

Rural hospital beats the odds in South Africa

In South Africa's poorest province, a team of doctors have turned a rundown, dysfunctional district hospital into a beacon of hope for the rural community. Adele Baleta reports.

He dashes, then swerves, the rubber of his wheelchair squeaking as it rolls over the gleaming linoleum floor. 14-year-old Aphiwe Velelwandle circles, comes in for the kill, breaks through doctor Karl Le Roux's porous defence and snatches the basketball away to the cheers of the clinical team.

It is difficult to believe this scene is being played out at the end of a ward round in an isolated rural area in South Africa's Eastern Cape Province. The province is the most impoverished with the worst health outcomes in the country. Despite this, Zithulele Hospital stands out for its commitment and excellence in health delivery.

"This is special to see", says Zithulele physiotherapist Marlie Enright. "Disabled children are usually hidden in homes and if they do get to a rural facility there are most often no allied health professionals to treat them." Moments before, Enright had presented Aphiwe's case to the gathered multidisciplinary clinical team at the 120-bed hospital.

Perched on a rolling coastal hill, about 100 km from the town of Mthatha, the hospital is at the end of a long, dusty, pot-holed road. It serves a community of 130 000 people in which education levels are low and unemployment is high. Tuberculosis and HIV/AIDS are endemic.

Aphiwe arrived at Zithulele Hospital in mid-May with severe pressure sores. He has never been to school, and had a spinal chord injury when he was a toddler. In a few months, in the care of the staff, he has moved from being unresponsive to ruling the paediatric ward. He is one of the examples of what can be done in the face of impossible logistical, staffing, equipment, and procurement challenges that are accepted as the norm in most health facilities in the country.

Started by missionaries in 1956, and now run by the provincial health department, Zithulele, like most rural hospitals, had been unable to attract professionals. District hospitals are historically under-resourced (the ratio of doctors is below 18.5 per 100 000 population) in the four

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most rural provinces. After a series of foreign doctors came and went, Ben and Taryn Gaunt arrived in 2005, determined to make a difference. Only three community service doctors (compulsory internships) and a radiographer were there to greet them.

"At that time the maternity service was fragmented and disorganised. The delivery room had two beds almost touching each other, perineum's facing, no curtains, nothing. There was only one laryngoscope in the hospital and only two delivery packs, preventing steam sterilisation between cases", says Ben who is the hospital's clinical director. He and Taryn (principal medical officer) got started.

In 2006, they were joined by Karl and Sally Le Roux (senior medical officers) who helped build a strong core. Between them, they have post-graduate diplomas in obstetrics, child health, anaesthetics, and HIV/AIDS management. Within 3 years the group expanded into a multidisciplinary team of 22 members. There are now eight doctors, three physiotherapists, four occupational therapists, two pharmacists, two radiographers, a dietician, a dentist, and a social worker. The allied health professionals give input into decisions, and policy and leadership issues. Chief occupational therapist Kate Sherry says: "It's been

a privilege for us to work in the way we do. Having the doctors' buy-in has been essential and we have learnt from each other." The hospital gets referrals from 15 primary health-care clinics and the allied professionals do outreach work in the community.

"There was no leadership when we started. This was fortunate because we were able to set the tone. This and a commitment of the core team to the medium to long term is the key to making rural health work", says Ben. Karl agrees, adding that building relationships with staff and managers is vital, especially in an historically dysfunctional area. The district had been targeted by the apartheid government for underdevelopment. "To win people over you have to be excellent all the time, caring, fair, and hardworking because it's a community that has been mistreated in the past", Karl says.

The challenges are great, including incompetent administration, nepotism, and having to deal with non-medical bureaucrats who are unaware of the effects their budget cuts and shortages have on the rural health system, say Ben and Karl.

The team has managed to turn maternal and child health care around.



The multidisciplinary clinical team of Zithulele Hospital, Eastern Cape Province



Taryn Gaunt counsels a mother at the antiretroviral clinic in Zithulele Hospital

Data in the Eastern Cape suggests that 73% of women have a skilled attendant at delivery, says Ben.

