2011 National Health Research Summit Report
Executive Summary

Rationale. The 2011 National Health Research Summit (Summit) was held in response to the legislative mandate of the National Health Research Committee (NHRC) to set priorities for health research, and to address the strategic priorities of the National Department of Health (DoH) and the government of South Africa. The Summit successfully brought together 271 stakeholders from government, industry, academia and civil society to identify the key priorities for strengthening health research, innovation and development over the next 3 - 5 years, and assisting the NHRC and DoH accordingly. Its 7 findings have a similar number of actionable recommendations. The recommendations, which promise to significantly enhance health research in South Africa, call for: (1) increased funding for health research by the DoH to achieve the 2% target of the national health budget; (2) training a new generation of health researchers, especially black people and women (through a proposed National Health Scholars Programme); (3) developing health research infrastructure in the Academic Health Complexes to facilitate research-based re-engineering of Primary Health Care (through funding of Clinical Research Centres); (4) funding of priority research projects designed to increase the lifespan of South Africans (through a National Priority Research Projects Fund); (5) improving the national regulatory framework for health research; (6) creating a national mechanism for the timeous translation of research findings into policy, programmes and practice; and (7) developing a national system for evidence-based planning, monitoring and evaluation of the effectiveness and impact of the health research system on the burden of disease in South Africa.

Methods. The Summit findings are based on 3 sources: (1) 7 experts analysed the ‘strengths, weaknesses, opportunities, and threats’ of health research in South Africa based on recent studies; (2) all participants in the Summit contributed to Commissions to identify the priority research initiatives required to achieve the outcomes of the NSDA; and (3) research conducted by the sub-committees of the NHRC during its first year of existence (2011).

Findings. The NHRC identified 7 themes as the main priorities for action by the NHRS:

1. Funding. There is inadequate funding of health research by the Government of South Africa, especially by the DoH. The NHRC determined that the DoH invested about 0.37% (R416.5 million) of 2011/2012 health budget (R112.6 billion), which falls short of the Health Research Policy in South Africa of 2001 and subsequent commitments by the Ministry of Health in Mexico (2002)\(^1\) and Bamako (2008)\(^2\) to invest 2% of the health budget on health research.

2. Human Resources. There is a shortage of human resources for health research in South Africa, especially black South Africans and women, with a far lower associated research production than the world average for a middle-income country.

Rationalé. The strategic focus of the DoH is the implementation of the 10 Point Plan for 2009 - 2014 health sector priorities, which includes ‘strengthening of research and development’ as its 10th priority. A major goal of Government in the Medium Term Strategic Framework for 2009 - 2014 is to achieve a long and healthy life for all South Africans. The Ministry of Health has entered into a Negotiated Service Delivery Agreement (NSDA) with other Ministries responsible for the social determinants of health and all 9 provincial Members of Executive Committees (MECs) for Health, to improve the health outcomes of the population.

The National Health Research Summit (Summit) was held on 26 - 27 July 2011 in response to the legislative mandate of the National Health Research Committee (NHRC) to set priorities for health research, and to address the strategic priorities of the DoH and the government of South Africa. The Summit successfully brought together 271 stakeholders from government, industry, academia and civil society to identify the key priorities for strengthening health research, innovation and development over the next 3 - 5 years, and assisting the NHRC and DoH accordingly. Its 7 findings have a similar number of actionable recommendations. The recommendations, which promise to significantly enhance health research in South Africa, call for: (1) increased funding for health research by the DoH to achieve the 2% target of the national health budget; (2) training a new generation of health researchers, especially black people and women (through a proposed National Health Scholars Programme); (3) developing health research infrastructure in the Academic Health Complexes to facilitate research-based re-engineering of Primary Health Care (through funding of Clinical Research Centres); (4) funding of priority research projects designed to increase the lifespan of South Africans (through a National Priority Research Projects Fund); (5) improving the national regulatory framework for health research; (6) creating a national mechanism for the timeous translation of research findings into policy, programmes and practice; and (7) developing a national system for evidence-based planning, monitoring and evaluation of the effectiveness and impact of the health research system on the burden of disease in South Africa.

The first 5 recommendations are potentially actionable in the short to medium term by the DoH through the organs of state; the last 2 require further policy work by the NHRC during the remaining 2 years.

