

Epitomising hope: From poverty to world-class healer



Her shy, humble demeanour belies the passion and tenacity it took just to keep studying, sitting by the light of a small paraffin

lamp late into many nights in her tiny Eastern Cape shack – all so she could achieve the matric marks she knew would one day help her become a doctor.

Her *Goko* (grandmother) chided her for using too much precious paraffin in the small township near Peddie in which she grew up. Today, her *Goko* would burst with pride to hear that Dr Neliswa Gogela (36) is the country's first recipient of a R2.1 million grant to study liver transplantation at one of the world's top clinical research hospitals.

Dr Gogela is one of the first recipients of this new local fellowship, a R100 million private initiative that aims to help address the crisis in clinical research in South Africa.

Dr Gogela, a University of Cape Town (UCT) hepatologist currently working towards her PhD, will travel with her pharmacist husband Thibedi Mafokwane and sons Matome (8) and Itumeleng (16 months), to work for a year at Massachusetts General Hospital (MGH) in Boston. There she will help transplant 50 livers, 10 times as many as she would have been able to do in a year at Groote Schuur Hospital. Her fellow surgeons will be world leaders in the field.

Dr Gogela is one of the first recipients of this new local fellowship, a R100 million private initiative that aims to help address the crisis in clinical research in South Africa. Launched seven years ago, the Discovery Foundation, a trust fund belonging to Discovery Health, plans to fund the training of 300 medical specialists over 10 years. So far, it has spent R84 million on 169 specialists doing their Master's degrees and PhDs.

The new MGH fellowship will be awarded annually to deserving candidates across disciplines, and from medical campuses throughout the country. Taken together, the Discovery awards are a significant boost to the government's own programme for revitalising the ageing and fast-dwindling cohort of clinical teachers – less than 1% of all healthcare professionals in South Africa currently have a PhD in addition to their professional degree.^[1] Health Minister Dr Aaron Motsoaledi announced a year ago that government will fund 1 000 PhDs across health disciplines over the next 10 years, while adding clinical research centres to hospitals earmarked for revitalisation in order to build relevant, evidence-based knowledge into the public health system.

Academic leaders a dying breed in SA

According to a report by the Academy of Science for South Africa (ASSAf), the number of qualified academic leaders at South African medical schools has been declining since the early 1990s. Dr Ayanda Ntsaluba, executive director of Discovery Holdings Ltd and a former Director

General of the Department of International Relations and Co-operation, said there has been an 'explosion of recruitment' by the economically powerful 'OECD countries' (signatories to the Organisation for Economic Co-Operation and Development, consisting of 34 countries across Europe, the Americas and Australasia), at the very time South Africa is introducing its National Health Insurance. 'We need a creative response to this reality, involving public private partnerships, the academic community and government. We need to fill the pipeline with energetic academic leaders.'

Professor Bongani Mayosi, head of the Department of Medicine at UCT and currently at the helm of the National Health Research Council, said non-communicable diseases (NCDs) are the major cause of death in the world today. (In South Africa, HIV/TB and malaria are bigger killers.) The increase in NCDs is one of the prices Africa is paying for its current economic boom, as more people move to the cities and the pace of life speeds up. Heart disease among Africans had increased from 2% of the population in 1950 to 30% in 2010, while the current estimate of diabetes among Africans stood at 27 million



UCT's Dr Neliswa Gogela, winner of the MGH Fellowship, with a patient.

people in 2010 (7.5% of the global burden). This is projected to increase by 80% by 2030, 'dwarfing' the threat of HIV.

Mayosi said Africa suffers a deficit of nearly 4 million nurses and doctors, and not a single African country can afford the MGH model to address (for example) their hypertension and diabetes disease burdens. He described this as 'an extraordinary problem requiring extraordinary solutions'. The Discovery Foundation initiative is 'but one stone being thrown in the pond – we need 1 000 MGH fellowships to make a difference'.

