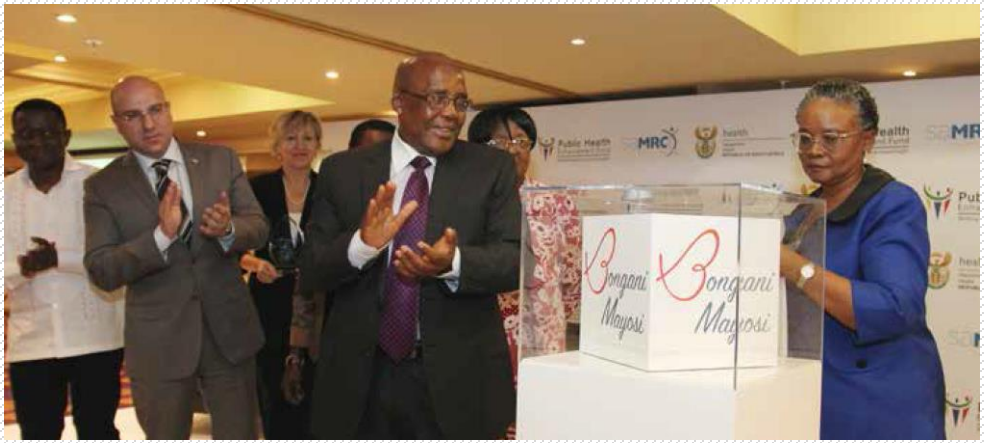
MID-CAREER SCIENTISTS: BUILDING THE PIPELINE

MID- CAREER SCIENTIST BY GENDER, RACE AND INSTITUTION 2019/2020 FINANCIAL YEAR

	GENDER	RACE	INSTITUTION (5)
Prof Khumalo	Female	Black	UCT
Prof Mokwena	Female	Black	SMU
Prof Kwitshana	Female	Black	UKZN
Dr Sibeko	Female	Black	SUN
Prof Gamildien	Male	Coloured	UWC
Dr Bantjes	Male	White	SUN

"The research strengthening, and capacity building funding opportunity will equip and capacitate identified institutions to conduct excellent multidisciplinary research to address some of the key questions that could impact on lowering the burden of disease in South Africa "

BONGANI MAYOSI NATIONAL HEALTH SCHOLARS PROGRAMME (NHSP)



- Flagship PhD programme and national asset for next generation health and clinical scientists
- Part of the Social Compact funded through the Public Health Enhancement Fund
- Results: **47 graduates** (87% of which are PhDs) various health professions

ANNUAL PERFORMANCE PLAN

RSA CONSTITUTION

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 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 27:** Healthcare, food water and social security
- **Section 28(2): Children:** A child's best interests are of paramount importance in every matter concerning the child"
- **Section 32: Access to Information:** All the rights contained in this access to information section

Chapter 10: Public Administration

- **Section 195: Public administration must be governed by the democratic values and principles enshrined in the Constitution**

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—

(a) categories of preference in the allocation of contracts; and

(b) 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.

SUSTAINABLE DEVELOPMENT GOALS

SUSTAINABLE DEVELOPMENT GOALS

2015

NDOH 10 POINT PLAN: 2009 TO 2014

1. Provision of Strategic leadership and creation of a Social Compact for better health outcomes
2. Implementation of a National Health Insurance Plan (NHI)
3. Improving Quality of Health Services
4. Overhauling the health care system and improve its management
5. Improving Human Resources Planning, Development and Management
6. Revitalization of physical infrastructure
7. Accelerated implementation of HIV & AIDS and Sexually Transmitted Infections National Strategic Plan 2007-11 and increase focus on TB and other communicable diseases
8. Mass mobilisation for better health for the population
9. Review of the Drug Policy
10. Strengthening Research and Development

GOVERNMENT 12 KEY OUTCOMES

1. Improved quality of basic education
2. A long and healthy life for all South Africans
3. All people in South Africa are & feel safe
4. Decent employment through inclusive economy
5. A skilled and capable workforce to support an inclusive growth
6. An efficient, competitive and responsive economic infrastructure network
7. Vibrant, equitable and sustainable rural communities with food security for all
8. Sustainable human settlements and improved quality of household life
9. A responsive, accountable, effective and efficient local government system
10. Environmental assets and natural resources that are well protected and continually enhanced
11. Created a better South Africa and contribute to a better and safer Africa and World
12. An efficient, effective and development oriented public service and an empowered, fair and inclusive citizenship

NSDA 2010: OUTPUTS WRT OUTCOME 2

Output	Indicators and targets by 2014
1. Increasing life expectancy	• Males: from 53.5 to 58.0 years • Females: from 57.2 to 60.0 years
2. Decreasing maternal and child mortality	• Maternal: from 140-160 to 100 (or less) per 100 000 live births • Child: from 69 to 45 (or less) per 1000 live births
3. Combating HIV and AIDS and decreasing the burden of TB	• Increase TB cure rate from 65% to 85% • 80% access to ARVs • Reduce new HIV infections by 50%
4. Strengthening health system effectiveness	• Health system based on PHC • Emphasis on promotion and prevention (instead of curative) healthcare

SAMRC HEALTH RESEARCH PRIORITIES AND ITS IMPACT TO THE POLICIES (1)

Sub-programmes	Which research Units paly a role in the sub-proagrammes	Under which strategic goals (SG) do the research units conduct research	What are the research outcomes?	Which policy(ies) are impacted by the research outcomes?
Health promotion and disease prevention	Alcohol, Tobacco and Other Drug Research Unit Environment and Health Research Unit Hypertension and Cardiovascular Disease Research Unit Microbial Water Quality Monitoring Research Unit Non-Communicable Diseases Research Unit Risk and Resilience in Mental Disorders Research Unit Rural Public Health and Health Transition Research Unit Violence, Injury and Peace Research Unit	SG 2 SG 3	Contribute towards the body of evidence by gaining a better understanding of how factors such as nutrition; physical activity; alcohol, smoking and drug use; mental health; healthy behaviours; environment and stress affect life expectancy Conduct research using a life course approach to healthy lifestyles, early diagnosis, and cost-effective prevention and management of diseases through health promotion	NSDA 1: Increasing life expectancy 10 Point Plan: Strengthening research and development NDP 2030 objectives and actions: Promoting health, social protection and building safer communities QBOD: non-communicable diseases QBOD: Injury & Trauma SDGs 3, 5, 6, 13, 15 & 16
Maternal, child and women's health	Child and Adolescent Lung Health Development Pathways Research Unit Gender and Health Research Unit Maternal and Infant Health Care Strategies Research Unit	SG 2 SG 3	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.	NSDA 2: Decreasing maternal and child mortality QBOD: Maternal & child mortality

SAMRC HEALTH RESEARCH PRIORITIES AND ITS IMPACT TO THE POLICIES (2)

