TSANZ
The Transplantation Society of Australia and New Zealand
LIVER AND INTESTINAL TRANSPLANT ADVISORY COMMITTEE (LITAC)

Position Statement to the Australian Law Reform Commission

Subject: Legal Reform to Permit the Use of Normothermic Regional Perfusion (NRP) in Donation after Circulatory Determination of Death (DCDD) Organ Donation in Australia

Submitted by: TSANZ Liver and Intestinal Transplant Advisory Committee (LITAC)

Date: 30 June 2025

Executive Summary

This submission recommends that the Australian Law Reform Commission review and support changes to current legislation that prevent the use of Normothermic Regional Perfusion (NRP) in Donation after Circulatory Determination of Death (DCDD) abdominal organ donation. NRP is a transformative technology that improves transplant outcomes, reduces healthcare costs, and increases donor organ utilisation. Australia's current legal restrictions on NRP are out of step with international practice and compromise the potential to save lives and improve transplant success rates.

Background

Liver transplantation in Australia primarily relies on donation after neurological determination of death (DNDD), which offer optimal outcomes. However, with the growing number of patients awaiting transplants and a persistent shortage of donor organs, DCDD donors have become a critical alternative despite being associated with higher complication rates.

Innovations such as NRP allow clinicians to improve the quality and viability of DCDD organs, addressing many of the historical limitations. However, despite the mounting international evidence of NRP's benefits, Australia's current legal framework prohibits its use in DCDD donors due to concerns surrounding the reestablishment of circulation post-mortem.

Position

We strongly advocate for reform of the current legal prohibitions surrounding NRP in Australia, to align with international clinical standards and best practice in transplantation.

Supporting Evidence

1. Increased Utilisation of Donor Organs

- NRP enables real-time assessment and resuscitation of organs, allowing transplant centres to utilise DCDD livers that would otherwise be declined. Centres employing NRP have demonstrated up to 40% increased liver utilisation.

2. Improved Outcomes following Liver Transplantation

- Clinical studies have shown NRP significantly reduces rates of:
  - Ischaemic cholangiopathy: Rate of ischaemic cholangiopathy is 2-3x lower following NRP compared to any other machine perfusion technology
  - Early allograft dysfunction
  - Primary non-function
  - Need for re-transplantation

  This directly translates into improved survival and quality of life for transplant recipients.

3. Cost-Effectiveness

- NRP is a cost-effective alternative to ex-situ machine perfusion, with single runs supporting multiple organs (e.g., liver, kidneys, pancreas, heart).
- NRP dominated cost savings compared to DCDD in terms of cost of performing a retrieval, with £1.17M savings per 100 donors.
- NRP reduced the long-term cost burden associated with post-liver transplant complications.
- For kidney transplantation, NRP adds an estimated three years of graft life and patient independence from dialysis, equating to a potential GBP 300,000 per patient in savings.

International Precedent

NRP is currently approved and widely practiced in countries such as the United Kingdom, France, Spain, and Italy, and is mandated in some jurisdictions as the standard of care for DCDD donation. Australia is now an outlier among developed nations in prohibiting this evidence-based, ethically applied practice.

Recommendation

We recommend that the Australian Law Reform Commission:

1. Review current legal barriers to the application of NRP in the context of DCDD

donation.

2. Support legislative amendments to permit NRP under ethically governed clinical protocols.

3. Encourage the National Health and Medical Research Council (NHMRC) and relevant clinical bodies to establish national NRP guidelines and governance frameworks.

Conclusion

Lifting the prohibition on NRP would represent a significant advancement in Australia's transplant capability. It is an ethical, clinically validated, and cost-effective technology that can increase life-saving transplants and reduce burdens on the healthcare system. Law reform in this area is both urgently needed and eminently justified.

Yours Sincerely,

[redacted]

Professor Simone Strasser, on behalf of the Liver and Intestinal Transplant Advisory Committee

LITAC Chair

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