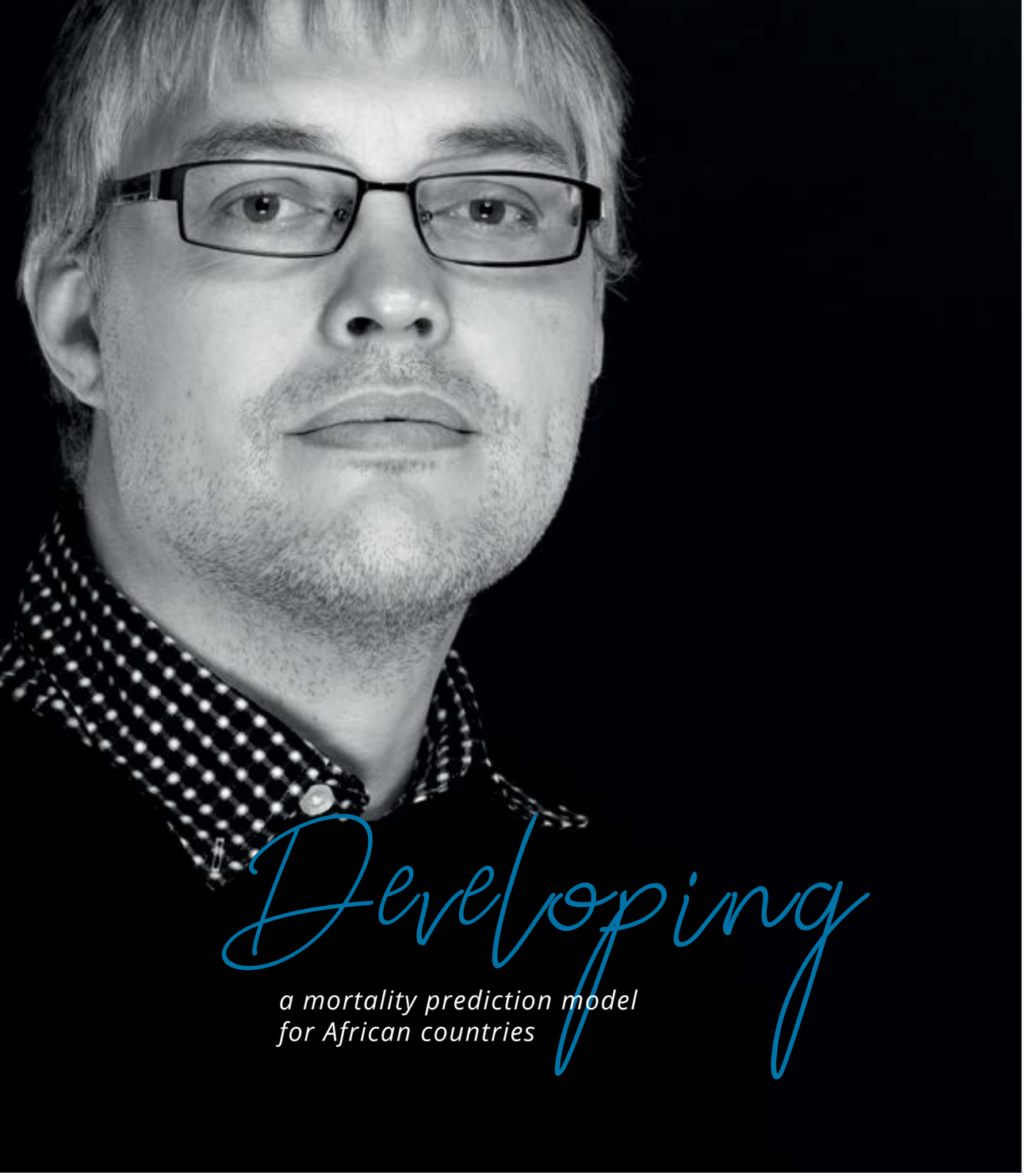


DR JACINTO KAPP

Rural Individual Fellowship Award

Walter Sisulu University

Validation of the Simplified Acute Physiology Score (SAPS 3)

For Internal Medicine registrar, Jacinto Kapp, a near-death experience gave new meaning to his research on adapting an international mortality prediction model for local ICUs.