3. Health Research Infrastructure: There is a lack of health research facilities and infrastructure in academic health complexes that are required by the National Health Act of 2004 to conduct research into priority health problems of South Africans e.g. none of the 8 academic health complexes has a publicly funded clinical research centre.

4. Priority Research Fields: The priority research areas are surveillance, knowledge translation, integration of care, health economic evaluation, diagnostics, therapeutics and vaccine development to address the quadruple burden of disease, social determinants of health, and strengthen the health system.

5. National Regulatory Framework: There is a cumbersome regulatory system for registration of new medicines and conduct of clinical trials under the Medicines Control Council (MCC). Researchers have identified this as a major impediment to indigenous health research and innovation in South Africa.

6. Planning and Translation: There is a virtual absence of national planning, coordination and translation of research into health innovations, policy, programmes and practice, and inadequate alignment of the funding programme of the MRC to achieve the health outcomes of the country.

7. Monitoring and Evaluation: There is a lack of national mechanisms for monitoring and evaluation of the performance of the health research system of South Africa.

Recommendations for immediate implementation

1. Funding: The DoH should consider the progressive implementation of its commitment to the proportion of the national health budget allocated to research and development from 0.37% to 2% over the 2012 - 2014 period, as required by the National Health Research Policy of 2001 and commitments made in Mexico (2004) and Bamako (2008). This will lift the investment on health research from <R500 million at present to >R2 billion by 2014 (fourfold increase). The new funding will be directed to human resources development for health research (Par. 2 below), health research infrastructure development (Par. 3 below), and support of new priority research programmes (Par. 4 below) by the health research councils under the purview of the NHRC.

2. Human Resources: The increased funding should be used to at least double the number of health researchers and academic clinicians over the next 10 years, in line with the Human Resources for Health Strategy of South Africa (2012/13 - 2016/17). The increased production of health researchers may be achieved by the creation of a ‘National Health Scholars Programme’ to fund PhD studentships, post-doctoral fellowships, mid-career research posts, and research chairs in all healthcare fields including medicine, dentistry and nursing. New leaders produced under this scheme will also address the dire shortage for academic leaders in medicine, dentistry and nursing. New leaders produced under this scheme will also address the dire shortage for academic leaders in medicine, dentistry and nursing. New leaders produced under this scheme will also address the dire shortage for academic leaders in medicine, dentistry and nursing. New leaders produced under this scheme will also address the dire shortage for academic leaders in medicine, dentistry and nursing. New leaders produced under this scheme will also address the dire shortage for academic leaders in medicine, dentistry and nursing.

3. Health Research Infrastructure: The new funding should also be directed at developing the Health Research Infrastructure of the Academic Health Complexes. The Academy of Science of South Africa (ASSAf) Report on the Revitalisation of Clinical Research identified the priority of creating Clinical Research Centres in the academic health complexes to facilitate research occurring alongside service and teaching. Creating Clinical Research Centres should form part of the hospital revitalisation programme in preparation for the introduction of the National Health Insurance scheme.

4. Priority Research Fields: The new funding should also be used to create a ‘National Priority Health Research Fund’ to stimulate and support new and innovative research programmes that address the research priorities related to the quadruple burden of disease, health systems strengthening, and combating the social determinants of health (that seek to achieve the outcomes of the National Service Delivery Agreement of the DoH). These funds should be tied to measurable achievement of the objectives of the NSDA.

5. National Regulatory Framework: The inhibitory effect on health research of the cumbersome administrative processes of the MCC has been detailed in the ASSAf Report and by many Summit contributors. A consultative process of stakeholders is essential to address this issue, possibly through an initial national meeting convened by the Ministry of Health, followed by a transparent and participative change management process. The regulatory framework improvement will enhance the international competitiveness and South Africa’s share of clinical science and innovation, and provide an important source of foreign direct investment into the country.

Recommendations for further development through revision of the National Health Research Policy of 2001

6. Planning and Translation: A National Planning, Coordination and Translation System for Health Research should be developed, as a function of the NHRC.

7. Monitoring and Evaluation: A monitoring and evaluation mechanism of the performance of the health research system should be developed, as a function of the NHRC.

