

Feasibility of organ donation following voluntary assisted dying in Australia: lessons from international practice

All Australian states have passed voluntary assisted dying (VAD) legislation. It is currently lawful in Victoria,¹ Tasmania,² Western Australia,³ Queensland,⁴ and South Australia.⁵ Similar legislation has passed in New South Wales,⁶ to commence in late 2023. Further, in late 2022 a bill was passed to repeal the *Euthanasia Laws Act 1997* (Cth),⁷ thus enabling the Northern Territory and the Australian Capital Territory to pass laws pertaining to VAD.

In some international jurisdictions, patients who choose VAD are also able to participate in organ donation after circulatory death (DCD). Although DCD is a well established practice, the potential for organ donation following VAD in the Australian context has received limited academic,⁸ clinical and public attention. In this article, we briefly examine how organ donation following VAD is practised in other jurisdictions, and consider whether combined VAD and DCD could become possible and appropriate in Australia. Although the Australian legal term is "voluntary assisted dying", it is internationally known as assisted suicide when medication is self-administered, and as euthanasia when administered intravenously by a physician.

Organ donation following euthanasia: international practice

Organ donation after euthanasia is currently performed in Belgium, the Netherlands, Spain and Canada. The process is essentially the same as DCD by patients in the intensive care unit (ICU) following withdrawal of life-sustaining therapy. However, in the case of DCD after euthanasia, there are additional considerations and processes that are followed.

For example, in Belgium and the Netherlands, both euthanasia and DCD procedures need to be strictly separated, to prevent a patient choosing euthanasia because they can then donate organs. Usually, euthanasia is performed by a general practitioner who has the main treatment relationship with the patient and who, together with a second independent physician, verifies that the patient meets the eligibility criteria for euthanasia. Only after these criteria have been met can they discuss the topic of organ donation. Depending on the jurisdiction, the patient must request organ donation themselves (see the hypothetical scenario in the Box), or the physician can refer them to the organ donation organisation.^{9,10} The latter is a possibility in Canada.

If the patient wants to be an organ donor, their medical records as well as blood and urine samples are investigated to rule out any contraindications, such as malignancy. If the organs are suitable for donation, the patient, together with the performing physician and

the organ donation coordinator from the hospital, will choose a date for the combined procedure. In organ donation after euthanasia, similar to our case scenario (Box), the patient provides first-person consent for DCD (unlike other circumstances, in which the patient's relatives would be asked about the patient's organ donation registration status or intentions). Legal agreements are created between the performing physician and the hospital board. In the Netherlands, because euthanasia is a non-natural death, the public prosecutor and municipal coroner must also be informed.

Euthanasia is often performed in the ICU as its personnel are familiar with organ donation and with comforting a dying patient and their next of kin. On the day of the procedure or shortly before, additional medical imaging is required to initiate the process of organ allocation. The patient's relatives can be present in the ICU while the performing physician injects an anaesthetic induction agent (such as a barbiturate or propofol) and a muscle relaxant. Death usually occurs within 10–15 minutes.¹¹ Intravenous administration is the preferred option to enable organ donation following euthanasia. Oral ingestion of barbiturates is usually not adopted because the dying process is unpredictable; prolongation of hypotension and hypoxaemia renders the organs unsuitable for transplantation.

After circulatory arrest, there is a "no touch time" of several minutes, depending on the local requirements for DCD, to adhere to the dead donor rule ensuring the patient's vital functions will not return. The patient is transported to the operating room immediately after death has been confirmed. These logistic requirements suggest that the patient should ideally undergo euthanasia in the hospital. However, organ donation after euthanasia commencing at home has been performed in the Netherlands and Canada.¹²

A euthanasia review committee determines afterwards whether all due diligence criteria were fulfilled, including intolerable suffering, and the patient's relatives can receive anonymised information about whether the transplantation procedure was successful. Organs are distributed in accordance with the local transplant waiting lists. A European

Hypothetical case scenario

A 57-year-old woman suffers from amyotrophic lateral sclerosis with an estimated prognosis of six months.

She has a son who received an organ transplant a few years ago and is now able to continue a healthy life.