The inclusion of his own presenting vital signs in his 800-patient data set was only prevented by a motorist who stopped to help as he bled profusely from a gunshot wound in his arm, inflicted by would-be hi-jackers. Jacinto was on his way to Durban from Umtata's Nelson Mandela Academic Hospital to visit his parents in April 2005 when he slowed down for speed bumps on the N2 near Harding in Kwa-Zulu Natal.

"I just heard the passenger window breaking and felt blood coming from my arm. The bullet hit me just below the elbow joint and severed the radial nerve. I had no extension of the wrist or fingers, so I floored the car and drove as far as I could. I couldn't change gears," he recalls.

He pulled over after two or three minutes, got out and flagged down an approaching car in the gathering dusk, fortunately occupied by a generous and concerned driver.

"I'd lost quite a bit of blood by then, but didn't feel much until I stopped my car. It affected me quite badly and I was off work for nine months, with no function in my left arm. I had two operations including a tendon transfer and extensive rehabilitation to get it working again," he adds.

Juggling study and child-raising

This father of two young children and his psychologist wife live in Port Elizabeth where she is a partner in a holistic private practice. He is in his third year of Internal Medicine, almost fully recovered, with only minor impairment.

Jacinto believes his decision to resume his Community Service in January 2006 at Uitenhage Hospital, 36km away from Livingstone Hospital, might have had something to do with the trauma he suffered.

"I think that was part of the reason. Somehow the environment affected me," he explains.

He has always wanted to be a doctor. His uncle, John Kapp, a Port Elizabeth GP, whom he later joined in private practice for four years, was a seminal influence.

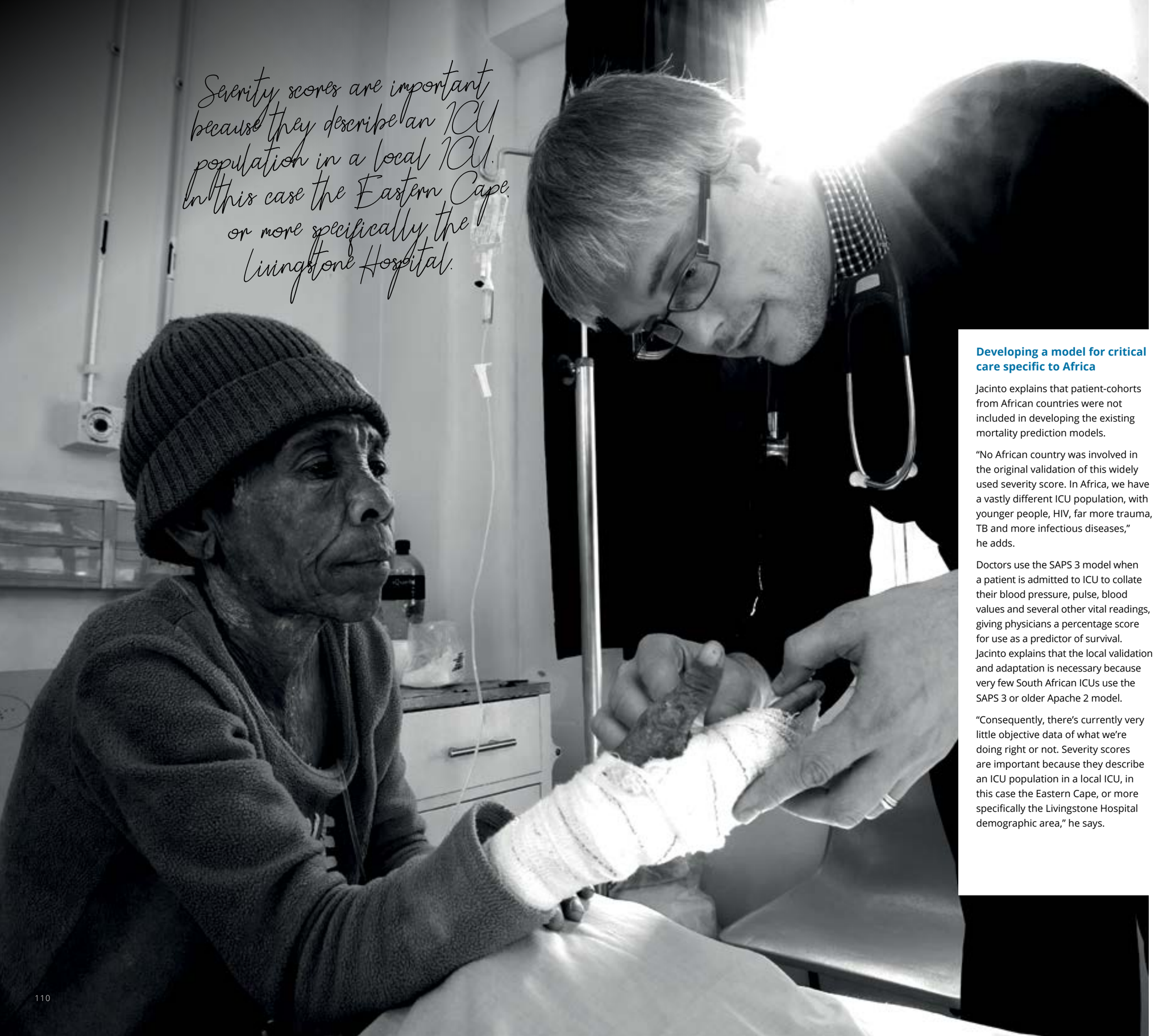
"My parents moved to Durban while I was studying medicine and I always remember him in his office, the smells and kinds of things he was doing. It was always very interesting to me," he adds.