Sub-programmes	Which research Units paly a role in the sub-proagrammes	Under which strategic goals (SG) do the research units conduct research	What are the research outcomes?	Which policy(ies) are impacted by the research outcomes?
Health Promotion and Disease Prevention: HIV, AIDS, TB and other communicable diseases	Centre for the Study of Antimicrobial Resistance Centre for Tuberculosis Research Unit HIV Prevention Research Unit HIV-TB Pathogenesis and Treatment Research Unit Molecular Mycobacteriology Research Unit Respiratory and Meningeal Pathogens Research Unit	SG 2 SG 3 SG 4	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.	NSDA 1: Increasing life expectancy NSDA 3: Combating HIV/AIDS and TB 10 Point Plan: Strengthening research and development QBOD: HIV/AIDS and TB
Health systems strengthening	Biostatistics Research Unit Burden of Disease Research Unit Health Services to Systems Research Unit Health Systems Research Unit South African Cochrane Centre	SG 2 SG 3 SG 4	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, tile health, telemedicine, eLearning, and mobile health) in strengthening health systems.	NSDA 4: Strengthening health system effectiveness SDG 3 10 Point Plan: Implementation of NHI
Public health innovation	Drug Discovery and Development Research Unit Herbal Drugs Research Unit	SG 2 SG 3	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.	10 Point Plan: Strengthening research and development
Biomedical research	Antiviral Gene Therapy Research Unit Bioinformatics Capacity Development Research Unit Immunology of Infectious Diseases Research Unit Precision and Genomic Medicine Stem Cell Research and Therapy Unit	SG 2 SG 3 SG 4	Conduct basic research, applied research, and transactional research to determine predisposition to disease. This understanding is important for planning effective intervention and disease control.	10 Point Plan: Strengthening research and development

STRATEGIC OBJECTIVES, PERFORMANCE INDICATORS, PLANNED TARGETS AND ACTUAL ACHIEVEMENTS

STRATEGIC GOAL	STRATEGIC OBJECTIVE	INDICATOR NO.	PROGRAMME PERFORMANCE INDICATOR	SP TARGET (2015/16 - 2019/20)	FINAL 2017/18 PERFORMANCE	REPORTING PERIOD: 2018/19 PERFORMANCE TARGET	FINAL 2018/19 PERFORMANCE	VARIANCE
Administer health research effectively and efficiently in South Africa	To ensure good governance, effective administration and compliance with government regulations	1.1	Compliance with legislative prescripts, reflected in the final audit report relating to the processes and systems of the SAMRC	Clean audit	Unqualified audit with findings	Unqualified	Clean audit	-
	To promote the organisation's administrative efficiency to maximise the funds available for research	1.2	Percentage (%) of the 2018/19 SAMRC total budget spent on salaries and operations of all corporate administrative functions	20%	19%	20%	16%	The SAMRC has over performed due to efficiency improvements within Administration divisions and containing staff numbers. With these efficiency improvements the SAMRC managed to keep the costs below 20% of total expenditure and deliver an effective service to the core business. Contract revenue increased by 10% (R48m) which also contributed to the decrease in administration percentage vs total costs

STRATEGIC OBJECTIVES, PERFORMANCE INDICATORS, PLANNED TARGETS AND ACTUAL ACHIEVEMENTS

STRATEGIC GOAL	STRATEGIC OBJECTIVE	INDICATOR NO.	PROGRAMME PERFORMANCE INDICATOR	SP TARGET (2015/16 - 2019/20)	FINAL 2017/18 PERFORMANCE	REPORTING PERIOD: 2018/19 PERFORMANCE TARGET	FINAL 2018/19 PERFORMANCE	VARIANCE
Lead the generation of new knowledge and facilitate its translation into policies and practices to improve health	To produce and disseminate new scientific findings and knowledge on health	2.1	Number of published journal articles, book chapters and books by SAMRC researchers within intramural, extramural research units and collaborating centres at the SAMRC (Malaria, TB, HIV and Cancer), SelfInitiated Research, SHIP and Flagship projects **	*3150	865	750	936	The SOP has been circulated to all the unit directors and it was presented at the Unit Director's Forum meeting. More researchers have started to comply with the SOP regarding the affiliation to the SAMRC
		2.2	Number of journal articles published by SAMRC grant-holders with acknowledgement of SAMRC support during the reporting period **	*825	197	196	251	SOP has been circulated to all unit directors and it was presented at the Unit Directors Forum. More researchers have started to comply with the SOP regarding the acknowledgement of non-baseline SAMRC funding and/ or any additional grant funding above the normal baseline budget that is received.
	To promote scientific excellence and the reputation of South African health research	2.3	Number of published indexed impact factor journal articles with a SAMRC affiliated author **	*2124	765	700	787	There has been an increase in the number of publications in journals with an Impact Factor, as opposed to publishing in journals with no Impact Factor.

STRATEGIC OBJECTIVES, PERFORMANCE INDICATORS, PLANNED TARGETS AND ACTUAL ACHIEVEMENTS

STRATEGIC GOAL	STRATEGIC OBJECTIVE	INDICATOR NO.	PROGRAMME PERFORMANCE INDICATOR	SP TARGET (2015/16 - 2019/20)	FINAL 2017/18 PERFORMANCE	REPORTING PERIOD: 2018/19 PERFORMANCE TARGET	FINAL 2018/19 PERFORMANCE	VARIANCE
Lead the generation of new knowledge and facilitate its translation into policies and practices to improve health	To provide leadership in the generation of new knowledge in health	2.4	Number of journal articles where the first and/or last author is affiliated to the SAMRC during the reporting period **	*1830	490	500	538	There has been a move by the SAMRC researchers that collaborate to have themselves positioned either as the first or the last author on the publications.
	To facilitate the translation of SAMRC research findings into health policies and practices	2.5	Number of new policies and guidelines that reference SAMRC research during the reporting period	27	9	6	6	
	To provide funding for the conduct of health research	2.6	Number (new and renewals) of research grants awarded by the SAMRC during the reported period	750	168	176	176	

** SAMRC makes use of the Scopus, Web of Science and PubMed databases for the collection of performance information (journal articles) for the indicators 2.1 to 2.4. Various journals affiliate to various databases, which is dependent on many factors, thus there is inconsistency as to which journal affiliates to which specific database. In addition, there is no consistency, uniformity and time limitation in the way the databases capture the journal articles. While some journals and database have open access, others are based on paid subscription and license agreements. Timely accessing published journal articles from these databases is a challenge due to the complexities of uploading journal articles in a timely fashion based on many factors including licensing agreements. For example, Scopus does not rule out the possibility of missing key research information. Databases continuously update their sites with new journal articles and have different dates on which information is available to the intended audience such as the SAMRC. The latter gives rise to an inherent limitation in SAMRC quantifying the amount of journal articles present on a database at any given time. The SAMRC has a cut-off date at which information is collected from the databases, and this process has been consistently applied from year-to-year. Therefore, it is impractical, given the limitations of the databases, for the SAMRC to ascertain precisely which journal articles that would have been submitted for publishing during the reporting period, would have already been included in the databases at the time when performance information is submitted to the Auditor General of South Africa (AGSA).

STRATEGIC OBJECTIVES, PERFORMANCE INDICATORS, PLANNED TARGETS AND ACTUAL ACHIEVEMENTS

STRATEGIC GOAL	STRATEGIC OBJECTIVE	INDICATOR NO.	PROGRAMME PERFORMANCE INDICATOR	SP TARGET (2015/16 - 2019/20)	FINAL 2017/18 PERFORMANCE	REPORTING PERIOD: 2018/19 PERFORMANCE TARGET	FINAL 2018/19 PERFORMANCE	VARIANCE
Support innovation and technology development to improve health	To provide funding for health research innovation and technology development	3.1	Number of innovation and technology projects funded by the SAMRC to develop new diagnostics, devices, vaccines and therapeutics	180	92	40	79	The SAMRCs was able to attract more funding towards the development of new diagnostics, devices, vaccines and therapeutics during this financial year, which resulted in more grants being allocated to successful applicants.
		3.2	Number of new diagnostics, devices, vaccines and therapeutics progressed to the next stage of development during the reporting period	New Indicator	2	2	2	Corrective action: The SAMRC will use the performance for this financial year, in line with available budget, as a baseline to set a more realistic target, going forward.