1. The rationalé for the 2011 National Health Research Summit

The average life expectancy of South Africans has fallen by 20 years over the past 2 decades, from nearly 70 years to about 50 years, owing to a quadruple burden: infectious diseases (mainly HIV/AIDS and TB), chronic non-communicable diseases, violence and injury, and perinatal and maternal conditions. Research for health is important because it can improve health outcomes by establishing effects of healthcare interventions and promoting the development of optimal healthcare policy, programmes and practice. Health research is crucial in the education and training of healthcare professionals and producing new knowledge. A healthy nation is required for economic progress, and a well-functioning health system is essential for economic growth. Therefore the revitalisation and strengthening of health research is of national importance.

The NHRC of the DoH, which has a legislative mandate to advise the Minister of Health on health research priorities, convened the 2011 National Health Research Summit (Summit) on 26 - 27 July 2011 at the OR Tambo Conference Centre, Birchwood Hotel, Ekurhuleni, Gauteng. In identifying health research priorities, the NHRC must have regard to: (1) burden of disease, (2) cost-effectiveness of interventions to reduce the burden of disease, (3) availability of human and institutional resources for the implementation of interventions closest to affected communities, (4) health needs of vulnerable groups such as women, older persons, children and people with disabilities, and (5) the health needs of communities (Section 70, National Health Act, 2004).

The Summit was in response to the legislative mandate of the NHRC and to address the strategic priorities of the DoH and the South African government. The strategic focus of the DoH is the implementation of the 10 Point Plan for 2009 - 2014 health sector priorities. This includes
3. The opening session

The Summit opening session was addressed by dignitaries who set the scene for the rest of the meeting:

- Ms Khosi Maluleke, Member of Mayoral Committee, welcomed participants on behalf of the Executive Mayor of Ekurhuleni, Mr Mondli Gungubele.
- Dr Gwen Ramokgopa, Deputy Minister of Health, delivered a keynote address on the challenges facing health researchers in South Africa.
- Dr Stella Anyangwe, WHO Representative in South Africa, presented ‘Global Research for Health’ on behalf of Professor Peter Ndumbe, Director of Research, Publications and Library Services of WHO Africa Region (AFRO).
- Professor Matthias Haus, Vice President of AstraZeneca (Southern and Sub-Saharan Africa), presented on research, development and innovation in South Africa’s private sector.

4. Health research in South Africa: What are the strengths, weaknesses, opportunities and threats?

Presentations analysed strengths, weaknesses, opportunities and threats of health research (SWOT analysis) to set the scene for the commissions to identify South Africa’s research priorities. The SWOT analysis addressed: research on the quadruple burden of disease (HIV, AIDS and TB, maternal and child health, non-communicable diseases, and violence and injury); state of basic and clinical research, operational and health systems research in achieving the Millennium Development Goals; and health research required to ensure an increased lifespan for South Africans.

4.1. HIV, AIDS and TB

Professor Salim Abdool Karim (University of KwaZulu Natal) presented on the strengths, weaknesses, opportunities and threats to research in HIV/AIDS and TB in South Africa. The health status of South Africans i.e. HIV and AIDS and TB has been reviewed.

Key strengths included:
1. A core group of highly skilled researchers in laboratory, clinical and epidemiological aspects of HIV/AIDS and TB;
2. Several large AIDS clinical research units in KwaZulu-Natal, Gauteng and Western Cape; and
3. An increasing number of high-quality HIV and TB-related publications in high-impact journals e.g. New England Journal of Medicine, Nature, and Science.

Weaknesses included:
1. Low level of funding for HIV/AIDS and TB research from the South African government (<30% of total funding for HIV/AIDS and TB research comes from local sources), associated with the low level of government investment on research and development (0.8% of GDP in 2003); (2) Small number of full-time equivalent researchers compared with other countries (2.2 FTE researchers per 1 000 total employed people in South Africa compared with 7.4 per 1 000 in Russia), and who are mainly confined to historically advantaged universities and communities; (3) Low research productivity e.g. the production of one paper per million inhabitants in 1991 - 2002, which is 50% lower than the research productivity of Cuba, which produces two publications per million inhabitants (also the world average); (4)-deficiency of original and innovative science, with researchers and research sites mainly serving as conduits and recruitment sites for large international investigators.
international research consortia; (5) lack of a national research strategy and leadership on research into HIV and AIDS and tuberculosis; (6) lack of a comprehensive national surveillance system for HIV/AIDS and TB; (7) absence of an organised pathway to translate new evidence into policy, programmes, and practice; and (8) dysfunctional government regulatory review system for trials and new medicines, exemplified by inordinate delays with the processing of applications by the MCC and some Provincial Health Research Councils inhibiting the research enterprise.

