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PO Box 72135, Lynnwood Ridge, Pretoria, South Africa, 0040
Tel: +27 12 349 6600 • Fax: +27 86 576 9520
E-mail: admin@assaf.org.za

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The Academy of Science of South Africa (ASSAf) was inaugurated in May 1996. It was formed in response to the need for an Academy of Science consonant with the dawn of democracy in South Africa: activist in its mission of using science and scholarship for the benefit of society, with a mandate encompassing all scholarly disciplines that use an open-minded and evidence-based approach to build knowledge. ASSAf thus adopted in its name the term 'science' in the singular as reflecting a common way of enquiring rather than an aggregation of different disciplines. Its Members are elected on the basis of a combination of two principal criteria, academic excellence and significant contributions to society.

The Parliament of South Africa passed the Academy of Science of South Africa Act (No 67 of 2001), which came into force on 15 May 2002. This made ASSAf the only academy of science in South Africa officially recognised by government and representing the country in the international community of science academies and elsewhere.



Reconceptualising
Health Professions Education
in South Africa

CONSENSUS STUDY REPORT CONCISE



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1 FOREWORD

The Academy of Science of South Africa (ASSAf) has a mandate to provide evidence-based science advice to policymakers. This consensus report is in fulfilment of this mandate.

The training of healthcare professionals is a topic that impacts on us all. The findings and recommendations of this study are thus likely to be of interest to a wideranging audience, over and above policymakers and educators. The challenges facing the health education sector are enormous and are deeply embedded in our inequitable society. How we train our healthcare professionals to address these challenges is the topic under scrutiny in this report.

The ten-member consensus study panel, under the leadership of Prof Jimmy Volmink, is to be commended on their diligence and on vast amount of evidence that they have amassed to inform the recommendations, both pedagogic and systemic, that they have made. This report is a product of their volunteer commitment and I thank them for their dedication to the task and look forward to the debates that will ensue following the release of the report.

I thank all those who were involved in the preparation and production of this report, particularly the Academy staff who supported the panel in their work.

Professor Jonathan Jansen
President: Academy of Science of South Africa



2 ACKNOWLEDGEMENTS

This report is the joint work of a ten-member study panel appointed by the Council of the Academy of Science of South Africa (ASSAf). Each panellist has agreed to the specific formulation of the report and to its conclusions and recommendations. I thank them all for their inputs and robust discussions during the course of this study.

The study panel members were: Prof Jimmy Volmink, Chairperson (Stellenbosch University), Prof Judith Bruce (University of the Witwatersrand), Prof Henry de Holanda Campos (Federal University of Ceara, Brazil), Prof Jan de Maeseneer (University of Gent, Belgium), Prof Sabiha Essack (University of KwaZulu-Natal), Prof Lionel Green-Thompson (University of the Witwatersrand), Prof Khaya Mfenyana (Walter Sisulu University), Prof Steve Reid (University of Cape Town), Prof Ben van Heerden (Stellenbosch University) and Dr Gustaaf Wolvaardt (Foundation for Professional Development).

The report was reviewed by three external reviewers: Prof Susan van Schalkwyk (South Africa) from Stellenbosch University; Dr Elsie Kiguli-Malwadde (Uganda) from the African Centre for Global Health and Social Transformation (ACHEST); and Dr Charles Boelen (France) who is the former Co-ordinator of the World Health Organisation Programme on Human Resources for Health. Their valuable inputs and critique have enriched the report.

Various researchers have contributed to the report through written submissions. Ms Michelle Galloway is thanked for overall editing, writing and literature searches. Others who have contributed and who are thanked include: Prof Juanita Bezuidenhout, Dr Mark Blecher, Prof Julia Blitz, Dr Terence Carter, Prof Ian Couper, Mr Saul Kornick, Ms Nokwazi Makanya, Dr Reno Morar, Dr Penny Orton, Prof Di Parker, Ms Elizabeth Pienaar, Dr Nandi Siegfried, Prof Ted Sommerville, Dr Stefanus Snyman, Mr Werner Swanepoel and Ms Mariette Volschenk.

