

High-flow nasal oxygen proves successful in severe Covid-19 cases

High-flow nasal oxygen (HFNO) treatment has proven to be successful in treating critical care Covid-19 patients, as an alternative to ventilators, which was the standard in the initial phases of the global pandemic.



Shahied Fischer and Ivan Cummings were treated with HFNO at Groote Schuur Hospital. Image: Western Cape Health

The Western Cape government has been implementing HFNO at its tertiary hospitals, and Groote Schuur Hospital (GSH) recently discharged five patients from critical care and ICU wards to normal wards after they were treated with these machines.

The HFNO machine is a device which can deliver concentrated oxygen to a patient's lungs, via long tubes which sit just below the patient's nostrils. This decreases the work of breathing and makes sure that the body gets enough oxygen even though there is lung inflammation.

"Over a period of three months around a third of patients recover without requiring intubation, which is a significantly positive outcome compared to settings where no high-flow nasal oxygen treatment is offered obviously not all patients require this modality. Most do not require such high volumes and concentrations of oxygen. The results are continuously reassessed as time progresses and our insight into Covid-19 management grows further," Dr Shrikant Peters, medical manager: ICU and Dr Laurene Booyens, medical manager: medicine said.

HFNO treatment

The province had 121 HFNO machines available at hospitals, with another 42 on order, bringing the province's total to 163. HFNO can be provided not only in a high-care bed, but also in a normal, acute bed, which relieves some pressure on high-care beds.

Recent data from Tygerberg Hospital's Covid-19 ICU's first 70 ICU patients shows a mortality rate of roughly 40%, compared to roughly 85%-90% for patients who did not receive HFNO and were mechanically ventilated, Professor Coenie Koegelenberg told *Spotlight*.

Both Tygerberg and GSH have patients on HFNO prone themselves, meaning patients will rotate their bodies every two hours to allow oxygenated blood into different parts of the lung. For this, a patient will lie on their back, their left and right side, and on their stomach for two hours at a time. For ventilated patients, ICU staff are responsible for manually proning patients

"Proning is a very effective way of pushing up oxygen levels," said Koegelenberg.

While HFNO and proning have lent themselves to decreasing mortality rates, they are not a cure for Covid-19. Together, these two methods treat low oxygen levels in patients with severe Covid-19 disease, but do not actively treat the virus itself, the *Spotlight* article said.

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