Opportunities included: (1) the new Ministry of Health produced the 10 Point Plan for re-engineering the health system, which identifies the strengthening of health research as one of its 10 pillars; (2) the NHRS which provides an opportunity to identify priorities; and (3) new discoveries in basic and clinical research of HIV/AIDS and TB presenting many options that need to be tested.

Five key threats to the South African health research enterprise were: (1) Dependence of health research in South Africa on foreign funding. Orientation of health research towards local needs is not possible if local investment is limited, as ‘he who pays the piper calls the tune’. (2) There was virtually no large-scale investment in the training of young health researchers. This has perpetuated the apartheid legacy of a virtual absence of black researchers among the middle and higher strata of health research leadership in South Africa. (3) A dearth of local innovation partly due to dependence on work designed by overseas investigators. (4) Poor co-ordination between basic science, clinical science, population science and health systems streams of research, in addition to the existence of inter-institutional silos. (5) No clear linkage between health researchers, policy makers, health programme developers and practitioners. These have resulted in South African research discoveries not being easily translated into public good.

4.2 Maternal and child health
Professor Sithembiso Velaphi (University of the Witwatersrand) presented on the strengths, weaknesses, opportunities and threats to research in maternal and child health in South Africa. The maternal and child health status of South Africans has been reviewed recently.

The key strength in maternal and child health was that South Africa already has information on mortality and morbidity, and we know what works in this field. However, at the present trajectory, South Africa will not meet the child and maternal mortality Millennium Development Goals because of the impact of HIV infection coupled with poor implementation of existing packages of care.

Current research weaknesses are: (1) lack of information on implementation and coverage of key packages of care; (2) poor information systems at facility level; and (3) low research literacy among all cadres of healthcare professionals owing to lack of emphasis on research in the curricula of medical schools and nursing colleges. This is likely to change – at least for medical specialists – as the HPCSA now requires registrars to complete a research dissertation as a condition for specialist registration.

Opportunities for progress are: (1) most perinatal and maternal deaths occur in hospital where enhanced interventions may be implemented; (2) the introduction of District Clinical Specialist Teams provides an opportunity for leadership and accountability to be enhanced where it really matters; and (3) the introduction of the Master of Medicine (MMed) research component for all registrars in South Africa provides an opportunity to conduct appropriate research with relevance to patient care.

Threats are: (1) excessive clinical workload owing to inadequate staffing of clinical units; (2) lack of funding of research training posts and inadequate support from universities; and (3) separation of research units from clinical departments, which prevents the mainstreaming of research in the training of health professionals.

4.3 Non-communicable diseases
Professor Debbie Bradshaw (Medical Research Council) presented on South Africa’s strengths, weaknesses, opportunities and threats to research in chronic non-communicable diseases. The chronic non-communicable diseases health status of South Africans had been reviewed recently. She identified several strengths, weaknesses, opportunities and threats in the field of research on non-communicable disease, similar to those listed by Abdool Karim.

Strengths include: (1) a small but effective group of highly skilled internationally recognised researchers in laboratory, clinical and epidemiological aspects of cardiovascular disease, chronic lung disease, diabetes, cancer and mental health; (2) a research infrastructure characterised by MRC and non-MRC research units in KwaZulu-Natal, Gauteng and the Western Cape, the Demographic Surveillance Systems in rural areas, and the clinical trial infrastructure in the public and private health systems; (3) a steady stream of high-quality publications in leading international journals such as Circulation, The Lancet, and the American Journal of Respiratory and Critical Care Medicine; and (4) the emerging disease surveillance system with improved birth and death registration, and an increasing number of national health surveys.

Weaknesses include: (1) a dearth of funding from local governmental and non-governmental sources for non-communicable disease research relative to the burden of disease; (2) a small number of ageing researchers who are mainly from the historically advantaged groups and affiliated with historically advantaged institutions; (3) dominance of contract clinical research from the pharmaceutical industry with extremely limited indigenous innovation and original science; (4) lack of a national surveillance system for morbidity data (such as the Cancer Registry) and quality of care (weakness also identified by Professor Velaphi); (5) lack of an ‘evaluation and synthesis platform’ to translate new evidence into policy, programmes and practice; and (6) lack of urban-based population research sites to complement the work in rural research sites.