This study was financially supported through generous funds from the Stellenbosch University Rural Medical Education Partnership Initiative (SURMEPI), which is greatly appreciated. Special thanks go to Prof Marietjie de Villiers and Dr Kalay Moodley who facilitated and assisted with this process.

The President of ASSAf, Prof Jonathan Jansen, and the Council are acknowledged for their support throughout the project.

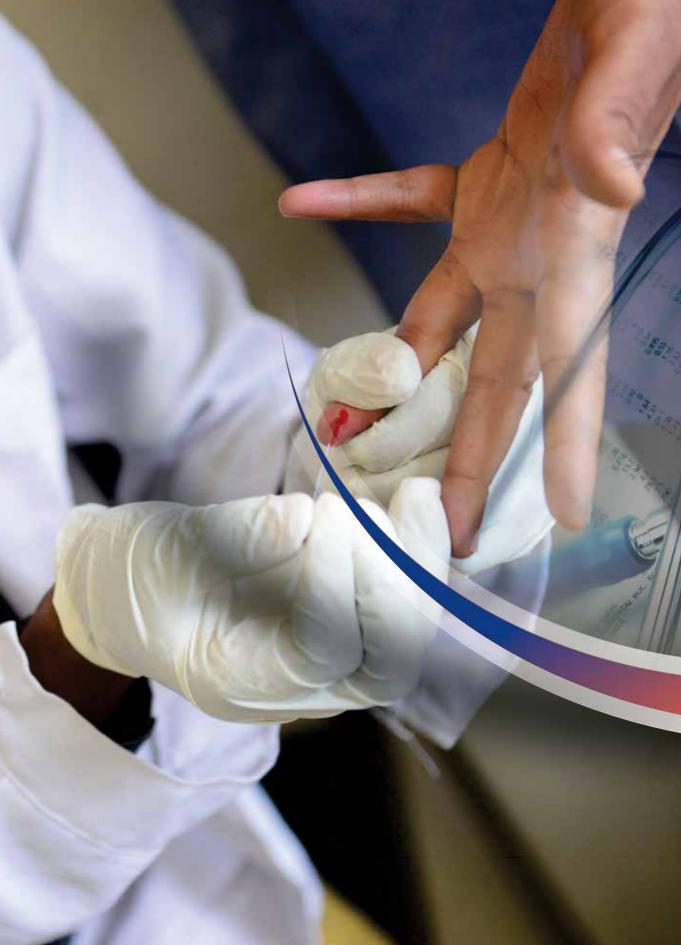
The staff of the Academy, in particular, Prof Roseanne Diab, Executive Officer is thanked for her contribution and support. The Project Officer, Ms Phakamile Mngadi, copy editor, Ms Patricia Scholtz, and LedCool (Pty) Ltd are thanked for their attention to detail and the production of the report.

The panel met eight times between April 2014 and September 2016; they also held two consultative workshops on 31 July 2015 and on 12 September 2015 (as part of the South African Association of Health Educationalists (SAAHE) Conference), as

part of their information-gathering process. Speakers and facilitators at the 31 July 2015 Workshop were: Dr Stefanus Snyman, Dr Prinitha Pillay, Dr Margaret Matthews and Mr Vernon Solomon, who are acknowledged for their valuable contribution. Ms Heather Erasmus of Write Connection was the scribe at the SAAHE workshop and is acknowledged for her contribution.

Professor Jimmy Volmink Panel Chairperson





3 SUMMARY

3.1 Background

South Africa's quadruple burden of disease, shortage of trained health personnel, particularly in under-resourced and rural areas, and the ongoing higher education crisis places unique challenges on the health sciences education (HSE) sector. The goal of health professional education (HPE) is to produce a cadre of well-trained and appropriately skilled health workers at all levels of the healthcare system who are able to work together effectively to ensure universal healthcare coverage and advance health for all. Globally, HPE is changing dramatically in keeping with changing patient demands, healthcare systems and technologies.

This report reflects the consensus of a study panel, working under the auspices of the Academy of Science of South Africa (ASSAf), who were tasked with assessing HPE in South Africa with a view to providing evidence-based advice to decision-makers on how HPE might be transformed to improve the health of the nation. The report aims to address the full value chain in health sciences education from student selection, through pedagogical developments, unpacking of the current bottlenecks in the system and looking at how the future health sciences education system can be financed and regulated.