"In 2005 we estimated that 50% of women in the area were delivering at home." In the next 3 years, deliveries at the hospital increased by 54% from 745 to 1143. Although women's access to health has not changed much, Ben attributes the success to the growing reputation of the hospital in the community as a place of quality care. For some women, a trip to the hospital over the weekend can cost up to two-thirds of their monthly household income. Ben estimates that up to 33% of women in the drainage area of nearly 1000 km² still deliver at home.

A 24-h caesarean section service was re-instituted in 2005, meaning fewer referrals to the tertiary hospital 100 km away, and monthly perinatal mortality meetings began in May, 2006. A year later the doctors started a journal club, accredited by the University of Cape Town, to be updated on relevant issues and topics.

The perinatal mortality rate at Zithulele Hospital, which averages about 42 per 1000, dropped to 24.6 per 1000 in 2008. Paediatric bed availability increased from 320 bed nights a month in 2006, to 503 in the first 5 months of this year.

"We hope this reflects our increased efforts, but avoidable mortality continues, specifically reflecting the

relative lack of antenatal care and poor transport infrastructure in our area", Ben says. There is only one vehicle for hospital use and most staff risk their own cars on the bumpy roads to do outreach work.

The hospital was approved as a Saving Mothers Saving Babies site in 2007 and receives funding for linen, patient clothing, medical equipment, computers, and extra staff. Japan donated life saving equipment.

Karl and Ben acknowledge the success of their neighbours at the larger Madwaleni Hospital, saying their approach has been different to other facilities in the district. The Zithulele team have tried to tackle four priority areas (maternity, child health, HIV/AIDS, and tuberculosis) simultaneously. Madwaleni has "brilliantly" tackled HIV/AIDS first, using the momentum to build the rest of the service. Ben says the generalist approach, whether right or wrong, helps to emphasise teamwork, which he believes has been key to changing the institutional culture at Zithulele.

"We try to foster an atmosphere that we aren't just a group of individuals doing our own thing, earning a salary but that we're all in it together, building on each others' skills", says Ben.

Trailing after the clinical team as they shuffle in a bundle from bed to bed giving histories and discussing patients' progress is a clue to the clinical challenges they face. Most patients have HIV/AIDS and tuberculosis, and kwashiorkor and marasma are prevalent.

Taryn who works in the busy antiretroviral (ARV) clinic says there are presently 1000 people on ARVs in the hospital and at its clinics. The target is to get at least 4000 people on treatment. There has been a major drive to try and get people tested and in 2008, an astounding 99.8% of women who delivered at Zithulele knew their HIV/AIDS status. Stigma is a major problem in the area and women will often accept ARVs for their children but not for

themselves. Denial means people often present late.

Due to rampant HIV/AIDS, the hospital has an exclusive breastfeeding policy. Karl says: "We had all our water tested and there was not a single water source except at the hospital that was not contaminated. The majority of children's deaths in the first year is due to formula feeding. Most women have lost at least one child to diarrhoea."

General worker Sibulele Metu told *The Lancet* that many men who had gone to the cities to work in the mines were infected with HIV/AIDS and had come home to the area. "They take new wives, often teenagers who have not even finished school. The girls fall pregnant and many of them get infected as do their babies. They often have to leave school. We encourage them to look after their babies and then to consider going back to school", she says.

The first-ever pharmacist arrived in May, 2006, and with sheer will and dedication transformed the pharmacy from chaos to a reliable system that ensures drugs and supplies are well stocked. The hospital has a reputation for good practice and strong leadership which has helped to attract student doctors.

When *The Lancet* visited the hospital, a nursing manager had to leave her post to chase up the repair of a radiograph machine, milk had run out, and there was the ever present threat of water drying up. The day-to-day challenges of running a hospital are amplified in a remote place that is at least a 2-h drive from a small town. But heading out on the dirt road, the memory of the physiotherapy team rejoicing at the news that a local educational official had assessed Aphiwe is the lasting impression. The official concluded that the boy had great potential and should be placed in a school as soon as possible. In spite of the seemingly insurmountable difficulties, Zithulele Hospital is a beacon of hope in rural health.

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