Advances in medical technology alleviates human and economic cost of burns injuries in South Africa

Burn injuries are among the most physically and psychologically traumatic wounds a patient can face. The South African Medical Research Council found that 3.2% of the population suffer burn injury annually with 50% of the victims younger than 20 years.

Tanya Vogt, COO of The South African Medical Device Association (SAMED) says research shows that the alarming rate of burns in South Africa is driven by factors like haphazard urban development, inadequate electrification of homes and the use of paraffin as a primary energy source in low income households. This leads to approximately 45,000 paraffin-related fires and 3000 deaths each year. ¹

There are six established burn centres in the country where only the most severe cases are dealt with. The Red Cross Children’s Hospital in Cape Town alone treats between 1200 -1300 in patients per year and another 2000 per year as out-patients. Heinz Rode, Emeritus Professor of Paediatric Surgery at Red Cross Children's Hospital says that there is overwhelming evidence that childhood burns are largely environmentally conditioned and preventable. ²

Historically, burns were treated with daily wound dressings and skin grafting procedures which are painful and distressing. Healing by inflicting pain becomes a conflict for the burns team particularly with young children who are bewildered and traumatised by this.

In response to the urgent need to ease pain, speed healing, and simplify rehabilitation, the medical devices industry has developed technologies like nanocrystalline silver, bioengineered temporary synthetic skins and procedurally efficient hydrosurgical tissue debridement. The reduced time to healing means a shorter stay in hospital for patients and a faster transition back into their normal environment which has revolutionised the management of major burns from patient, surgeon and funder perspectives.

A 2012 trial at the Burns Unit of the Chris Hani Baragwanath Hospital compared the use of Modern Burns Management dressings to conventional dressings. ³ With 96 analysable patients, the trial was one of the largest randomised, prospective clinical trials in this therapy area worldwide to date. 49 patients received modern burns management dressings compared to 47 patients who received conventional therapy. Independent data released by principal investigator, Dr Adelin Muganza showed that advanced burn management reduced the length of hospital stay by 33% with mean days to healing reduced from 28 to 21 days. The reduction in costs of antibiotics was 88% and there was an overall cost reduction of 20%. These results were in the large total body surface area (TBSA) group (TBSA > 25%).

These results are in-line with international clinical studies, including a retrospective review before and after the implementation of new burns practice guidelines. A statistically significant decrease in length of stay from 10.3 to 3.9 days (p<0.01) was seen when patients were treated with the new technology instead of a daily application of conventional dressings (smaller burns of TSBA < 20%). The resultant cost saving was CAN$10,643 per patient⁴. Helping patients recover from the trauma of a severe burn, both functionally and aesthetically, accelerates their re-integration into society and return to productive schooling and work, reducing the cost burden of burn trauma on state services and positively impacting South African GDP.

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Pay off line
SAMED is proactively embracing and adopting best-practice measures that are geared at improved access to quality healthcare, for all South Africans. From our self-imposed ban on all types of perverse incentives to our industry leading Code of Conduct, the association is making healthcare in South Africa a better option for all. We acknowledge the moral obligation in health to ensure that our interactions with healthcare professionals and patients are based on promoting innovative technology and the safety, quality and efficacy of products.