



New Device for Shock Patients in Intensive Care



The first successful testing of a new machine to record oxygen consumption in real time may help improve care for critically-ill patients with shock. The results are published in *Science Advances*.

The technology is the result of a collaboration between Prof. Peter Robbins in the Department of Physiology, Anatomy and Genetics and Professors Grant Ritchie and Gus Hancock in the Department of Chemistry at the University of Oxford.

The machine, called the Molecular Flow Sensor (MFS) combines laser spectroscopy and precise flow measurement of breath in a single device which conveniently fits into a ventilation tube. Patients in shock typically suffer from a lack of oxygen that could cause many of their organs to deteriorate or stop working altogether. Some of the major underlying causes of shock include heart attack, haemorrhage and sepsis.

At present, doctors do not have any accurate way of measuring how oxygen is being used by the body which makes it difficult for them to determine the most effective treatment strategy. This new technology could resolve this problem and enable doctors to evaluate the situation more precisely.

Stuart McKechnie, Consultant in Intensive Care at the John Radcliffe Hospital, said "though we already monitor critically-ill patients very closely, this device promises to provide highly useful additional information that may help us to care better for patients with sepsis and shock in the future."

Source: [Science Advances](#)

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