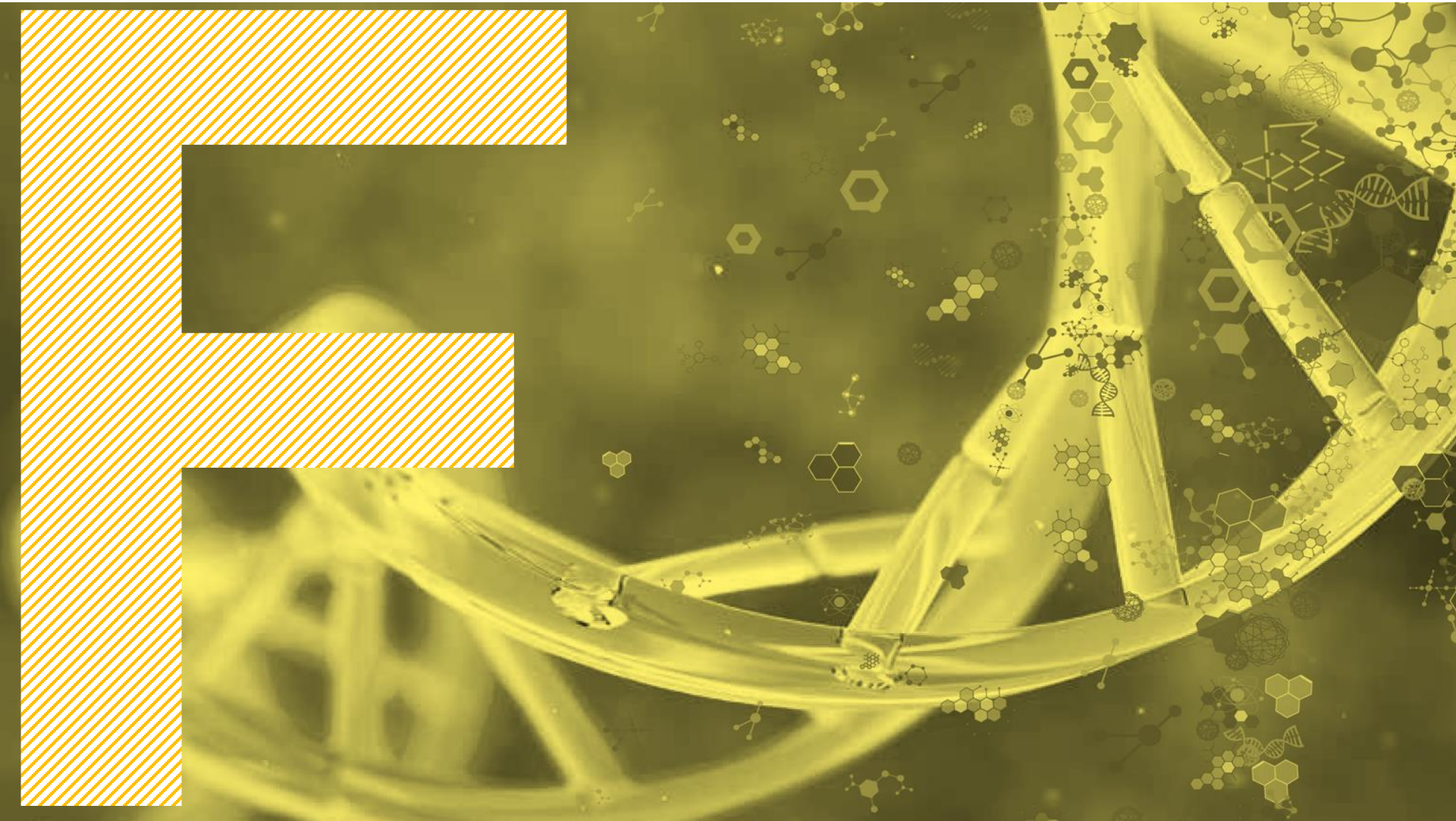
STRATEGIC OBJECTIVES, PERFORMANCE INDICATORS, PLANNED TARGETS AND ACTUAL ACHIEVEMENTS

STRATEGIC GOAL	STRATEGIC OBJECTIVE	INDICATOR NO.	PROGRAMME PERFORMANCE INDICATOR	SP TARGET (2015/16 - 2019/20)	FINAL 2017/18 PERFORMANCE	REPORTING PERIOD: 2018/19 PERFORMANCE TARGET	FINAL 2018/19 PERFORMANCE	VARIANCE
Build capacity for the long-term sustainability of the country's health research	To enhance the long-term sustainability of health research in South Africa by providing funding for the next generation of health researchers	4.1	Number (new and renewals) of SAMRC bursaries, scholarships and fellowships funded for postgraduate study at masters, doctoral and postdoctoral levels	435	155	101	141	There were more bursaries, scholarships and fellowships provided for post-graduate study than anticipated. Corrective action: The SAMRC will use the performance for this financial year as a baseline to set a more realistic target for the allocation of bursaries/scholarships/ fellowships

STRATEGIC OBJECTIVES, PERFORMANCE INDICATORS, PLANNED TARGETS AND ACTUAL ACHIEVEMENTS

STRATEGIC GOAL	STRATEGIC OBJECTIVE	INDICATOR NO.	PROGRAMME PERFORMANCE INDICATOR	SP TARGET (2015/16 - 2019/20)	FINAL 2017/18 PERFORMANCE	REPORTING PERIOD: 2018/19 PERFORMANCE TARGET	FINAL 2018/19 PERFORMANCE	VARIANCE
Build capacity for the long-term sustainability of the country's health research		4.2	Number of masters and doctoral students graduated during the reporting period	New Indicator	80	60	47	77 masters and doctoral students completed their studies in the reporting period. However, only 47 graduated as at a number of universities, the graduation ceremonies that are usually held at the end of March were rescheduled for dates in April 2019, as the month of March ended on a weekend. This unfortunately influenced the SAMRC's performance for the reporting period as the 30 graduates in April 2019 could not be included, as the current indicator refers to students who graduated and not students who completed their studies. Corrective action: Those students who completed their studies in 2018 but only graduated in April 2019 will be reported on in the 2019/20 reporting period to reflect students who graduated, as well as students who completed their studies before the end of March but their graduation ceremonies are scheduled to take place after the end of March.

SCIENTIFIC IMPACT



OUR RESEARCH PROFILE

MATERNAL, NEWBORN AND CHILD HEALTH

The burden of maternal, newborn and child health on SA is three times above average for comparable countries.

Our research shows that the under **5** mortality rate has decreased to **34** per **1000** livebirths in 2016 from **80** per **1000** livebirths in 2003.

Interventions by community health workers in community treatment could decrease deaths to under **200 000** over ten years.

NON-COMMUNICABLE DISEASES (NCDS)

Non-Communicable Diseases, as a group, account for the highest number of deaths in SA.

Four major NCDs: cancers, cardiovascular diseases, chronic respiratory diseases and diabetes.