3.2 Study Brief

The brief of this study panel appointed by the ASSAf Council was to examine the most relevant and reliable evidence relating to the questions listed below, and to make evidence-based recommendations that are appropriate and feasible.

The consensus study aimed to:

- a Reflect on the mix of personnel and the skills required to address the continuum of care from health promotion and prevention to therapeutic and curative care to rehabilitation and palliative care, specifically:
 - How does one develop healthcare professionals (HCPs) who are responsive to the needs of the communities in which they work?
 - What types of personnel would advance equity in healthcare delivery?
- b Adopt a statement of the broad competencies which HCPs should acquire through their education and training, with reference to the core competency framework for health professions training that was developed by the Medical and Dental Professions Board, based on the CanMEDS 2005 core competency framework, specifically:
 - What are the key competencies necessary to promote health and address the disease burden of the nation in a comprehensive manner?

- What graduate attributes including but not limited to health advocacy and leadership development would best serve the priority health needs of South African communities?
- c Develop an appropriate health science education model for the continuum of education from further education and training through undergraduate and postgraduate education through to the maintenance of professional competence encompassing the development of educators, students and appropriate curricula, specifically:
 - Engender the requisite competencies with respect to, inter alia, content, pedagogy, assessment, the teaching and learning process, the people (teachers, trainers, students) and places of learning (classroom, health facility and community training platform).
 - Address equity of access to education and training which translates to equity of outcome, i.e. access for success.
- d Confirm the benefits of the inter-professional team in the delivery of good health.
 - Promote a multi-disciplinary approach to healthcare in training and practice.
- e Propose an adaptable and flexible approach to the accreditation and regulatory framework for health professionals education and training.
 - Identify and harness synergies between regulatory and statutory mandates of the Department of Higher Education and Training (DHET), the Department of health (DoH) and professional councils and boards, specifically related to quality assurance, accreditation and compliance with the Higher Education Qualifications Framework (HEQF).

The study was undertaken by a panel appointed by the ASSAf Council. The panel members' biographies are given in the Appendix.

3.3 Methodology

The Academy follows a standard methodology, adapted from the United States (US) Academies, when undertaking such a study. This includes drawing on the expertise of key experts in the field either as authors or key informants, and review of local and international academic publications, with particular emphasis on review articles, using search terms relevant to the matter and by focusing on institutions known to undertake systemic reviews.

The consensus study panel serves in a voluntary capacity to drive and implement the study. The panel, guided by its chairperson, selects from a range of methodologies in order to meet the brief provided by the ASSAf Council. For this particular consensus study the methodology included:

a holding a public workshop with invited speakers and/or panel discussions;

- b holding panel workshops to debate and resolve particular questions and issues:
- c delegating initial analysis of topics of the study to individual members or sub-groups of the panel;
- d any other ways of working towards a proper understanding of the evidence and information that can help to complete the study.

The methodology ensured that each key question would engender responses that would be (1) evidence-based; (2) include local experiences/relevance (with examples of innovation); and, (3) make contextualised recommendations.

3.4. Key Findings and Recommendations

The key challenges in HPE were identified and recommendations have been made on how to overcome these challenges in a manner that will revitalise the education and training of health professionals and simultaneously meet the population's needs.

3.4.1 STUDENT SELECTION

Recommendation 1: There is a need to reconceptualise student selection with the aim of evaluating a broader set of criteria than those currently in use. Universities should conduct rigorous research to determine which selection criteria and student support measures best predict student success and promote the attainment of the desired graduate competencies in the South African setting. This is needed to inform and promote evidence-based interventions most likely to advance equity of student access and outcome. It is important to ensure demographically and geographically representative student cohorts, taking due cognisance of the challenges within the secondary education sector.

Recommendation 2: There is a need to institute academic and non-academic monitoring, development, support and mentoring programmes to translate access into retention and success. In this respect, the professional councils should introduce mandatory educational qualifications, certification or professional development for health professional educators and develop metrics of professional standards, and feed measurement results back into student selection. The DoH should provide an expanded, appropriately staffed clinical training platform spanning rural and urban areas across all level of healthcare. The DHET should increase funding for academic development and support programmes at universities and adequately fund students to ensure that access translates to retention and success.