The woman has requested voluntary assisted dying but would also like to donate her organs when she dies. She presents her proposal to her physician.

Jan Bollen¹ 

Courtney Hempton^{2,*}

Neera Bhatia³

James Tibballs⁴

¹ Radboud University Medical Centre (Radboudumc), Nijmegen, the Netherlands.

² Monash Bioethics Centre, Monash University, Melbourne, VIC.

³ Deakin University, Melbourne, VIC.

⁴ Royal Children's Hospital, Melbourne, VIC.

* Deceased.

jan.bollen@radboudumc.nl

organisation, Eurotransplant (<https://www.eurotransplant.org/>), regulates the transplant waiting lists for eight countries with requirements that organs donated following euthanasia are only transplanted in countries where euthanasia is lawful.

Statistics from international jurisdictions

From 2012 to January 2022, organ donation after euthanasia in the Netherlands was performed 85 times.¹³ In Spain in 2021, organ donation after euthanasia was only performed in seven cases from 656 DCD donors. In 2022, however, organ donation after euthanasia was performed in 42 cases from 912 DCD donors — highlighting a rapid increase.¹⁴ In Canada from 2016 to 2021, 136 patients donated organs after medical assistance in dying.¹⁵ In Belgium, 50 patients donated their organs following euthanasia between 2011 and 2020. Organ donation after euthanasia was feasible in patients who suffered from a neurodegenerative disease or from a mental illness. About 10% of patients who undergo euthanasia were assessed as potentially medically eligible for organ donation; the majority of patients who chose euthanasia suffered from cancer and were thus not eligible to donate organs.¹⁶ Organs transplanted following donation after euthanasia function adequately in recipients.¹⁷⁻¹⁹

Towards organ donation following voluntary assisted dying in Australia

At present, Australia lacks uniformity in VAD legislation across the country. Although there are legislative differences between jurisdictions on certain eligibility requirements, there is broad agreement. We highlight some of these differences and nuances below.

It is important to note that there are some significant variations in state legislation on critical matters of importance to people seeking VAD and medical practitioners who assist with VAD on issues such as initiation of discussion about VAD²⁰ and medical practitioner conscientious objection.²¹

Broadly, a person must be aged 18 years or over, have decision-making capacity in relation to VAD, and be diagnosed with a disease, illness or medical condition that has been assessed to be incurable, advanced and progressive, and will cause death within 6 months, or 12 months in the case of a neurodegenerative condition. However, there are some points of difference.²²

To access VAD, one of the key criteria states that a person must demonstrate Australian citizenship or permanent residency. Further, the person must show that they have resided in the state for at least 12 months before making a first request for VAD.²³ However, in some states, if a person cannot satisfy the requirement of citizenship or permanent residency but can show that they have resided in Australia before their first request for VAD for three consecutive years, they are considered to meet this criterion.²⁴ Alternatively, in some states, an exemption from the residency requirements can be sought if a person can demonstrate a significant connection to the state and

where there might be compassionate grounds for granting an exemption.²⁵

Almost all Australian VAD legislation includes a condition that if a person seeks VAD, their death must be imminent. This is measured by the underlying medical condition that is likely to cause death within weeks, less than 6 months, or within 12 months (if neurodegenerative).²⁶ A different approach has been taken in Tasmania, which is more flexible. Tasmanian legislation allows an exemption to the condition on life expectancy with broader circumstances of a person's condition taken into consideration.²⁷

There is a strict prohibition in each state against a person accessing VAD only on grounds of mental illness or disability.²⁸ Despite this clear articulation in Australian legislation, advance care directives in the Netherlands have been used to enable VAD in people with dementia.²⁹

If combined VAD and DCD were to be practised in Australia, it would require compliance with both VAD and organ donation legislation. We have briefly highlighted some of the differences in VAD legislation between the states. Despite these differences, if a person meets the VAD criteria (for each relevant state) and DCD legislation, we do not foresee that there would be any obstacles for DCD after VAD.