Our first-of-its-kind research shows that more than **70%** of women in sub-Saharan Africa are overweight and obese and five out of every **10** adults in South Africa suffer from hypertension.

HIV/AIDS AND TB

SA is estimated to have the biggest burden of TB in the world – a sizeable number of HIV/AIDS deaths are associated with TB.

We have conducted research that has mapped the true burden of MDR/XDR TB in the country allowing accurate and concerted interventions.

The roll-out of ART and earlier PMTCT interventions has resulted in a steady decline in HIV mortality: from **300 000** in 2006 to **153 000** in 2012.

VIOLENCE AND INJURY

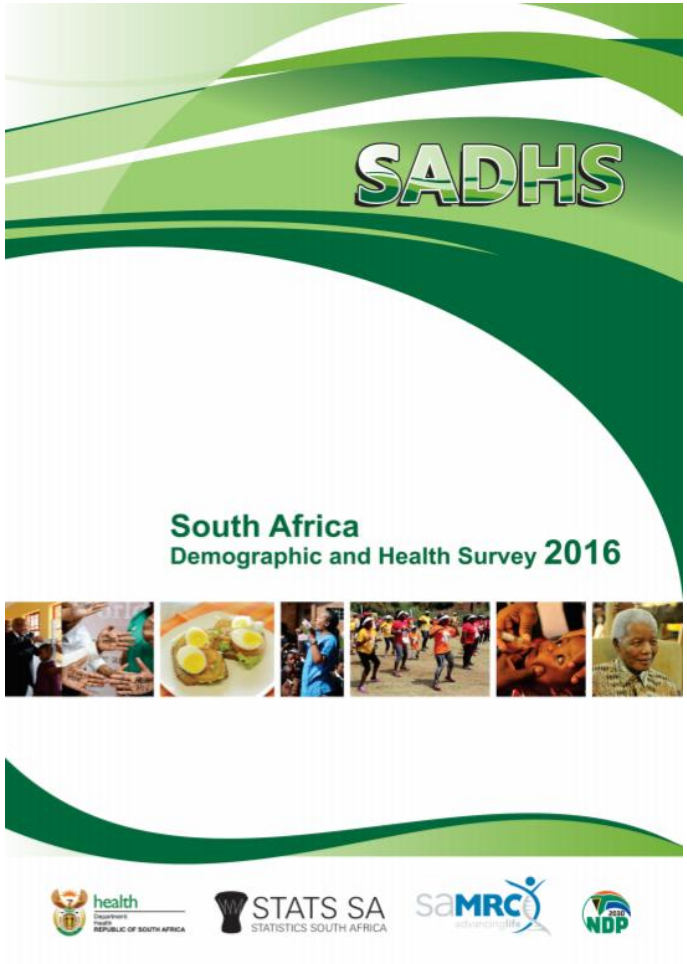
SA is five times above average for homicide. Interpersonal violence accounts for a considerable amount of premature deaths in SA.

Between 1997 and 2012, there was a **52%** reduction in death rates caused by interpersonal violence.

Data from our Burden of Disease Research Unit shows that interpersonal violence ranks as the number two cause of premature death in Gauteng and the Western Cape.

SOUTH AFRICAN DEMOGRAPHIC AND HEALTH SURVEY 2016

- National household survey collected wide range of health data from over 11 000 households in 2016
- Includes essential demographic indicators: maternal, newborn and child health, HIV and sexual behaviour, management of NCDs, status of violence against women in S.A.
- Conducted through a partnership between National Department of Health, Stats SA and SAMRC, with technical support from ICF via DHS program of USAID
- Full report finalised in 2018 and released with a summary report of Key Findings
- The data has been anonymized and made available for further analysis by academics and other institutions



RAPID MORTALITY SURVEILLANCE

- The Rapid Mortality Surveillance Report 2017 derives **estimates of key health status indicators** primarily from data obtained from the National Population Register.
- Although life expectancy at birth has continued to increase, reaching 64 years in 2017, the pace of improvement has slowed down in recent years.
- Infant and under-five mortality rates have **declined** to **23** and **32** per **1000** live births in 2017, respectively. However, the neonatal mortality continues to show no improvement remaining at **12** per **1000** live births.
- Mortality of **children aged 5-15** improved over a period of five years from **11** per **1000** deaths to **6** deaths per **1000** deaths. Children between the ages: **15-24** showed an improvement from **24** deaths to **21** per **1000** children during the same period. These improvements are likely associated with the roll-out of ARTs.
- The maternal mortality ratio peaked in **2009** and has declined to **134** per **100 000** live births in 2016.
- **Life expectancy** at age 60 years, an indicator of mortality experienced at older ages has remained constant at about **17 years**, indicating little improvement in health care in recent years.
- Estimates of **premature mortality** between the ages of **30** and **70** years due to selected non-communicable diseases (NCDs) including cardiovascular diseases, cancer, diabetes and chronic respiratory diseases.
    - The probability of a 30-year old man dying from these non-communicable diseases before the age of 70 years is 34% while the probability of a 30-year old woman dying from these diseases is 24%. The rates have shown no change between 2011 and 2016.
    - Primary health care services need to be more vigilant with diagnosing and managing these diseases and their risk factors. Health promotion efforts to reduce the prevalence of tobacco and alcohol use, increase physical activity and healthy nutrition are essential to reduce the burden of non-communicable diseases.

RAPID MORTALITY SURVEILLANCE

MORTALITY INDICATORS	2012	2013	2014	2015	2016	2017
LIFE EXPECTANCY AT BIRTH						
Life expectancy at birth Total	61.2	62.2	62.9	63.3	63.8	64.2
Life expectancy at birth Male	58.5	59.4	60.0	60.3	60.8	61.2
Life expectancy at birth Female	64.0	65.1	65.8	66.4	66.9	67.6
YOUNG CHILD MORTALITY (0-5 YEARS						
Under-5 mortality rate (U5MR) per 1 000 live birth	11.0	8.1	7.4	7.0	6.6	6.0
Infant mortality rate (IMR) per 1 000 live births	11.9	8.9	8.4	7.9	7.5	7.0
Neonatal mortality rate (<28 days) per 1 000 live births	10.1	7.3	6.5	6.2	5.6	5.1
OLDER CHILDREN & YOUNG ADOLESCENTS (5-14 YEARS)						
Older children & young adolescents ($_{10}q_5$ per 1000) Total	11.0	8.1	7.4	7.0	6.6	6.0
Older children & young adolescents ($_{10}q_5$ per 1000) Male	11.9	8.9	8.4	7.9	7.5	7.0
Older children & young adolescents ($_{10}q_5$ per 1000) Female	10.1	7.3	6.5	6.2	5.6	5.1

Source: Rapid Mortality Surveillance Report 2017 published by South African Medical Research Council.