World's top medical teachers are 'poached' South Africans

Dr Jonathan Broomberg, CEO of Discovery Health, said a condition of the MGH award is that recipients must work for two years in the public sector. The average age of specialists in the private sector was 55, and it was 'a cause of great sadness' that while some of the greatest medical teachers at the world's top institutions were South Africans, their expertise was not available to South Africa. Broomberg said that Gogela's fellowship would begin to alleviate the severe shortage of hepatologists trained in liver transplantation in South Africa, adding that the burden of liver disease and the complexity of available treatments had increased 'significantly'.

As an intern at Frere Hospital in East London, Gogela's terrier-like efforts on behalf of a semiconscious patient with hepatitis C (she made several calls to UCT) brought her to Professor Mayosi's attention. Delighted with the fellowship, she is aware that one of the problems she will face upon her return is the shortage of liver donors in South Africa: 'We have the patients, but not the livers for transplant.'

She believes the grant was sent by her guardian angel and that her self-discipline was instilled by her *Goko*, who used to 'time' how long she took to get home from the eMazani High School in Peddie. 'She would watch the first students come out and count how long it took me to get home. If I took long, I would have to explain why. So all I could do was study, study study.' The

standard of her high school education was so poor that by March of her matric year, her maths, science and biology teachers had 'washed their hands of us'. 'I knew I wanted to become a doctor, so I just taught myself, like many of my friends.' She did it so well that she was accepted by the Medical University of South Africa (Medunsa).

It was as an intern that Gogela developed her 'fascination' with the liver. She spent an entire weekend looking after her young hepatitis C patient, and a multitude of suggestions from UCT's experts ultimately helped Gogela to save her. After a week, the woman made a remarkable recovery and Gogela was 'hooked' on the liver. The timing of a call from Mayosi, with a UCT hepatology job offer, could not have been more fortuitous.

Mayosi said the biggest challenge is overcoming the separation between research activity and its impact on society. 'We're not seeing better outcomes in patients and we're not (sufficiently) converting research into products and processes.'

Beating the odds to inspire others

Deputy Health Minister Dr Gwen Ramakgopa described Gogela as 'an inspiration to many,' and said that her life story 'shows that you can overcome all existing barriers: gender, the urban/rural divide and education. Those who succeed in life are those with a sense of fascination and it's our collective responsibility as a society to nurture this fascination of our children and young people in a way that translates into accessing opportunities that benefit our nation and the world.' Regarding new developments in the human resource crisis in health, she revealed that the deans of all eight of South Africa's medical schools met with Cuban representatives to help stream local students to that country, which last year

increased its annual output of trained South African doctors from 80 per annum to 1 000. Ramakgopa said it is 'critical' to prioritise research projects aimed at mitigating South Africa's disease burden.

According to the government's White Paper on human resources in health, even doubling the output of South Africa's medical schools (currently at 1 200 graduates a year) over the next 15 years will only be enough to maintain the current doctor-to-patient ratio. Only half of new graduates chose to remain in South Africa, and only 3% of these work in the rural healthcare environment. In terms of available doctors, South Africa has one of the lowest doctor-to-patient ratios worldwide, with 5.5 doctors per 10 000 lives. In contrast, according to the World Health Statistics 2011, Russia has a ratio of 43:10 000, Brazil 17:10 000 and the UK 21:10 000.^[2] Mayosi said the biggest challenge is overcoming the separation between research activity and its impact on society. 'We're not seeing better outcomes in patients and we're not (sufficiently) converting research into products and processes,' he pointed out.

Dr Samson Kinyanjui, a researcher at the Kenya Medical Research Institute, said the biggest human attrition in research occurs between PhD and post-doctoral level, when 80% of researchers are lost. This is a problem in developed countries but a real crisis in developing ones, where the human resource pool was much smaller. Kinyanjui was speaking at a forum facilitated by the Swiss-based Council on Health Research for Development (COHRED), entitled 'Beyond Aid ... Research and Innovation as Key Drivers for Health, Equity and Development,' held in Cape Town in May 2012.

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2. World Health Organization. World Health Statistics 2011. Geneva: WHO, 2011. http://www.who.int/whosis/whostat/EN_WHS2011_Full.pdf (accessed 8 July 2013).

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