

NATIONAL CORONAVIRUS PANDEMIC

Without a vaccine, experts turn to data to help treat COVID-19 patients

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Australian researchers will examine worldwide data of COVID-19 patients in intensive care to see if patterns emerge that could change the way the virus is treated in those who are critically ill.

The COVID-19 Critical Care Consortium started by the University of Queensland is studying 20,000 patients in intensive care units in 47 countries.



Australian researchers are gathering data on COVID-19 patients in intensive care from around the world. AP

"At the moment the data is all we have, we don't have a vaccine, we don't have a treatment," University of Queensland Professor John Fraser said.

His team is also using research from Monash University, which is tracking the use of extracorporeal membrane oxygenation (ECMO) in seriously ill patients, including those suffering from COVID-19, from Australia and the world.

Of Australia's 6720 COVID-19 cases, just over 40 are in intensive care. Two of those patients have been placed on an ECMO in a last-ditch effort to keep them alive.

ECMO is a process where the patient's blood is pumped out of the body via large catheters, re-oxygenated in a machine and pumped back in to replace the function of the lungs, the heart, or both.

Monash University's Professor Carol Hodgson said it's used as a last option when conventional life support has failed, and is one of the most expensive intensive care interventions costing about \$300,000 per patient.

Professor Hodgson said in the past five years the use of ECMO has more than doubled globally but added that the treatment is still not a guaranteed life saver, with the mortality rate at 68 per cent for patients with heart failure. Given the cost and risks, Professor Hodgson said the research was important.

"One of the things that has worked really well in COVID-19 is putting patients in the prone position lying on their stomach," she said.

"So what we need to know, is it worth the money and the staff and the resources to put somebody on ECMO compared to just mechanical ventilation in prone positioning? If the outcomes are the same then of course, we will just put somebody on mechanical ventilation in prone position because we're going to save a lot of money."

Another issue with ECMO is there are no guidelines anywhere, about how and when it should be used. Professor Hodgson said Monash University began the excel registry of Australian and New Zealand ECMO patients, which links with data from international patients, to help create a more uniformed approach to treatment.

"The more we can learn now, the more we have patient numbers to do that, the better we'll be able to inform clinicians and hospitals about what's important in terms of managing these patients in the future," she said.

"What we need to know is that we're making these decisions based on evidence, not just expert opinion."

Professor Fraser said he was hoping to get the data from about 20,000 patients in intensive care units from 47 countries to help guide future treatment.

"If we have 20,000, 40,000 patients' data we can start finding patterns of what's associated with best, better or worse outcomes," he said.

"The data is all we've got ... and it will guide us into further treatment and it will help doctors or nurses nurse to understand better rather than phoning their

mate."

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