RAPID MORTALITY SURVEILLANCE

MORTALITY INDICATORS ctd.	2012	2013	2014	2015	2016	2017
OLDER ADOLESCENTS & YOUTH (15-24 YEARS)						
Older adolescents & youth ($_{10}q_{15}$ per 1000) Total	24.5	23.5	22.5	22.1	21.4	21.4
Older adolescents & youth ($_{10}q_{15}$ per 1000) Male	25.9	25.9	25.6	25.7	25.3	25.9
Older adolescents & youth ($_{10}q_{15}$ per 1000) Female	23.2	21.1	19.5	18.4	17.5	17.0
ADULT MORTALITY (15-59 YEARS)						
Adult mortality ($_{45}q_{15}$) Total	38%	36%	34%	34%	33%	32%
Adult mortality ($_{45}q_{15}$) Male	44%	42%	40%	40%	39%	38%
Adult mortality ($_{45}q_{15}$) Female	32%	30%	28%	28%	27%	26%
LIFE EXPECTANCY AT AGE 60						
Life expectancy at age 60 Total	17.6	17.4	17.4	17.3	17.4	17.4
Life expectancy at age 60 Male	15.5	15.3	15.3	15.2	15.2	15.2
Life expectancy at age 60 Female	19.2	19.1	19.1	19.0	19.1	19.1

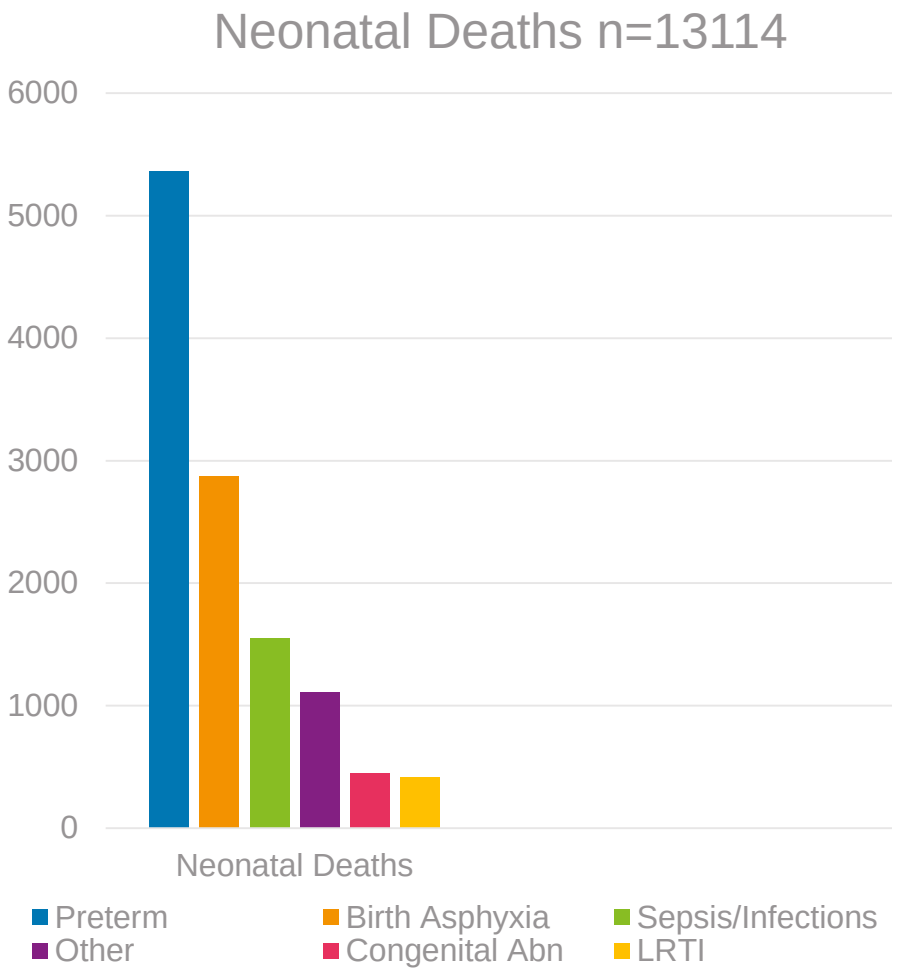
Source: Rapid Mortality Surveillance Report 2017 published by South African Medical Research Council.

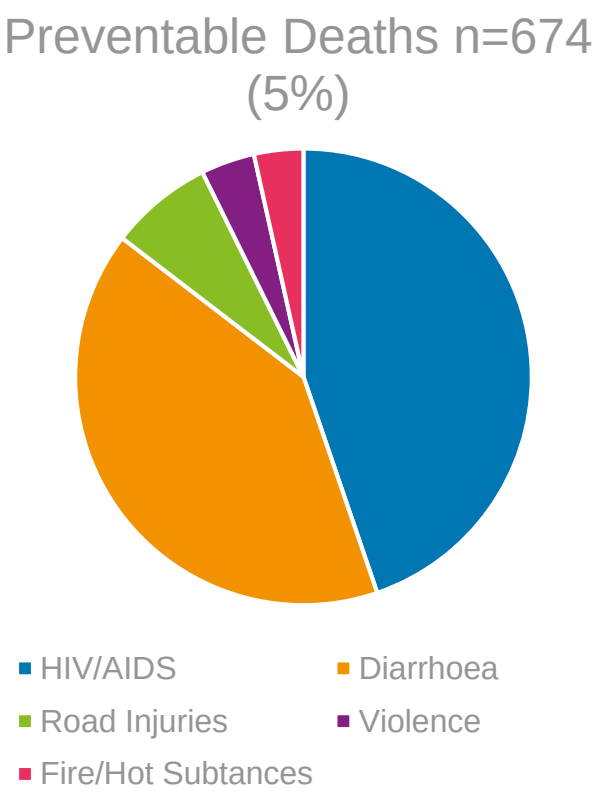
RAPID MORTALITY SURVEILLANCE

CAUSE SPECIFIC INDICATORS	2011	2012	2013	2014	2015	2016
MATERNAL MORTALITY (15-49 YEARS)						
Maternal mortality ratio (MMR) per 100 000 live births	200	165	154	164	152	134
PREMATURE MORTALITY ATTRIBUTED TO CARDIOVASCULAR DISEASE, CANCER, DIABETES OR CHRONIC RESPIRATORY DISEASE (PEOPLE AGED 30-69 YEARS)						
Cardiovascular disease ${}_{40}q_{30}$ Total	15%	15%	14%	15%	14%	14%
Cardiovascular disease ${}_{40}q_{30}$ Male	18%	18%	17%	18%	18%	17%
Cardiovascular disease ${}_{40}q_{30}$ Female	12%	12%	11%	11%	11%	11%
Cancer ${}_{40}q_{30}$ Total	9%	9%	9%	9%	9%	9%
Cancer ${}_{40}q_{30}$ Male	10%	10%	11%	11%	11%	10%
Cancer ${}_{40}q_{30}$ Female	7%	7%	7%	8%	8%	8%
Diabetes ${}_{40}q_{30}$ Total	5%	5%	5%	5%	6%	5%
Diabetes ${}_{40}q_{30}$ Male	5%	5%	5%	6%	6%	5%
Diabetes ${}_{40}q_{30}$ Female	5%	5%	5%	5%	5%	5%
Chronic respiratory disease ${}_{40}q_{30}$ Total	4%	4%	4%	4%	4%	4%
Chronic respiratory disease ${}_{40}q_{30}$ Male	6%	6%	6%	6%	6%	6%
Chronic respiratory disease ${}_{40}q_{30}$ Female	3%	3%	2%	2%	2%	2%

Source: Rapid Mortality Surveillance Report 2017 published by South African Medical Research Council.

