

His father, a mechanic at a bus depot, and his mother, a homemaker, were fiercely determined that their children would rise above their circumstances through education. "My parents were very intelligent and extremely strong on education but had few resources."

The determination of his working-class parents and a tour of what was to become the Helen Joseph Hospital in Johannesburg in matric, steered veteran physician, Murimisi Mukansi, towards medicine.

Now Director of the Intensive Care Unit at Helen Joseph Hospital where he has spent most of the past 26 years working as an Internal Medicine and Pulmonology consultant, Murimisi says two additional influences proved seminal in his career choice of medicine and academia.

The first was attending the two-week London International Youth Science Forum in 1982. A boarder at the Kheto Nxumayo Agricultural High School in Giyani, Limpopo, Murimisi was the top black matriculant in SA and won the 1982 SA Science Olympiad.

He found himself revelling in the company of students from all over the world during a London visit.

"It was very interesting and enjoyable and people were so receptive. It inspired me to dream and have ambition, to realise how much better opportunities could be back home," he recalls. "I had the opportunity to visit the Royal Marsden and Middlesex hospitals during this stint."

The second was cultural. His paternal grandfather was a Tsonga/Shangaan traditional healer, the last in a long line of tribal healers in the family. "I was named after him, so I believe that energy was channelled into me and my siblings going to medical school so we could move with the times," he chuckles.

Exploring

community-acquired pneumonia driven by HIV

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From humble beginnings to leading a unique study

Today, he is bringing the wisdom of his ancestors to bear through pure science and research. He will lead a unique two-year study of community-acquired pneumonia, (CAP), in a predominantly HIV-infected population with patients presenting at his emergency unit.

According to Statistics South Africa, CAP (classified as influenza and pneumonia), was the second-highest cause of death in the country in 2015 among both HIV-positive and -negative persons. Murimisi explains that in both these groups, the most common manifestation of pneumonia is pneumococcal pneumonia. Most global predictive modelling of CAP used in severity scores and biomarkers so far has excluded immunosuppressed people, including those who are HIV-infected.

Research that is potentially game changing

The results will enable doctors in South Africa and in other countries with a high HIV prevalence to better triage which CAP patients to admit and which to send home. By definition CAP is found in someone who has not presented at a healthcare facility for the past three months (community-acquired and not nosocomial or hospital or clinic acquired).

Murimisi says that according to the World Health Organization (WHO), an estimated two million people die of CAP globally. He estimates that some 60% of patients seen at Helen Joseph Hospital are HIV positive, a proportion he believes similar to other State hospitals. The percentage is important, because HIV drives CAP.

Already changing treatment

His work will build on published research showing that a user-friendly and time- and cost-saving severity-scoring predictive model is safe to use with excellent results in resource-constrained settings.

“In previous research, we showed that the scoring model, CRB 65 (Confusion, Respiratory rate and Blood pressure plus age 65), was every bit as effective as CURB-65, which requires urea measurement, an expensive and time-consuming laboratory test for kidney function,” he says.

Murimisi says it could take between one and two years to recruit the 300 candidates for the study. “We’re looking for infection that’s just started,” he emphasises. His team will check for inclusion criteria, if satisfied, take a history and examine them, checking their risk-factor profile, symptom presentation and sample nasopharyngeal and oropharyngeal swabs.

After doing an X-ray, an ECG and taking urine and blood specimens, they’ll measure biomarkers and check for any acute cardiovascular events, diabetes, liver or renal disease prior to the two-week infection window – all of which can predispose to pneumonia. A month later, they’ll contact the patient to see how they’re doing.

Somewhat uniquely for a clinician, Murimisi also has a Master of Business Leadership (MBL) qualification, explaining that he felt it necessary to enhance his understanding of overall financial management so necessary in modern medicine. He says he stuck with Helen Joseph Hospital to build his career and research at Wits University. Murimisi’s dream is to train more clinician researchers so they can contribute to society.