Critical opportunities are: (1) the need to develop integrated models of care for infectious and non-infectious diseases, which incorporate lessons learnt in the management of HIV/AIDS; (2) indigenous knowledge systems and the abundant plant kingdom of South Africa must be harnessed for the discovery of drugs for the treatment and prevention of non-communicable diseases; and (3) the global focus on chronic non-communicable diseases and social determinants of health, and the WHO call to reduce deaths from non-communicable diseases by 2% per year, provide renewed impetus for action in this field.

Lack of investment in the training of new health researchers in non-communicable diseases was identified as a key threat to the development of health research in South Africa by Abdool Karim and Velaphi. In addition, Bradshaw identified the relative neglect of mental health and the potential for competition between the communicable disease community and the non-communicable disease groups for scarce resources. The heavy demand of clinical service and teaching on the small core group of academic physicians was also an impediment to progress in this field. Finally, there is a shortage of experienced researchers in the epidemiology, health economics and decision science of chronic non-communicable diseases.
4.4 Violence and injury
Dr Ashley van Niekerk (MRC, University of South Africa Safety and Peace Promotion Research Unit) presented on the strengths, weaknesses, opportunities and threats to research in violence and injury in South Africa.14 The health status of South Africans i.r.o. violence and injuries has been reviewed.15

The same strengths were in this field of research as Abdool Karim and Bradshaw identified, including: (1) small core group of internationally recognised researchers in the prevention of injury and violence; (2) limited but robust research infrastructure based on a collaboration between the MRC and universities that is conducting several surveillance and intervention studies; (3) regular publication in peer-reviewed journals and policy briefs; and (4) an emerging surveillance system for injury and violence involving several government departments and social sectors.

Critical weaknesses are the same as those identified by Karim, Velaphi, and Bradshaw: (1) very low levels of funding for injury and violence research from local governmental and non-governmental sources; (2) shortage of trained researchers and research leaders in this field; (3) lack of an integrated, comprehensive and inter-sectoral national surveillance system for determinants, incidence, prevalence, costs, and health outcomes of injury and violence; (4) lack of an integrated national policy and strategy for research on injury and violence; (5) lack of a national system to translate new evidence into policy, programmes and practice, and for monitoring and evaluating the impact of interventions.

Opportunities are: (1) effective interventions are known and can be implemented rapidly; and (2) new willingness among some ministries such as Transport and Police to improve the culture of law enforcement and safety.

Threats are: (1) low priority accorded to violence and injury as a priority health problem; (2) competing commercial interests related to the drivers of violence and injury e.g. alcohol, firearm and motor vehicle industries; (3) lack of human resource capacity and leadership, and (4) lack of a pathway for the implementation of evidence-based solutions.

4.5 Basic and clinical research in South Africa
Professor Wieland Gevers (ASSAf) presented on the strengths, weaknesses, opportunities and threats to basic and clinical research in South Africa.16 The status of clinical research in South Africans was reviewed and published by an expert panel of the ASSAf.7

South African scientific publishing in health research represents a small fraction of world output, but comprises a large proportion of scientific research production from Africa. Clinical research in particular has formed an important component of South Africa’s scientific output in terms of quantity and quality over the past 60 years. However, these strengths are tempered by the fact that the most recent growth in research outputs in basic and population sciences has resulted from foreign-funded programmes. Furthermore, although there have been more publications than previously from female and black authors, progress has been slow, and the proportion of older authors is rising.

The ASSAf report identified the following key weaknesses or barriers to progress: (1) inadequate public engagement with health research; (2) lack of planning, regulation, and co-ordination of health research; (3) absence of clinician scientists and dedicated clinical research centres; (4) poor funding of health research; and (5) absence of monitoring and evaluating health research in South Africa.

The ASSAf panel recommendations relevant to strengthening health research are:

4.5.1 Raise the level of funding for health research through the investment of at least 2% of the budget of the public health sector in research and development.
4.5.2 Invest in the development of a new human resource capacity for health research, through new training programmes, PhD fellowships, and national research chairs.
4.5.3 Create clinical research centres and health research institutes as national hubs in the academic health complexes and other national sites.
4.5.4 Strengthen the framework for the national strategic planning, regulation and coordination of health research, under the leadership of the NHRC.
4.5.5 Monitoring and evaluating the efficiency and appropriateness of research expenditure by the NHRC.