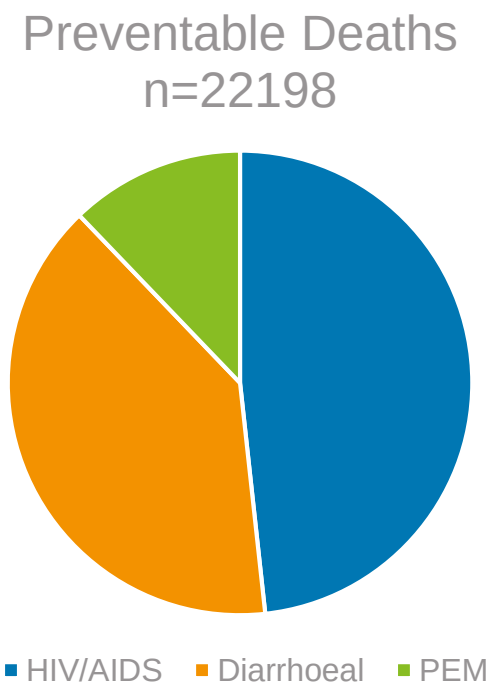
NEONATAL DEATHS





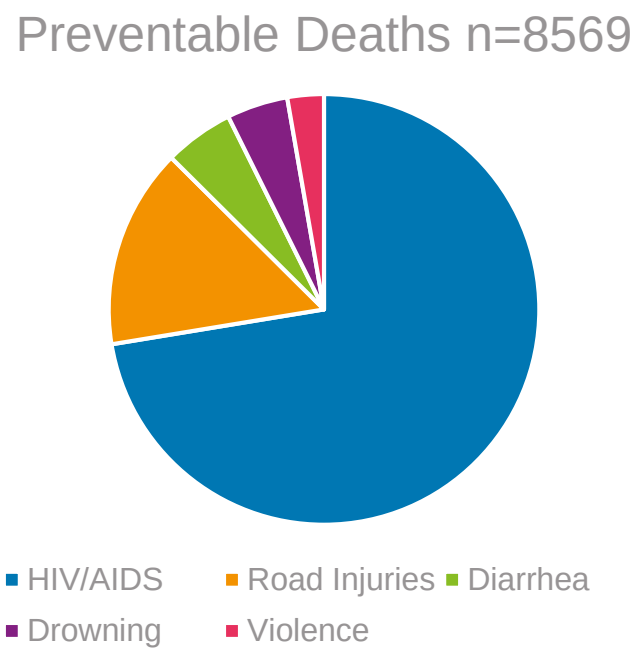
DEATHS: 1-59 MONTHS (N=34644)

1-59 months	N	Cum %
HIV/AIDS	9308	27%
Diarrhoeal diseases	7638	49%
Lower respiratory infections	5833	66%
Protein-energy malnutrition	2347	73%
Septicaemia	877	75%
Road injuries	856	78%
Tuberculosis	754	80%
Meningitis/encephalitis	723	82%
Congenital heart anomalies	603	84%
Other respiratory	492	85%
Fires, hot substances	458	86%
Interpersonal violence	339	87%
Endocrine nutritional,blood, immune	298	88%
Drowning	294	89%
Asthma	260	90%
Congenital disorders of GIT	235	90%
Grand Total	**34644**	**100%**



DEATHS IN CHILDREN 5-14

Older children 5-14 years	N	Cum %
HIV/AIDS	5658	51%
Road injuries	1171	61%
Lower respiratory infections	459	65%
Diarrhoeal diseases	408	69%
Meningitis/encephalitis	405	73%
Drowning	359	76%
Epilepsy	223	78%
Interpersonal violence	216	80%
Tuberculosis	211	82%
Asthma	174	83%
Fires, hot substances	156	85%
Leukaemia	87	85%
Septicaemia	87	86%
Renal disease	82	87%
Cerebrovascular disease	78	88%
Endocrine nutritional,blood, immune	75	88%
Cardiomyopathy	72	89%
Congenital heart anomalies	66	89%
Exposure to natural forces	62	90%
Grand Total	**11161**	**100%**



PREVENTABLE DEATHS 5-24 years

PREVENTABLE DEATHS		
Older children 5-14 years	**N**	**Cum %**
HIV/AIDS	5658	66%
Road injuries	1171	80%
Diarrhoeal diseases	408	84%
Drowning	359	89%
Interpersonal violence	216	91%
Grand Total	**8569**	**100%**

PREVENTABLE DEATHS		
Male youth 15-24 years	**N**	**Cum %**
Interpersonal violence	4176.808	40%
Road injuries	2220.55	61%
HIV/AIDS	1663.409	77%
Self-inflicted injuries	1082.244	88%
Drowning	226.0259	90%
Grand Total	**10423.17**	**100%**

PREVENTABLE DEATHS		
Female youth 15-24 years	**N**	**Cum %**
HIV/AIDS	5154.37	66%
Road injuries	808.319	76%
Interpersonal violence	581.451	84%
Self-inflicted injuries	389.699	89%
Grand Total	**7823.76**	**100%**

DEATHS THAT CAN BE PREVENTED

PREVENTABLE DEATHS		
Adult males 25+	**N**	**Cum %**
HIV/AIDS	67210	49%
Interpersonal violence	11148	58%
Cerebrovascular disease	10538	65%
Ischaemic heart disease	9349	72%
Road injuries	9315	79%
Diabetes mellitus	5578	83%
COPD	4626	87%
Self-inflicted injuries	3950	90%
Grand Total	**135862**	**100%**

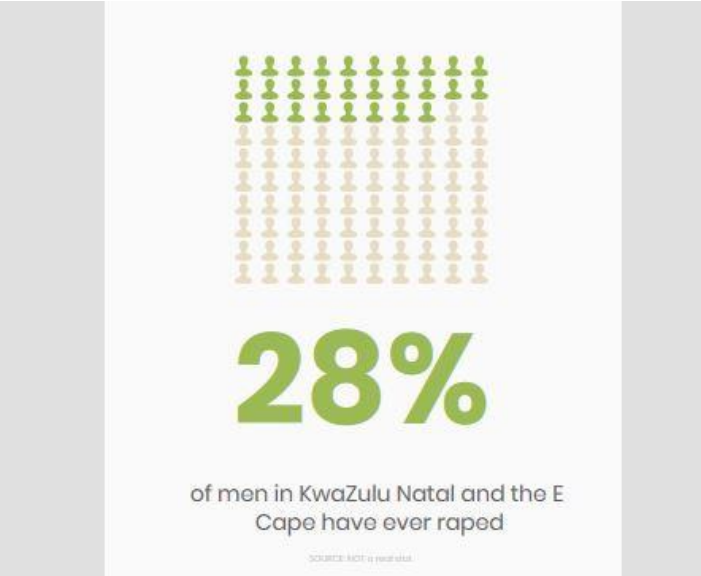
PREVENTABLE DEATHS		
Adult females 25+	**N**	**Cum %**
HIV/AIDS	63887	62%
Cerebrovascular disease	11960	73%
Diabetes mellitus	7278	80%
Ischaemic heart disease	5660	86%
Road injuries	2901	88%
COPD	2265	90%
Grand Total	**103843**	**100%**