Like many health professional couples, Jacinto and his wife juggled study, work and child-raising while qualifying and setting up their careers, with Jacinto admitting, "it was quite a rough ride, swapping over from private practice to public service and vice versa – and doing all that at once."

His mother, Joey Kapp, a former high school teacher in Port Elizabeth and late father, Michael, a credit control manager, were sterling supporters of him and his two younger brothers, one a teacher in Stutterheim and the other an electrician in New Zealand.

"My parents never steered us, but rather supported us in whatever we chose to do," he says.

Which led him to medicine and his current development of the highly applicable, locally adapted Simplified Acute Physiology Score (SAPS 3) in a tertiary ICU.



Developing a model for critical care specific to Africa

Jacinto explains that patient-cohorts from African countries were not included in developing the existing mortality prediction models.

"No African country was involved in the original validation of this widely used severity score. In Africa, we have a vastly different ICU population, with younger people, HIV, far more trauma, TB and more infectious diseases," he adds.

Doctors use the SAPS 3 model when a patient is admitted to ICU to collate their blood pressure, pulse, blood values and several other vital readings, giving physicians a percentage score for use as a predictor of survival. Jacinto explains that the local validation and adaptation is necessary because very few South African ICUs use the SAPS 3 or older Apache 2 model.

"Consequently, there's currently very little objective data of what we're doing right or not. Severity scores are important because they describe an ICU population in a local ICU, in this case the Eastern Cape, or more specifically the Livingstone Hospital demographic area," he says.

The adapted model will support evaluation of any local ICU's standard of care and help doctors decide which groups of patients will benefit most from ICU admission. Jacinto's study, which is almost complete, will also help with drafting broad ICU admission policies. Focused on Livingstone Hospital's 12 ICU beds and four step-down beds, his study was conducted over 12 months on first-time ICU patients. He inadvertently reveals the amount of work that was involved in his research when asked what excited him most about it.

"That I'm almost done," he quips. There are likely to be many grateful colleagues in emergency and critical care medicine as their work becomes more streamlined and effective by using this new fit-for-purpose assessment tool.

The adapted model supports evaluation of care and setting ICU admission policies

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