

Taking away the

suffering
of little children

DR BOITUMELO PITSO

Subspecialist Award

University of Pretoria

Paediatric Pulmonology

With no healthcare role models while growing up in the small Northern Cape town of Kimberley, Boitumelo Pitso was enthralled by the nurses who spilled out of a mobile clinic van that pulled up at her school one day.

"They were doing immunisation and I thought I'd really like to become a caring person like that," she says. Life was to prove generous with the intervention of a Catholic nun who helped her and other Grade 11 classmates with biology lessons after school. The nun drew out their dreams and ambitions, telling Boitumelo that she knew people who could show her more about nurses – and doctors. The result was a two-day guided visit to Kimberley hospital some two hours' drive away.

"That was very influential in shaping my eventual decision to become a doctor. Why become a nurse when you can make an arguably even bigger impact as a doctor?" Boitumelo recalls thinking.

Her single mother who was a teacher at a local school raised Boitumelo. Despite all the funding challenges for her undergraduate studies, she managed to pull through. Her other childhood memories as a middle-child in a six-sibling family involve playing nanny to small children in the neighbourhood and baby-sitting for her cousin and two older sisters during holidays.

A natural with children

With a mild and patient temperament, she connected particularly well with children who seemed to innately trust her, "so I decided then and there that I should eventually specialise in paediatrics," she adds.

She was earlier and perhaps unsurprisingly, judged the best student in her final MBChB examinations on Paediatrics and Child Health. Winning a second award for outstanding clinical performance in Internal Medicine was a bonus when she graduated cum-laude from Medunsa in 2008. During her Community Service year, a six-month spell in the Paediatric Department at Kimberly Hospital boosted her passion for paediatrics; and she further became interested in Intensive care through a mentor who spent time with her in the paediatric ICU. In January 2019, Boitumelo, having qualified as a paediatrician a year earlier, began her Discovery-funded subspecialist training in Paediatric Pulmonology at the Steve Biko Academic Hospital.

I think it was as an intern at "Boitumelo Hospital" that I decided the most vulnerable patients were the small children and the elderly that fed my passion to help the most vulnerable.

Chronic lung disease prevalence in children

The prevalence of paediatric chronic lung disease in South Africa is currently unknown, but suspicions are that it is alarmingly high and confounded by the burden of infectious diseases such as HIV.

"At least 60% of our follow-up patients have HIV-related bronchiectasis, often as a result of delayed diagnosis and late initiation of treatment," Boitumelo reveals. On average, her unit at Steve Biko sees approximately 80 to 100 patients each month from Mpumalanga, Limpopo and Gauteng. Boitumelo describes patient and caregiver education as the cornerstone of management in Paediatric Pulmonology. When caregivers are not compliant with this treatment, the recovery process is affected. Failing to explain techniques as well as compliance to treatment makes controlling a condition much harder.

She says that patients with bronchiectasis should know how to do home physiotherapy, which may assist with clearing phlegm from the airway.

She feels that the PMTCT programme has been a great success as well as the ARV rollout programme but that much more has to be done in rural areas to improve HIV stigma and denialism.

Married to a business development manager with a daughter aged six and son aged three, Boitumelo lives in Centurion. Asked what her top intervention would be if there were

no limits, she responds, "Access to medical care and establishing chronic lung-disease centres in all our provinces. Patients die because there's no follow up and there's poor communication between the referral centres."

Research that has also become her calling

Boitumelo has completed a Discovery-funded MMed dissertation comparing Polymerase Chain Reaction. This is a method widely used in molecular biology to make many copies of a specific DNA segment – with conventional culture in detection of respiratory pathogens in subjects with non-cystic fibrosis bronchiectasis. This MMed thesis was accepted for poster presentation at the 2019 European Respiratory Society congress in Spain.

She will spend much of 2019 and 2020 researching the role of airway clearance techniques in improving the quality of life of children with chronic lung disease.

"I'd like to assess the use of a flutter device, with or without physiotherapy, to clear out the lungs of children with chronic lung diseases. Secretions are associated with persistent coughing, which in turn may result in sleeplessness, daytime somnolence, poor concentration and overall poor school performance. Studies so far have focused primarily on cystic fibrosis. I want to broaden the spectrum to other conditions, with the purpose to improve quality of life."

"It was during a Discovery Foundation alumni congress at Pilanesberg that I heard about the subspecialty award and immediately decided to apply for it. In my medical officer days, I remembered the severe shortage of paediatric pulmonologists. There were just so many kids suffering from lung conditions. The two-year training also has a large critical care component, so it's a perfect fit."

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