Organ donation after circulatory death following voluntary assisted dying: practical and ethical considerations for Victoria

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ABSTRACT

On 19 June 2019, the Voluntary Assisted Dying Bill 2017 (Vic) will be enacted. Up to ten per cent of people deemed eligible for voluntary assisted dying will be medically suitable for organ donation. Donation after circulatory death after assisted dying is possible, although there are important challenges to address for donation to be successful in this context. This article explores the practical and ethical considerations that need to be reviewed in order to support organ donation after assisted dying. In particular, it discusses the ways in which organ donation will affect the place, timing and mechanism of death, and the ethics around consent for donation. The article explores potential ways to minimise warm ischaemic time, and finally discusses the potential for donation to influence the decision to consume the voluntary assisted dying substance.

Crit Care Resusc 2018; 20 (4): 254-257

Despite significant improvements in organ donation rates in Australia after the establishment of the Australian Organ and Tissue Authority and the DonateLife Network in 2009, there is still a shortfall of organs available for transplantation.[1] As a result, patients remain on organ waiting lists and many die before receiving a transplant. All possible avenues to bridge the gap between organs donated and those required for organ transplantation should be explored.

The Voluntary Assisted Dying Bill 2017 (Vic)[2] will be enacted in Victoria on 19 June 2019. A person with an incurable illness expected to cause death within weeks or months (not exceeding 12 months), whose suffering cannot be relieved in a manner that they find tolerable, and who has decision making capacity will be allowed to request assistance to die. If they are assessed as eligible, they will be able to end their life by administration (either by self or by a doctor if the person is incapable of self-administration) of a voluntary assisted dying (VAD) substance prescribed by a doctor and dispensed by a pharmacist.

Patients who die after consuming the VAD substance will potentially be able to be organ donors after death because the time of their death will be predictable. There are useful parallels with donation after circulatory death (DCD) after withdrawal of life-sustaining treatments. Organ donation has been successfully undertaken after euthanasia in some European jurisdictions,[3,4] and early reports are favourable in terms of recipient outcomes.[3] About ten per cent of patients eligible for VAD are likely to be medically suitable for donation,[5] and there are no components of the Bill in its current form which would preclude it. All eligible patients should be offered the opportunity to receive information and make an autonomous decision about organ donation. This article considers the practical and ethical considerations of organ donation after assisted dying.

Practical considerations

The decision to be an organ donor would have implications for the place, timing and mechanism of death. It would be contingent upon the person's willingness to die in hospital, which is unlikely to otherwise be their preference. Currently, DCD donors in Victoria are almost exclusively managed in the intensive care unit (ICU),[6] allowing a balance between the comfort of the patient and their family, familiarity of staff with the organ donation process, ability to promptly determine death using haemodynamic monitoring, and timeliness of transfer to the operating theatre after death. ICU admissions for potential donors have been shown to provide considerable community benefit.[7] The ICU would be the ideal place for coordinating donation in patients receiving assistance to die.

The time of consumption of the substance would need to be coordinated in order to suit not only the patient and their family but also the organ retrieval teams and recipients. Clearly, it would be important that the substance used to cause death did not injure organs being transplanted. Although the VAD substance is yet to be determined, it is likely to be a barbiturate with or without an opiate, as has been used in other jurisdictions such as Oregon, in the United States, and Canada,[8] and therefore unlikely to affect organ suitability for donation. However, it is likely that death will take longer after ingestion of the VAD substance than what has been recorded after euthanasia in European countries, where the medications used to cause death are injected and often include a neuromuscular blocker. Indeed, the time to death after ingestion of the VAD substance is likely to be a major barrier to donation. Review of cases in Oregon has shown a wide variability in the time between ingestion and death, although the median time is reported as 27 minutes.[8] There are several possible ways to overcome the potential problem of protracted time between ingestion and death, discussed below in the ethics section of this article.

The blood tests required to assess suitability for donation and to aid recipient selection could be performed as an outpatient to minimise the amount of time patients would need to be in hospital. Before consuming the VAD substance, the person may require insertion of an arterial line, which would allow prompt determination of death and, if heparin is to be administered, a cannula may be inserted.