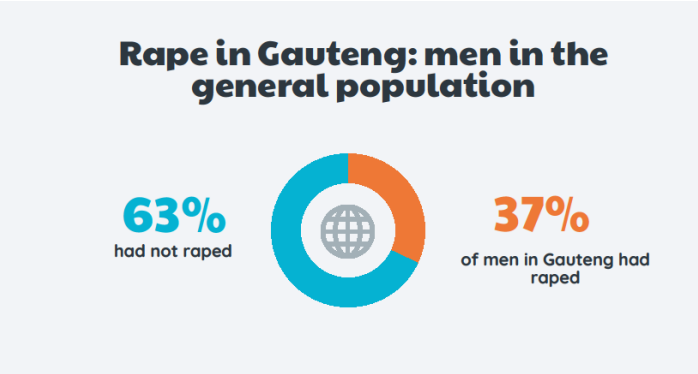
FEMICIDE IN SOUTH AFRICA: RESEARCH BY SAMRC

- In 2009 we showed that three women each day are murdered by their boyfriend or husband
- The perpetrator is not identified by police in 20% of femicides
- 20% of femicide cases have evidence of rape
- Only 37% of perpetrators of intimate femicide are ever convicted

RAPE PERPETRATION

- We have led the world in developing methods to study rape perpetration in the general population and understand why men rape
- We have shown South Africa has one of the highest prevalences of rape in the world
- We have shown perpetration rooted in trauma from men's past and extremely hierarchical ideals of masculinity





CHILD HOMICIDE IN SOUTH AFRICA: 2009

- **1277** child murders (<18 yrs) in 2009

Age

- **454** were under 5 years (39%)
- **337** (74% of <5 yrs) were under the age of 1 year (infanticide rate of 28.3/100 000 live births)
- **241** were neonates
  - Majority early neonates (<6 days)

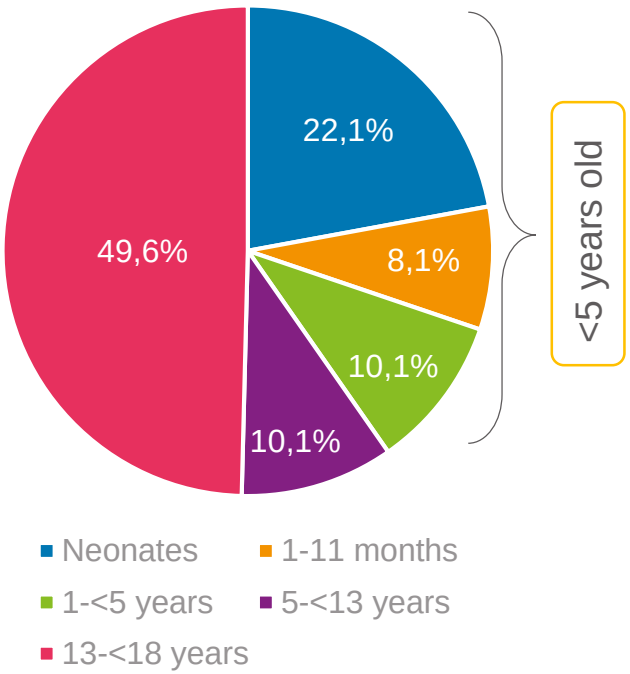
Child Abuse

- **44,5%** of all child murders were linked to child abuse/neglect
  - **75%** were children under **5 years**

Rape homicide

- **1 in 10** children killed had evidence of sexual assault – overwhelming girls (13 yrs and older)

Child homicide 2009: Age pattern



FIRST SOUTH AFRICAN NATIONAL TUBERCULOSIS PREVALENCE SURVEY, 2017/2019

WHOLE GENOME SEQUENCING PLATFORM

HEALTHY LIFE TRAJECTORIES INITIATIVE: BUKHALI TRIAL

- Healthy Life Trajectories Initiative (HeLTI) focuses on maternal, newborn, child and adolescent health.
- SAMRC is the South African partner that funds South Africa's participation in the initiative.
- The Bukhali project will establish a pre-conception to early childhood cohort in South Africa and test interventions along the continuum of care from pre-conception to pregnancy, infancy and childhood: reduce the prevalence of obesity & adiposity.
- Assess metabolic markers indicative of future risk of cardiovascular disease, diabetes and other NCDs.
- Use harmonized protocols, methods and interventions with similar cohorts and teams in Canada, China and India.
- The objective is to develop and implement new interventions that will drive policy changes and improvement in the prevention and management of non-communicable diseases in South Africa.

Bukhali

LIVING YOUR BEST LIFE

INTERVENTION-ARM

HeLTI South Africa

Healthy Life Trajectories Initiative

HEALTH HELPERS

Nutrition
PRIORITY

- Preconception and postnatal (0-6mo) supplementation based on Hb-screening (daily or 2x weekly)
- Pregnancy supplementation daily

Resource material

- 3x Resource Books
  - 9 modules covered in 6 sessions & then repeated
- Pregnancy Resource Book

Services

- Healthy conversation support monthly (in-person or telephonic)
- SMS support
- Waist circumference measurement
- HIV testing
- Pregnancy testing
- CV printing resources
- Pregnancy ultrasound
- GDM screening
- Transport funds (site visits)