3.4.2 SCALING UP THE HEALTH WORKFORCE

Recommendation 3: Public sector academic institutions need to be strengthened to scale up the production of HCPs.

a National Treasury needs to allocate more funding for the provision of adequate training facilities and infrastructure.

- b DHET, working together with the DoH, needs to expand the clinical training platforms across both public and private practice environments in anticipation of the move to a National Health Insurance system.
- c The private sector needs to play a role in addressing shortages across all cadres of HCPs by offering training, extending the clinical training platform and introducing international scholarship programmes.
- d Academic institutions need to make greater use of information and communications technology to augment classroom tuition to increase production and reduce costs.

Recommendation 4: The DoH needs to improve human resources planning and this should be supported by a regulatory environment that tracks and reports on key indicators.

- a A minimum national dataset of key human resources for health information that allows adequate strategic planning should be established and made publicly available.
- b The DoH needs to establish a multi-stakeholder forum to track and advise on HRH issues in line with the Global Health Force Alliance recommendations on the composition for Country Coordination and Facilitation mechanisms.

Recommendation 5: Strategies to improve retention during studies and to improve retention in the profession and in the country need to be scaled-up and strengthened and new strategies need to be implemented.

- a A multi-stakeholder and multi-sectoral approach (involving academic institutions, DoH, DHET, professional councils and non-governmental organisations) is needed to improve retention.
- b The retention strategies need to be part of accreditation requirements within a policy environment that tracks student retention rates and incentivises institutions to improve such rates.

3.4.3 STENGTHENING HEALTH PROFESSIONALS' EDUCATION FOR PRACTICE IN RURAL AND UNDERSERVED AREAS

Recommendation 6: Selection and training should be orientated towards addressing inequity and meeting the needs of the most underserved, through supporting a primary care focus and increasing the supply of HCPs to rural areas.

- a In their student selection policies, higher education institutions should prioritise applicants from rural and remote areas who meet the minimum academic criteria, in order to address the urban-rural maldistribution of graduates in the country.
- b Faculties should explore local adaptations of various models of rural education, with a stipulated minimum of clinical time spent in rural areas for each curriculum.
- c Whatever model is chosen should be accompanied by an implementation plan that builds on the strengths of rural medical education approaches

whilst overcoming the many challenges of training students in remote locations. Community-oriented primary care is recommended as a strategy to support service and learning, as this approach meets all stakeholders' needs in both rural and urban settings, especially in underserved areas.

Recommendation 7: Professional councils (such as the HPCSA), supported by the DoH must design and implement a monitoring system to track progress in HPE for practice in rural and underserved areas.

- a Health sciences faculties need to embrace social accountability in their training.
- b Health sciences faculties must demonstrate impact on service delivery through the distribution of their graduates and the extent to which they are supporting primary healthcare in rural and underserved areas after completion of community service.

3.4.4 INTER-PROFESSIONAL EDUCATION AND COLLABORATIVE PRACTICE

Recommendation 8: To enable IPECP to become sustainably embedded in HPE in South Africa, a multi-stakeholder, national working group should be formed to develop and guide the implementation of a strategic plan for IPECP.

The working group should consist of patient representation, health professions and student representatives, IPE experts/practitioners, project planners, service providers and professional boards. The plan should include a detailed stakeholder analysis and plans for stakeholder engagement and buy-in. It should also delineate an IPECP competency framework and an inter-professional education curriculum, based on this competency framework, for undergraduate, postgraduate and continuous professional education of HCPs.

3.4.5 CORE COMPETENCIES OF SOUTH AFRICAN HEALTHCARE PROFESSIONALS

Recommendation 9: A hybrid competency-based education model that emphasises the process of learning and the achievement of learning outcomes is recommended.

The framework and processes regulating and governing HPE in South Africa should, at all regulatory levels, be aligned with the transformation imperatives for HPE highlighted in this report. An Inter-Professional Regulatory Council Working Group is recommended to build consensus around a set of generic competencies for all HCPs. Transformation of learning among HCPs will require a meaningful combination of teaching, learning and assessment approaches.

