



Expanding blood donations

Blood and blood products are critical to the Australian health care system and support the treatment of patients across a broad range of clinical settings. However, while about one in 3 Australians will need blood or blood products in their lifetime, only one in 30 people gives blood each year, making blood a precious resource. NHMRC funded researchers sought to expand the donor pool by examining the risk associated with ending historical restrictions on donors who had previously resided or visited the UK during the height of the ‘mad cow’ outbreak.



Origin

Variant Creutzfeldt–Jakob disease (vCJD) is caused by infectious proteins (prions). Most cases of vCJD have been linked to consumption of beef from cows with Bovine Spongiform Encephalopathy (BSE, ‘mad cow’) during the UK outbreak in the 1980s.

In 2000, the Australian Government banned the donation of blood by anyone who had spent a total of six months or more in the UK between 1980 and 1996 to prevent transmission of vCJD through contaminated blood products.



Investment

NHMRC first funded research into blood and blood products in 1937.

In 2018, NHMRC funded a partnership of researchers based at the Kirby Institute (University of New South Wales) and Australian Red Cross Lifeblood (Lifeblood) to examine risk factors associated with infectious agents and protecting the Australian blood supply.



Research

Researchers used mathematical modelling to assess the risks and benefits of removing vCJD-related geographic restrictions on the Australian population.

They found that the likelihood of transfusion transmission of vCJD was 1 in 1.45 billion, only increasing the current transfusion risk by 0.01%. On the other hand, they estimated that expanding the donor base could add 57,000 donations annually, the equivalent of 3.5% of yearly donations. These gains were considered to outweigh any increased risks.



Translation

Based on the research findings, Lifeblood submitted a proposal to the Therapeutic Goods Administration (TGA) to end the restriction of donations from those visiting or residing in the UK during the mad cow outbreak. In response, in July 2022 the TGA agreed to lift the exclusion and allow blood donation from an expanded range of donors.

Both Canada and New Zealand blood services have since lifted their own vCJD-associated geographic restrictions on donors.

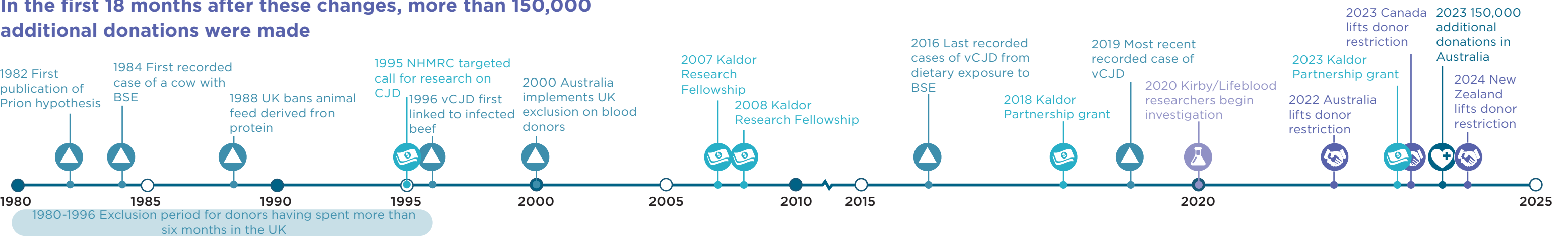


Impact

In Australia, it is estimated that there are now more than 700,000 additional people eligible to donate blood due to the removal of this restriction.

Between July 2022 and November 2023, more than 150,000 additional donations were made in Australia by those previously unable to donate blood or blood products. This represents around 7% of total donations made in this period and was twice the number predicted.

In the first 18 months after these changes, more than 150,000 additional donations were made



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