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MEDIA RELEASE

VIRAL SCREENING: INCREASING ORGAN DONOR NUMBERS

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THIRTY more people could receive organs per year in New South Wales alone if organ donations from people at increased risk of blood-borne viruses but with negative test results were accepted, according to the authors of a systematic review published online today by the *Medical Journal of Australia*.

There are 1500 Australians on organ transplant waiting lists, but there are not enough donors to go around. For every 100 people whose families and doctors agree to refer to organ donation services, only 15-20 will go on to donate.

Up to 60% of potential donors are rejected because of concerns they could possibly transmit infection or cancer to the person who is transplanted. Blood-borne viruses, like hepatitis B, hepatitis C or HIV, are a particular concern. For each of these viruses, there is a short period of time between a person becoming infected and any tests showing up positive for the infection (called the window period). Some potential organ donors are rejected because of concern about the residual risk of a window period infection, if the infection was recently acquired.

Until now, Australian transplant doctors have relied on estimates of this risk from the United States when they weigh up donation safety decisions, even though infection risk might be very different in the Australian context.

Researchers from the University of Sydney, the University of New South Wales, NSW Health Pathology, the Royal Prince Alfred Hospital and the Centre for Transplant and Renal Research at Westmead Hospital, analysed data from MEDLINE, government and agency reports, the Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine conference abstracts, the Australian New Zealand Clinical Trial Registry, National Health and Medical Research Council grants published between 1 January 2000 and 14 February 2019, and personal communications.

They found that the residual risks of selected blood-borne viral infections in Australians at increased risk of infection but with negative antibody and nucleic acid test results were low in absolute terms. For HIV, risks were around 1 in 10 000, which is substantially lower than international estimates. For hepatitis C and B, for which there are curative treatments and protective vaccinations respectively, risks were still under 1%.

“Our findings have important implications for donation referral and transplantation practice,” the authors wrote.

“All potential donors with behaviours that increase their risk of infection should undergo prospective antibody and nucleic acid assessment before being considered for donation.

“Nucleic acid testing is not uniformly available across Australia, but its importance for estimating residual infection risk is clear.

“[Previous research has shown that] potential donors from specific risk groups are often rejected without viral screening; accepting such donors could expand the donor pool in New South Wales by about five donors per year (providing organs to as many as 30 additional recipients).

“Our risk estimates are based on Australian data and are conservative, so they can be confidently employed in decision-making,” they wrote.

“Given more effective treatments for the human immunodeficiency virus, hepatitis C, and hepatitis B infections, organ donation by people at increased risk of infection but with negative viral test results could be considered as a strategy for expanding the donor pool,” they concluded.

Please remember to credit *The MJA*.

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CONTACTS:

Ivy Shih
Assistant Media and Public Relations Advisor
University of Sydney
Ph: 02 8627 9528
Email: ivy.shih@sydney.edu.au