3.4.6 FACULTY DEVELOPMENT

Recommendation 10: Health professions educators should become more responsive to their internal learning community, as well as to the community beyond the institution.

This comprises a progressive process including: a supportive institutional climate which values teaching, recruitment and integration of faculty; competency for change agency; transformative educational strategies; adaptive education communities; and scholarship and reflection.

3.4.7 INTERNSHIP AND COMMUNITY SERVICE IN SOUTH AFRICA: IMPLICATIONS FOR UNDERGRADUATE EDUCATION

Recommendation 11: Universities should take responsibility for education and professional development from undergraduate years through to internship and community service.

This is likely to improve the alignment of undergraduate education and health system outcomes through skills development, promotion of advocacy and collaboration. Regular interaction between CSOs and the undergraduate programme committees and students of their universities, would improve the alignment of undergraduate education and the health system outcomes. The skills and capacity of students as potential change agents for health system change and improvement, including advocacy, could be developed. Project-based health promotion through community-oriented care should be an essential component of every HCP curriculum. Longitudinal integrated clinical models of learning in communities, in order to stimulate student advocacy and challenges to power, could be promoted. Partnership models of teaching and learning should be developed which use patients as teachers and are participative and collaborative.

Recommendation 12: Medical internship should be renamed 'Postgraduate Years 1 & 2' and community service should be renamed 'Postgraduate Year 3'.

This would signal a shift from the mindset of interns as the lowest level of medical worker to the active development of young professionals better prepared for the public health service. Structured reflection sessions facilitated by senior clinicians and academics should be mandatory for interns to promote the conscious development of a professional identity through mentoring. During community service there needs to be greater grounding and support in primary and community-oriented care for interns and CS doctors to be able to tackle the broader challenges of healthcare in a given district, as opposed to being exclusively hospital-based.

Recommendation 13: Earlier differentiation of postgraduates into specialties should be considered by the professional councils.

The current nine years is a long period for the production of a generalist doctor. During the CS year there needs to be active support for preparation for specialty training.

3.4.8 FINANCING HEALTH SCIENCES EDUCATION IN SOUTH AFRICA

Recommendation 14: Take urgent action to improve governance of health sciences funding by strengthening the capacity and accelerating the momentum of the JHSEC.

Strengthening governance structures and building a joint vision is the critical first step without which detailed costing and planning activities might not produce their full intended benefit. It is important that JHSEC be fully established as originally intended, including stakeholder parties. If the appropriate governance structures are in place and strong, the necessary planning and costing studies, and other investigations such as on the design of joint agreements would be facilitated. The JHSEC membership needs to be strengthened by enabling it to draw on deans of HEIs and provincial HODs. It also needs to facilitate a framework for provincial committees that can undertake detailed negotiations around issues such as joint agreements and training plans, and make recommendations to relevant Ministers, and, where necessary, guide and play a role in adjudicating disputes.

Recommendation 15: Improve human resources for health planning, resource allocation and budgeting.

If the appropriate governance structures are in place and strong, the necessary planning and costing studies, and other investigations such as on the design of joint agreements, and so forth would be facilitated. The following issues should receive priority:

- Adoption of a rational, systemic and integrated approach to planning health sciences education and training.
- b A long-term HRH national plan for the expansion of the supply of skilled health practitioners based on demand and supply-side modelling.
- c The Treasury should consider introducing a form of performance-based programme budgeting which more regularly adjusts the higher education funding formula for volume increases (in the context of an agreed long-term national plan).
- d Consistently and progressively align the funding streams to volumes and unit costs by discipline for preclinical and clinical training which would bring a more rational, systemic and integrated approach to the fore.
- e Mechanisms to recoup education and training costs as a return on investment strategy JHSEC to commission work that will provide the policy evidence for the implementation of various mechanisms to ensure retention of HCPs and securing return on investment into HCP education and training.

Recommendation 16: Introduce joint governance structures at institutional level.

