



Innovation in the fight against COVID-19

Many people hospitalised with COVID-19 need breathing support and at the start of the pandemic there was a global shortage of ventilators as patient numbers spiked. These devices are also very expensive and very few were available in Tongaat Hulett's countries of operation, particularly Zimbabwe and Mozambique.

In response, a Tongaat Hulett team, led by Dr Craig Jensen (General Manager – Refinery) and Dr Tongai Mukwewa (Tongaat Hulett Chief Medical Officer), adapted an existing design to develop a low-cost High Oxygen Efficient Continuous Positive Airway Pressure (HOE-CPAP) breathing aid. CPAP-type units assist breathing by supplying a mixture of air and oxygen through a tight-fitting mask that helps the patient take deeper breaths, improving oxygenation.

The Tongaat Hulett Bucket Breathing Aid (BBA) is literally built in a bucket and provides a cheap but effective solution for patients requiring breathing support that will have benefits to healthcare facilities extending beyond COVID-19. It is currently undergoing review and certification in Zimbabwe and Mozambique.

During the second wave, the BBA was used to treat patients in Zimbabwe, both at the Colin Saunders Hospital in Triangle and at the government's main COVID-19 hospital. Feedback from medical practitioners at these facilities has been excellent and we have received requests for more units for both government and private hospitals in Zimbabwe, South Africa and Mozambique. Additional units have been supplied to facilities in Zimbabwe and Mozambique in anticipation of the third wave of COVID-19.

The team also produced Perspex aerosol boxes to help protect healthcare workers from infection. The aerosol box creates a barrier between the patient and the person attending to them, reducing the risk of infection for frontline health workers.



Tongaat Hulett's Bucket Breathing Aid



Tongaat Hulett's aerosol box