Social messaging

- Recurring preconception health messaging
- Community radio & newspapers

Health Feedback

- Blood pressure
- BMI
- Iron status
- Lifestyle

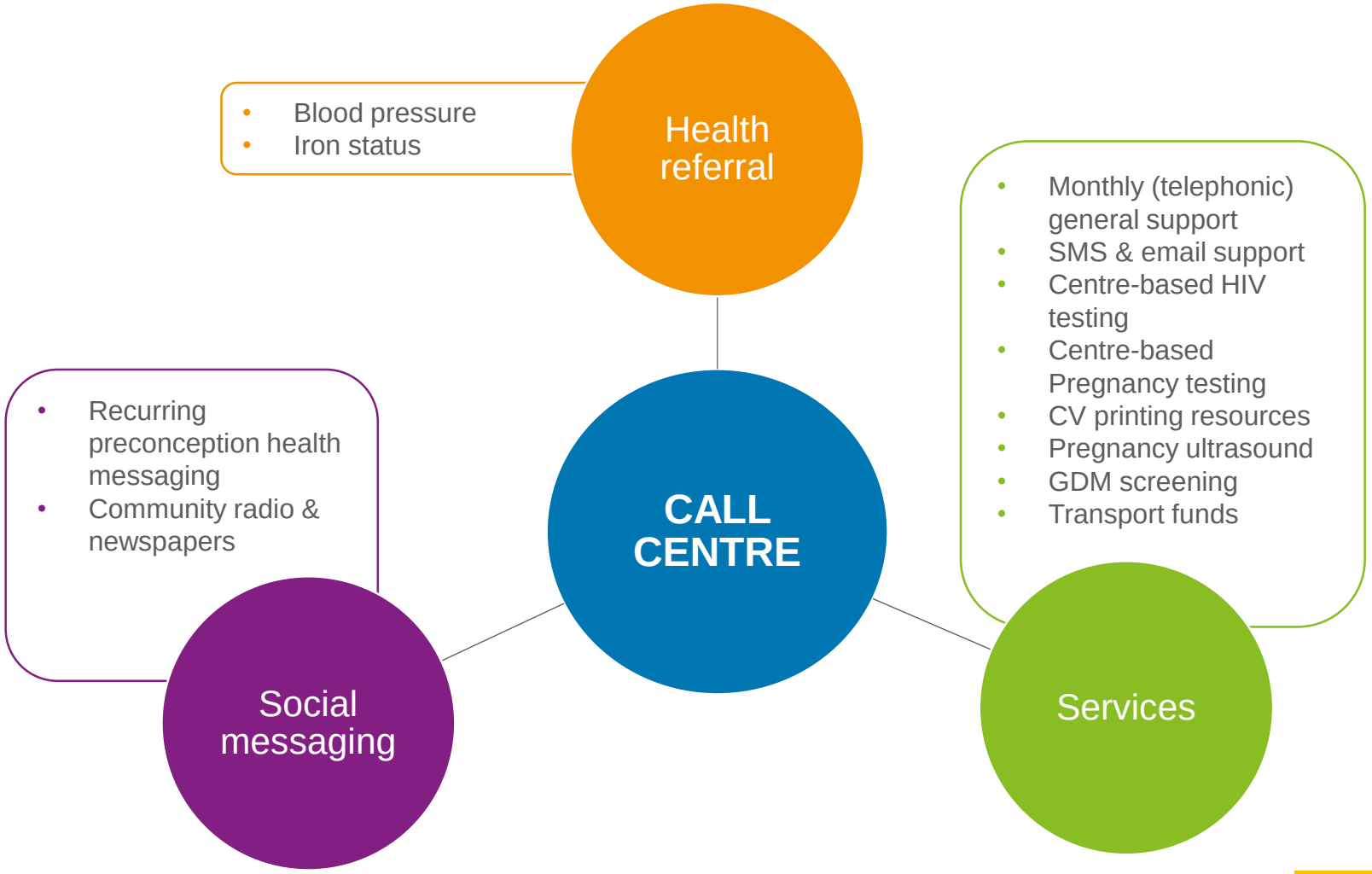
Bukhali

LIVING YOUR BEST LIFE

CONTROL-ARM

HeLTI South Africa

Healthy Life Trajectories Initiative



GLOBAL ANTIMICROBIAL RESISTANCE RESEARCH AND DEVELOPMENT (GARD) PARTNERSHIP

- Identify key medical priorities for Antimicrobial resistance (AMR).
- Stakeholder engagement on the joint research & innovation strategy.
- Conduct an analysis of the current R&D pipeline for antibiotics in South Africa and Africa.
- Identify priority projects on which GARDP and the SAMRC can collaborate with regional partners.
- Promote the development of new antibiotics and antibiotic treatments.
- Leverage additional funding from local and international funding sources.
- The SAMRC is also providing funding to GARDP amounting to R4 million for neonatal sepsis surveillance and sexually transmitted infections (STIs) studies in South Africa in 2018/19.

PARTNERSHIPS WITH OTHER COUNTRIES

SENEGAL

UNITED STATES OF AMERICA

SUDAN

SWEDEN

BRICS TB RESEARCH NETWORK

INDIA

PARTNERSHIPS WITH OTHER COUNTRIES

Senegal

- Focus on capacity building, joint human capital development programmes, as well as joint strategic research projects.

Sweden

- SAMRC and the Swedish Research Council for Health, Working Life & Welfare (FORTE) have an MoU to strengthen collaboration between South Africa and Sweden in Science, Technology, and Innovation.
- Focus areas include inequalities in health, and health systems and healthy systems policies.
- Partnership sets to fund 11 collaborative projects with a budget of R22 million from SAMRC and R15.9 million over three years from Forte.

PARTNERSHIPS WITH OTHER COUNTRIES

Sudan

- Focus of the collaboration is on drug research and development from natural products and diagnostic development.
- MoU in place with the Department of Science and Technology (DST) for managing the collaboration since March 2016.
- The DST is providing R1 million over two years for joint projects with matching funding from the Sudanese government for partners in Sudan.

India

- Collaboration between SAMRC, the South African DST, Department of Science and Technology of India and the Indian Department of Biotechnology.
- Focus on HIV and TB with a selection of seven projects for funding, four of these are in South Africa looking to strengthen capacity development.

PARTNERSHIPS WITH OTHER COUNTRIES

BRICS TB Research Network

- The Network is an endeavour to collaborate with BRICS Ministries of Health and scientists to address the problems with TB in BRICS and to raise resources to find local solutions.
- SAMRC is a strategic partner in the BRICS TB Research Network.
- The National Department of Health hosted the third BRICS TB Research Network Meeting, over 28 – 29 June 2018, in Johannesburg, with delegates from BRICS countries and the World Health Organization (WHO).
- The Network is expanding and strengthening its existing research network in BRICS by developing partnerships in BRICS who share a vision of ending TB.
- Prof Glenda Gray, SAMRC President & CEO, serves as a member of the South African mission.

PARTNERSHIPS WITH OTHER COUNTRIES

South Africa-US Program for Collaborative Biomedical Research

- Established in 2015 the joint programme is between the SAMRC and the U.S. National Institutes of Health (NIH).
- In November 2018, Dr Aaron Motsoaledi, approved the second phase of the Biomedical joint programme. The programme had awarded 31 grants in its first five years.
- The first five-year phase of the programme started in 2013 and will end in 2019.
- Current projects have generated outstanding scientific discovery, resulted in multiple publications and have assisted in training a significant number of young South African investigators.
- A key impact from phase one is a phylogenetic study that is characterizing the cycle of HIV transmission between adolescent girls/young women and older young men. The study has influenced policy and was featured in the UNAIDS 2016 report: Get on the Fast-Track: The life-cycle approach to HIV.
- This particular study has also contributed to the South African National Strategic Plan on HIV, TB and Sexually Transmitted Infections (STIs) through its progress on Goal 1, which focuses on breaking the cycle of transmission.

COMMUNICATIONS AND STAKEHOLDER ENGAGEMENTS

- March for Science

  14 April 2018

  Durban & Cape Town

- Bio Convention

  4 -7 June 2018

  Boston, U.S.A

- 5th SA TB Conference

  12- 15 June 2018

  Durban

COMMUNICATIONS AND STAKEHOLDER ENGAGEMENTS

- International AIDS Conference

  23 - 27 July 2018

  Amsterdam

- Bio Africa

  27 - 29 August 2018

  Durban

- Nutrition Congress

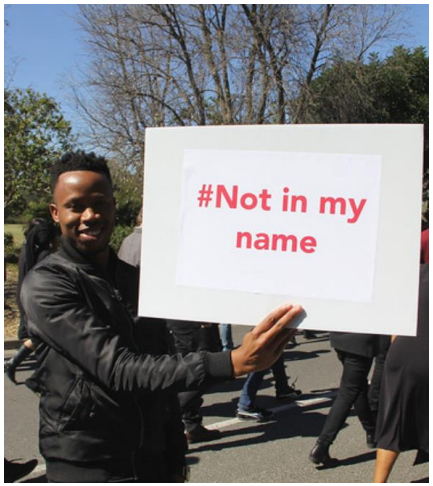
  5-7 September 2018

  Johannesburg

COMMUNICATIONS AND STAKEHOLDER ENGAGEMENTS

- Evidence 2018
  25 -28 September 2018
  CSIR, Pretoria
- 12th Annual Early Career Scientist Convention
  17-19 October 2018
  Cape Town
- FameLab
  7 – 8 February 2019
  Cape Town

SAMRC STAFF - TAKING A STAND AGAINST GBV #IAMNOTNEXT (FRIDAY 6 SEPTEMBER)



Annual Report
2018|2019

Thank You

saMRC advancinglife

CELEBRATING 50 YEARS