Patients would be interacting with health care staff with whom they have no prior relationship. Measures could be taken to minimise the impact of this, including handover or even shared care with the patient's general practitioner and/or the coordinating medical practitioner (for assisted dying),[9] and involvement of palliative care specialists, chaplaincy services, social work teams and other support staff from within the hospital network. As many of these staff will have limited or no experience with organ donation, the ICU staff and the organ donation staff will have important roles as coordinators of the donation process. As for DCD after withdrawal of life-sustaining treatments, it is important that any costs associated with donation are not borne by the dying person or their family.

Ethical considerations

Consent

These cases would allow for first person, contemporaneous consent, which removes many of the concerns regarding consent for deceased organ donation, including concerns about how informed a registration on the Australian Organ Donor Register is and concerns about the precision of donation decisions made by family members. It also removes concerns about consent for ante-mortem interventions, which again would be given by the patients themselves. It would be most analogous to DCD after withdrawal of ventilation from a conscious patient with a cervical spinal cord injury, in which there is a precedent for first person contemporaneous consent, without the communication barriers inherent in such a case.

In cases of DCD after withdrawal of life-sustaining treatments, there is an expectation that organ donation will not be discussed until after a decision to withdraw life-sustaining treatments is finalised.[10,11] Similarly, organ donation should not be discussed with a person requesting VAD until after they have been deemed eligible for it; this is important to ensure that there is separation of the two processes to avoid a perception of a conflict of interest. If a person initiates a discussion about donation before eligibility assessment for VAD, the request should be acknowledged and sensitively deferred until such time.

It is currently recommended that whenever donation is possible, the opportunity is discussed with the potential donor or, more commonly their family. It is also recommended that a donation specialist joins the treating doctor for the conversation about donation, known as a collaborative approach.[12] There is no reason why these principles should not apply to people accessing VAD. All patients eligible for donation after VAD should have the chance to discuss it with a suitably skilled donation specialist in order to support informed decision making. Given that the treating doctor in such cases will not be an intensivist and may have little experience with organ and tissue donation, a collaborative approach to discussing donation will be particularly important.

Reducing warm ischaemic time

As mentioned above, the time to death after consuming the VAD substance is likely to be longer than that reported in European cases of euthanasia. There are several possible ways to overcome the impact of this on the potential for donation, including changing the definition of death, removing the need for death before organ retrieval, deliberately hastening death and elective intubation before death — these are discussed below.

DCD has led to attempts to increase the precision of determining the time of death, and it is felt appropriate to wait 2–5 minutes (depending on the local hospital protocol) after cessation of circulation before declaring death. This arbitrary time point has been chosen to ensure the certainty of death (contingent upon a decision not to attempt resuscitation) while supporting the expediency needed to retrieve organs to allow successful transplantation. Upon administration of the VAD substance, it might be argued that the dying process has become irreversible, contingent upon the decision to forego medical attempts to prevent death. This raises the question of whether death could be determined earlier in such cases, for example when consciousness is lost. However, there have been six people in Oregon between 1998 and 2015 reported to have lost consciousness after ingesting a lethal dose of medication only to regain consciousness, calling into question the certainty of death in such a circumstance.

The "dead donor rule" states that the person must already have died before organ retrieval, or in other words, that the process of organ donation must not lead to the death of the person. This rule acknowledges that it is wrong to kill another person. However, having passed a law allowing health professionals to assist in causing the death of a person, consideration might be given to whether the dead donor rule is relevant in the context of VAD. Others have gone further and questioned whether, after induction of anaesthesia, the cause of death of the person undergoing VAD could be the retrieval of organs itself (so-called organ donation euthanasia).[13] Accepting that the death of the person is assured, and with confidence of avoiding any suffering through deep anaesthesia, organs could be retrieved before (and therefore causing) the

death of the person, thereby maximising the success of the donation without any change to the outcome for the dying person. Despite reasonable ethical arguments for this, the Voluntary Assisted Dying Bill 2017 (Vic) is drafted in such a way that the cause of death must be by administration of a substance, and the *Human Tissue Act 1982* (Vic)[14] forbids donation leading to the death of the donor. Therefore, within the current legislative framework, it will not be legal to declare death before cessation of the circulation, nor remove the need to determine death before donation.