At the institutional level, provinces have tended to assume complete responsibility and authority over health institutions such as hospitals, and have generally moved to distance HEIs from this function. However, given the centrality of skills development in South Africa, the joint nature of the service-teaching-research platform and severe quality problems in many parts of the public health sector, strong consideration should be given to reviving the concept of the academic health sciences complex

with a joint governing board. This model, if properly supported, has the potential to radically improve skills development, institutional governance and quality, and could form a strong basis for strengthening alignment of interests and more effective service delivery, as well as health sciences education. The model also has great relevance in the context of greater institutional decentralisation required for the purchaser-provider split under NHI.

3.5 Conclusion

In conclusion, this report provides a consensus view on transformative efforts needed with respect to the education and training of HCPs in South Africa to consolidate current and enhance new efforts to address the severe quantitative and qualitative shortfall in the health workforce and improve health. In fulfilling its brief the panel examined the most relevant and reliable evidence, where available, with the goal of making evidence-based recommendations that are appropriate and feasible in our setting. The panel hopes it will encourage ongoing debate and discussion on this vital topic.





APPENDIX

Members of the Study Panel

1 Prof Jimmy Volmink (Chairperson), MASSAf

Prof Volmink (BSc, MBChB, DCH, MPH, DPhil) is Professor of Clinical Epidemiology and Dean of the Faculty of Medicine and Health Sciences at Stellenbosch University. He was the Founding Director of Cochrane South Africa.

2 Prof Judith Bruce

Prof Bruce (B Cur [Nursing], MSc [Nursing], PhD) is the Head of the School of Therapeutic Sciences at the Faculty of Health Sciences, University of the Witwatersrand. Her academic and professional experience includes clinical work at hospitals in the Western Cape and Gauteng, and teaching general nursing science at the Coronation Nursing College.

3 Prof Sabiha Essack

Prof Essack (B Pharm, M Pharm, PhD), is the South African Research Chair in Antibiotic Resistance and One Health and Professor of Pharmaceutical Sciences at the University of KwaZulu-Natal and served as the Dean of the Faculty and later School of Health Sciences for ten years. She is an elected member of the Council of the Academy of Sciences of South Africa.

4 Prof Lionel Green-Thompson

Prof Green-Thompson (MBBCh, DA [SA], FCA [SA] MMed) is a Clinical Coordinator in the Centre for Health Science Education at the University of the Witwatersrand. He is also a practising anaesthesiologist.

5 Prof Khaya Mfenyana

Prof Mfenyana (BSc, MBChB, MFamMed, Fellowship of the College of Family Physicians and Masters degree in Educational Administration) is the Executive Dean of the Faculty of Health Sciences at the Walter Sisulu University.

6 Prof Steve Reid

Prof Reid (BSc Med, MBChB, MFamMed, PhD) is a Family Physician with extensive experience in clinical practice, education and research in the field of rural health in South Africa. In January 2010, he took up the post of Glaxo-Wellcome Chair of Primary Healthcare at the University of Cape Town.

7 Prof Ben van Heerden

Prof van Heerden (MB ChB, MSc, MMed) is the Director of the Undergraduate Medical Education Unit at the Faculty of Medicine and Health Sciences of Stellenbosch University. He is registered with the Medical and Dental Professions Board as a specialist in both nuclear medicine and internal medicine.

8 Dr Gustaaf Wolvaardt

Dr Wolvaardt (MBChB, MMed (Int), FCP [SA], AMP, PGCHE) heads the Foundation for Professional Development, a private institution of higher education with a focus on catalysing social change through developing people, strengthening systems and providing innovative solutions.

9 Prof Henry De Holanda Campos (Brazil)

Prof De Holanda Campos (MD, MSc, PhD (Nephrology), Fellowship in Medical education) is a full Professor of Internal Medicine, Faculty of Medicine, Federal University of Ceará, Fortaleza, Brazil. He is also the Vice-Rector and has been the Director of the FAIMER Brazil Regional Institute since 2007.

10 Prof Jan de Maeseneer (Belgium)

Prof Jan de Maeseneer (MD, PhD) Head of Department of Family Medicine and Primary Healthcare, Vice-Dean Strategic Planning, Faculty of Medicine and Health Sciences, Ghent University; Director International Centre for Primary Healthcare and Family Medicine, Ghent University, Belgium.