4.6. Operational and health systems research, and research to achieve the Millennium Development Goals
Dr Peter Barron (University of the Witwatersrand) presented on the strengths, weaknesses, opportunities and threats to operational and health systems research and the progress towards achieving this in South Africa.17 South Africa’s progress in the health-related MDGs has been reviewed recently.18 His salient features were: (1) progress by South Africa in achieving the health-related MDGs has been reviewed;17 and (2) the health system is notoriously globally for not using available information to make decisions, especially in health system research. South Africa is fortunate in having a wealth of research expertise in the MRC, universities and non-governmental sector (e.g. Health Systems Trust), and an increasing number of students conducting health systems research at masters and doctoral levels. However, there is virtually no culture of using scientific evidence for decision making; most decisions by the ministry and health managers are made ‘intuitively’ and ad hoc. Furthermore, most health research activity in South Africa is oriented towards academic purposes, and does not address important health systems questions. It is no surprise therefore that most of the research output does not feed into decision making.

The present great opportunity is that the DoH at provincial and national levels needs evidence on which to base health policy and decisions about the management and delivery of healthcare. The new requirement for all medical specialist trainees to complete a research project for registration purposes provides the system with the opportunity to conduct relevant research.

4.7 Research on the outcomes of the National Service Delivery Agreement of the Department of Health
Dr Thabang Mosala (DoH) presented on the strengths, weaknesses, opportunities and threats to operational and health systems research and progress made towards achieving this in South Africa.19 The strengths, weaknesses, opportunities, and threats addressed by the preceding 6 speakers were reiterated. Key issues were:

1. A framework of surveillance datasets on infectious diseases, non-communicable diseases (based on household surveys), violence and injury, and maternal and child mortality is being developed.
2. Data sources need to be integrated between academia, governments and the private sector to develop a comprehensive national system of surveillance of the burden of disease among South Africans.
3. Key weaknesses were the lack of prevalence studies of TB, and poor infection control measures in health institutions. The emergence of drug resistance is a major threat to TB control in the country. This
was counterbalanced by the progress made in the development of rapid diagnostic tests for tuberculosis (such as GeneXpert), funding of new drugs and development of vaccines for tuberculosis. The main challenge was to create greater collaboration and synergy between the Ministry of Health and the significant groups of researchers who are addressing these challenges in combating the quadruple epidemics affecting South Africans.

Dr Mosala concluded that if research is to contribute to increasing the lifespan of South Africans, attention must be focussed on interventions to reduce mortality from HIV/AIDS, TB, chronic non-communicable disease, violence and injury, and conditions that cause perinatal and maternal mortality.

5. What research is required to improve the health of South Africans?

In breakaway Commissions, delegates were asked to identify the priority research questions for the 5 key national health outcomes:

1. What research is required to achieve an increase in life expectancy?
2. What research is required to reduce maternal and child mortality rates?
3. What research is required to combat HIV/AIDS and TB?
4. What research is required to strengthen the effectiveness of the health system?
5. How can South Africa build its health innovation system and ensure that the objectives of the WHO Global Strategy and Plan of Action for Public Health Innovation and Intellectual Property are achieved?

5.1. What research is required to achieve an increase in life expectancy?

The Commission noted (among others) the WHO’s Commission on Social Determinants of Health final report (2008) on ‘Closing the gap in a generation: health equity through action on the social determinants of health;’ the on-going HSRC National Health and Nutrition Examination survey; and the ASSAf report on HIV/AIDS, TB & Nutrition.

In considering the research required to achieve an increase in life expectancy from 54 to 58 (males) and from 57 to 60 (females) by 2014 (the NSA target), substantial potential overlap was noted with the remit of the other four Commissions. Maternal and child mortality and HIV/AIDS and TB were not discussed. Discussions therefore focused on non-communicable diseases (NCDs), communicable diseases other than HIV/AIDS and TB, trauma, and social determinants of health.

The Commission agreed with the WHO that measuring and understanding the problem and assessing the impact of policy and action are prerequisites for success. In many areas, translation of existing research into policy and monitoring the effect of policy implementation would be at least as important as carrying out new research.