DCD is permitted once a person is determined to be dead. For the purposes of DCD, the law in all Australian jurisdictions defines death as "irreversible cessation of circulation of blood in the body" (circulatory death).³⁰⁻³⁷ Currently in Australia, the procurement of organs after DCD operates under a national guideline issued by the Organ and Tissue Authority³⁸ under a system where organs are only procured if the family (next of kin) of the deceased donor consents, regardless of whether or not the person had registered to be an organ donor or expressed a preference to donate their organs following death. This practice accords with Australian common law property rights of close relatives over a dead body, which imply that consent of close relatives is also required.³⁹ DCD commenced in Australia in the late 1990s and currently comprises about one-third of all donors.⁴⁰

The current varying legislation on VAD does not specifically mention organ donation. However, publicly available guidance⁴¹ developed for health service executives, managers and senior staff responsible for VAD-related processes in Victoria includes an overview of three potential options for organ, tissue or body donation: (i) body donation for research; (ii) cornea and sclera donation for transplant and/or research; or (iii) brain donation for research. At present, it is not clear to what extent these potential options for organ, tissue or body donation have been used by patients who have died by VAD.⁴² We were unable to source any other publicly available information about the potential for or prohibition of the donation of organs or tissues following VAD.

From a legal perspective, there do not appear to be any prohibitions against organ donation after VAD. As noted earlier, despite some differences in state

legislation, especially pertaining to eligibility criteria, conscientious objection by medical practitioners and initiation of VAD discussion, if all the relevant legislative requirements for both VAD (relevant for each state) and organ donation are independently and separately complied with, we do not foresee any obstacles to the practice. The key element to combining VAD and DCD in a sound practical, legal and ethical way is to ensure a clear separation between the two processes. Given that a person must request VAD themselves, it is unlikely that there will be any potential for coercion for organ donation.⁸

Following the international practice of organ donation after euthanasia, to enable VAD and DCD from a medical perspective it would be necessary to allow an eligible practitioner to administer the VAD substance intravenously, ideally in an ICU or other hospital setting. This requirement — intravenous administration in the hospital setting — may present a logistic challenge to introducing combined VAD and DCD in Australia. Under section 45 of the Victorian legislation, patients must self-administer the VAD substance, unless they are “physically incapable of the self-administration or digestion of the voluntary assisted dying substance” (section 46(c)(i)), in which case practitioner administration may be permitted.^{1,42} However, in Western Australia, under section 56 of the legislation patients are able to decide whether to self-administer the VAD substance or have this administered by a practitioner.³

The most recent data available from Victoria report a total of 604 VAD deaths after medication; in 517 cases the substance was self-administered, and in 87 cases it was practitioner-administered.⁴³ It remains to be seen whether, given the choice, more patients opt for practitioner-administration than self-administration.

Conclusion

Although VAD is a relatively new clinical intervention, presuming the relevant legal requirements for VAD and organ donation are adhered to, DCD following VAD in Australia appears to be both legally and clinically feasible. As the practice of DCD is well established, its combination with VAD represents more operational challenges than legal obstructions. There might be the need for evidence-based research into this issue. While the potential number of patients who may be eligible for VAD and suitable for organ donation may be limited, those who do meet the criteria for both should be facilitated to donate their organs after VAD. Following other countries that already facilitate organ donation after euthanasia, we recommend the development of national best practice guidelines for this combined procedure in the Australian context. This would still enable each jurisdiction, despite the variations in VAD legislation, to practise combined VAD and DCD if the relevant legislative requirements for VAD and organ donation were met. The national guideline should comprise four essential elements:

- adherence to the legal definition of death;³⁰⁻³⁷
 - adherence to each state/territory-based VAD legislation,¹⁻⁷
 - adherence to the national guideline for organ donation after circulatory death,³⁸ which might also include some discussion about informed consent to organ donation before VAD occurs; and
 - consent of the closest relative.
- We note, however, that clinical guidelines, unless incorporated into legislation, are not legally binding.⁴⁴ A potential national guideline would benefit from consultation involving a range of stakeholders including medical practitioners and families, and broad societal input concerning any ethical, legal, social and cultural implications. The practice of combined VAD and DCD would also require close monitoring after instigation when a national guideline has been developed. Further, record keeping and reporting would also be necessary.
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