



Under the Microscope

Dr Edward Litton

Intensive Care Consultant at Royal Perth Hospital (RPH), Dr Edward Litton is leading a research trial investigating the impact of intravenous iron on critically ill patients in intensive care across metropolitan health sites in Western Australia.

Named the IRONMAN study, the *'Intravenous iRon or placebo for aNaeMiA in iNtensive care'* study is a randomised controlled trial.

The research examines whether intravenous iron injections will assist in decreasing the requirement of red blood cell transfusions, leading to better outcomes for the patient.

140 anaemic intensive care patients will participate in the trial in intensive care units at RPH, Fremantle, Sir Charles Gairdner and Joondalup hospitals, to determine whether iron injections have the potential to replace some red blood cell transfusions in clinical practice.

"Although a potentially life-saving treatment for patients, red blood cell transfusions are an increasingly expensive and scarce resource," Dr Litton said.

"In critically ill patients admitted to intensive care, transfusions are commonly associated with harm, including mortality."

With intensive care patients accountable for 20 per cent of all blood transfusions, the use of intravenous iron injections as an alternative to a blood transfusion in ICU could have significant fiscal advantages.

"As well as offering improved patient outcomes, and alleviating the pressure on local blood supplies, a reduction in the number of transfusions may also be cost effective," Dr Litton said.

Results of the trial are not expected until early next year. However, a recent review undertaken by Dr Litton suggests that intravenous iron injections effectively increase red blood cell counts, reducing the number of blood transfusions required.

"Western Australia is a leader in patient blood management," Dr Litton said.

"The IRONMAN study hopes to identify ways to improve clinical practice, providing better patient outcomes while also improving financial efficiency."

The research has been made possible thanks to crucial funding secured through a State Health Research Advisory Council grant from the State Government, as well as industry support.

"We have received \$200,000 of funding, without which the project would not have been possible," Dr Litton said.