The Commission recommended that research should focus on the following priorities:

5.1.1 Acquiring accurate statistical data on the causes of death in South Africa to define the status quo
5.1.2 Acquiring accurate data on the prevalence and incidence of NCDs in the population through active case finding
5.1.3 Understanding the barriers to translation of existing evidence into policy and existing policy into implementation, including
5.1.3.1 Assessing where and why existing health policies are not being implemented
5.1.3.2 Assessing whether known interventions are being made and whether they are working effectively in different provinces/districts
5.1.4 Strengthening health promotion and disease prevention through:
5.1.4.1 Identification and validation of diagnostic and prognostic biomarkers of NCDs to enable early screening for disease and monitoring of treatment responses
5.1.4.2 Identification of environmental and genetic risk factors of disease, including identification of gaps in knowledge on the social, cultural and economic determinants of disease in South African populations
5.1.4.3 Identification of the barriers to healthy behavioral choices by individuals, and the potential impact of community-driven health interventions.
5.1.5 Prevention of violence and injury.

5.2 What research is required to reduce maternal and child mortality rates?

The Commission adopted as its point of departure the Report of the National Committee on Confidential Enquiries into Maternal Death (NCCEM)20 in the triennial Saving Mothers reports (National Department of Health, 2008).21 Key research questions for maternal and child mortality rate reduction were:

5.2.1 Research priorities to reduce maternal mortality
5.2.1.1 Determine the impact of social determinants related to maternal death. This necessitates collaboration with experts (water, education, housing, nutrition, electricity) to ascertain minimum standards.
5.2.1.2 Ascertain the quality of maternal services (antenatal care, reproductive education, postnatal care).
5.2.1.3 Review the implementation programme in specific districts of the ‘ten recommendations’ arising from the Saving Mothers report.21
5.2.1.4 Ascertain how the District Health Information System (DHIS) data may be strengthened (maternal death registration).

5.2.2 Research priorities to reduce child mortality

Priority should be given to research that:
5.2.2.1 generates a better understanding of neonatal infections (representing 1/3 of deaths)
5.2.2.2 ascertains the HIV profile in children <5 years (pattern might have changed following the widespread use of anti-retroviral drugs)
5.2.2.3 determines the impact of vaccines – particularly on diarrhoea and acute respiratory infections in children <5 years
5.2.2.4 ascertains why 40% of deaths occur outside of healthcare facilities.

5.2.3 What research is required to combat HIV/AIDS and TB?

The commission prioritised research questions that seek to:
5.2.3.1 identify and implement effective interventions to prevent the spread of HIV/AIDS and TB
5.2.3.2 assess the epidemiology, treatment and prevention of multi-drug resistant and extensively drug-resistant TB
5.2.3.3 assess the interaction of HIV/AIDS and TB with non-communicable diseases such as diabetes, cardiovascular disease and mental health
5.2.3.4 develop safer and more effective vaccines for HIV infection and TB
5.2.3.5 develop new anti-TB drugs to reduce treatment duration and improve completion rates
5.2.3.6 develop rapid, reliable, accessible, point of care diagnostic methods for tuberculosis;
5.2.3.7 monitor the uptake and outcomes of treatment for HIV/AIDS and TB.

5.3 What research is required to strengthen the effectiveness of the health system?
The Commission identified research required to strengthen the effectiveness of the health system, namely:
5.3.1 How do we determine staffing levels for equity and efficiency?
5.3.2 What is the impact of interdisciplinary/multidisciplinary teams on access and equity?
5.3.3 What is needed to effectively integrate e-health into the health system, including management of hospital systems, telemedicine, tele-education and m-health?
5.3.4 How do we measure health outcomes and current status quo?
5.3.5 Why are we so poor at meeting patient expectations, attitude, cleanliness?
5.3.6 How do we identify pockets of excellence in SA and replicate these elsewhere?
5.3.7 How to best measure and improve the rational use of drugs by patients and healthcare workers?
5.3.8 How do we strengthen operational efficiencies at all levels, including the roles of technology and infrastructure?
5.3.9 How do we deal with challenges of inadequate availability/ utilisation of resources in public health?

