

# Blood Synergy



## Making Better Use of Blood

The Blood Synergy is an NHMRC-funded program of research providing new knowledge on conventional and novel blood products, transfusion practice, and health systems and health economics data to tackle the fundamental questions: ***How is blood used in Australia, and how can its use be improved and made more cost-effective?***

Our research addresses Australia's national transfusion research priorities to deliver safer and more appropriate transfusion support for patients, help guide better stewardship of national blood supplies, and reduce costs to the community.

### Patient Blood Management

#### Critical Bleeding

Major haemorrhage is a leading cause of early death in many settings. It is often unexpected, and may require large quantities of different blood products urgently – a daily challenge for blood services and health systems. We're using our Australian and New Zealand Massive Transfusion Registry together with a network of specialists working across pre-hospital and hospital settings to develop new evidence to inform recommendations and guide clinical decision-making on management of critical bleeding.

#### Critical Care

Critically ill patients in intensive care often receive blood transfusions, yet major evidence gaps exist regarding the optimal use of blood products and other therapies in this context. We conduct observational and interventional studies to evaluate the efficacy and safety of transfusions in critically ill patients, providing data to inform policy and guide clinical decision-making in transfusion support for patients in the critical care setting.

#### Blood Diseases

Patients with blood cancers and other blood diseases are the major users of red cell and platelet products. However, much of the evidence base for transfusion practice in this area is weak and in some cases, outdated, as treatments of these disorders have advanced in recent years. We are investigating optimal transfusion and alternative treatment strategies and products, to improve clinical management and outcomes, and reduce transfusion risks.

#### Immunoglobulin Use

Immunoglobulin (Ig) therapy, made from plasma, is used to treat patients with a wide range of conditions; for patients with blood cancers, it is generally used to prevent or treat infections. Ig use accounts for over half Australia's national blood budget, and its use continues to grow. Our research investigates the efficient and effective use of Ig, including optimal duration of use, clinical outcomes for patients receiving Ig, and other interventions to manage infectious risks.

## Clinical Research Excellence

We are an **alliance of Australian and international clinical researchers**, with expertise in haematology and transfusion medicine, emergency and trauma, military medicine, critical care, anaesthesia, nursing, transfusion laboratory science, public health, epidemiology, biostatistics, health economics, and health systems research.

Our team are **international leaders with established research and practice improvement collaborations** with governments, blood services, community and professional organisations, and industry, to rapidly translate new evidence into practice.

The Blood Synergy was recognised with the inaugural **Fiona Stanley Synergy Grant Award at the NHMRC Research Excellence Awards**.

## Health economics

We are integrating health economic analyses into each research stream, to provide important new Australian data for improving health system performance, and to make better use of the gifts of volunteer blood donors by delivering quality, cost-effective care for patients and the community.

We are building Australia's transfusion research capacity, bringing together our expertise and resources, and training the next generation of researchers, by mentoring young investigators and supporting their research activities.

## Building Australia's transfusion research capacity

The Blood Synergy program is managed by the Transfusion Research Unit in the School of Public Health and Preventive Medicine at Monash University. We welcome enquiries about the program and collaborative opportunities. Please contact:

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[bloodsynergy.org](http://bloodsynergy.org)