5.4 How can South Africa ensure that the objectives of the WHO Global Strategy and Plan of Action for Public Health Innovation and Intellectual Property are achieved?
The Commission discussed how South Africa can build its health innovation system and ensure that the objectives of the WHO Global Strategy and Plan of Action for Public Health Innovation and Intellectual Property are fulfilled (presentation Ms Glaudina Loots (Department of Science and Technology)).
The broad objectives of the WHO GSPOA are:
5.4.1 prioritising and promoting the research and development into diseases that affect developing countries
5.4.2 building and improving the innovative capacity for health research and development, especially in developing countries
5.4.3 improving the transfer of technology between developed and developing countries
5.4.4 applying and managing intellectual property to contribute to innovation and promote public health
5.4.5 improving delivery and access to health products and medical devices
5.4.6 developing innovative and sustainable financing mechanisms for research and development
5.4.7 establishing implementation monitoring, evaluation and reporting mechanisms.
The Public Health Innovation Forum was formed to carry out the mandate of the WHO GSPOA under the auspices of the NHRC and the Health Innovation Unit of the Department of Science and Technology.

5.5 Recommendations of the NHRC on the findings of the Summit: Strengthening Research for Health, Innovation and Development in South Africa for the period 2011 - 2014
The Summit has been very helpful to the NHRC and to the DoH in identifying the key priorities for strengthening health research, innovation and development in South Africa. The 7 findings of the Summit have a similar number of actionable recommendations. The first 5 recommendations can be implemented immediately by the DoH through the usual mechanisms, outlined below. The last 2 recommendations require further work, which could best be achieved through the development of a White Paper as a basis for revising the National Health Research Policy of 2011.

Recommendations for immediate implementation are:
7.1 The DoH should embark upon a budgetary process of progressive realisation of the allocation of 2% of the national health budget to research and development, as agreed in Mexico (2004) and Bamako (2008). This target should be achieved over the next 3 years and will lift expenditure from the current 0.38% of the budget, and provide over R2 billion for health research by 2014. The Minister of Health is obliged to ensure that South Africa lives up to its international undertakings.
7.2 The new funding should be used to at least double the number of health researchers in South Africa over the next 5 years and may be achieved by creating a National Health Scholars Programme under the purview of the NHRC to fund PhD studentships, postdoctoral fellowships, mid-career research posts, and research...
chairs in all fields of healthcare including medicine, dentistry and nursing. This new strategic programme may be co-ordinated by the NHRC and implemented by the MRC and other science councils.

7.3 The new funding should also be directed at developing the health research infrastructure of academic health complexes. The priority identified by the ASSAf Report is the creation of clinical research centres in the academic health complexes based on a Primary Health Care approach and through a competitive process. This new strategic programme may be co-ordinated by the NHRC and implemented by the MRC and other science councils.

7.4 The new funding should also be used to create a National Priority Health Research Fund to support research programmes that address research priorities related to the quadruple burden of disease, health systems strengthening, and combating the social determinants of health (i.e. that seek to achieve the outcomes of the NSDA of the DoH). These funds should be tied to measurable achievements of the objectives of the NSDA. This new strategic programme may be co-ordinated by the NHRC and implemented by the MRC and other science councils.

7.5 The inhibitory effect of the inefficient administrative processes of the MCC on clinical research has been detailed in the ASSAf report and by many contributors to the Summit. A consultative process of stakeholders must be embarked upon to address this issue, possibly through a national meeting initially convened by the Ministry of Health.

Recommendations for further development through a White Paper as a basis for the revision of the National Health Research Policy of 2001 are:

7.6 Development of a National Planning, Co-ordination and Translation System for Health Research, as a function of the National Health Research Committee.

7.7 Development of a monitoring and evaluation mechanism for the performance of the health research system, as a function of the NHRC.

8. The way forward

The recommendations will be presented to the Ministry of Health for consideration for incorporation in the 10 Point Plan, and for implementation. The outcome of the Summit will serve as the Programme of Action for the NHRC for the remainder of its term.

9. Conclusion

The Summit has been enormously helpful to the NHRC and to the DoH in identifying the key priorities for strengthening health research, innovation and development in South Africa. Its 7 findings have a similar number of actionable recommendations. The first 5 recommendations can be implemented immediately by the DoH through the usual mechanisms. The last 2 recommendations require further work, which could best be achieved through the development of a White Paper as a basis for revising the National Health Research Policy of 2001.

The 2010 - 2013 NHRC is grateful to the participants of the Summit for providing the basis for the priorities that have been set for its work over the remainder of its term.

References