In cases of DCD after withdrawal of life-sustaining treatment, it is felt that treatment to manage symptoms of the dying person should not deliberately hasten death,[15] and the doctrine of double effect is often espoused to defend the use of palliative medications that might hasten death in this context. Here, the potential for a medication to hasten death, even when predictable, is accepted because it is not the primary, intended effect. However, in cases of VAD, this need not be relied upon because the primary intent is the death of the person. It could be argued, then, that a higher dose of medication that might lead to a quicker death, and thereby facilitate the donation wishes of the dying person, is ethically justifiable. It is unclear at present how the dose of the VAD substance will be chosen.

Another approach to minimising warm ischaemic time would be for the potential donor to be intubated after losing consciousness due to the VAD substance, and thereafter managed as per current DCD practice after withdrawal of life-sustaining treatments. Physiological support would be used until it was clear that the VAD substance had reached full effect, and death could then be expected shortly after discontinuing life-sustaining treatments. This approach would require consent from the person for the ante-mortem intervention of intubation and mechanical ventilation. This would introduce a risk that the timing of withdrawal of life-sustaining treatments may be wrong, including being delayed beyond the peak effect of the VAD substance, which may lead to the inadvertent survival of the patient. The time between ingestion of substance and death has been reported to be widely variable.

The intersection of assisted dying and donation

Assisted dying laws are contentious. One of the primary arguments against these laws is the slippery slope argument that, once endorsed, there will inevitably be a trend towards loss of voluntariness.[16] It is imperative that there is a clear separation between VAD and the potential to save the lives of others through organ donation. Indeed, the need for this separation is equally recognised when DCD follows cessation of life-sustaining therapies.

Since patients must request VAD themselves, the potential for donation is not likely to influence the initial request. Donation must not affect the assessment of eligibility for VAD, and the use of strict and objective criteria for determining eligibility, including that they act without evidence of coercion, serves this purpose.

The potential for someone with a terminal illness to save the life of a loved one who is in need of a transplant could be a source of pressure for that person to consider VAD. This is well documented in living related kidney donors.[17] Altruistic, non-directed donation is less likely to result in such pressure. One approach to minimising this risk would be to disallow directed donation after VAD; however, this may result in otherwise willing donors declining donation, and may prevent a dying person from fulfilling a wish to save or help someone known to them.

Having been assessed as eligible for VAD, there is still no obligation to consume the substance that will lead to death. A significant benefit of VAD for some might be the empowerment that comes from having available the means to end one's life, rather than the act of ending life itself. It is possible that the wish to be a donor might persuade someone to complete their death in order to fulfil this wish, resulting in a more premature death than that which may have otherwise occurred. A counter argument to this concern is that consideration of donation is part of making an informed and autonomous decision about VAD, including the timing of consuming the substance. Another counterargument is that 94% of family members surveyed after giving consent for donation after the death of a loved one said they found comfort in their decision to donate. It would not be right to deny the opportunity to find solace in donation to those choosing VAD for fear of influencing their decisions.

As for current DCD practice, when VAD is to be followed by donation, the doctors who provide treatment for the dying person, including the administration of the VAD substance, and who declare the death of the person should not be the designated officer, part of the transplant team, or caring for a potential recipient.

Conclusion

There is an ongoing need to increase the availability of donated organs for transplantation. There is an accepted precedent for nearly all aspects of donation after assisted dying, although there are a number of specific considerations. First, the decision to be a donor will require that death is supervised by a health care team unknown to the person and their family, at a time that is influenced by the needs of the health care team and recipients, and in a hospital environment, which may not have otherwise been the person's choice. Second, consent for donation and also for ante-mortem interventions will be first person contemporaneous consent, alleviating many of the concerns regarding consent for DCD. Third, there is a need to

prevent the opportunity of organ donation contaminating assessment of eligibility for VAD. This risk will be minimised by the objective and strict eligibility criteria for VAD as well as by delaying any discussions about donation until after eligibility is confirmed. Finally, there is a possibility that someone deemed eligible for VAD will end their lives prematurely purely in order to support a wish to be a donor. This may be seen as a legitimate part of the decision making of the person or as a risk that will, at least in part, be reduced by continuing to disallow directed donation.

A major barrier will be the time to death after consumption of the VAD substance. As discussed above, ethical approaches to this are worthy of further discussion and consideration.

There is a need to identify and support the potential for organ donation after assisted dying, and it is timely to begin a conversation about how best to do this. We must develop appropriate processes for donation in this unique context, as has been done in the Netherlands where a practical manual for donation after euthanasia has been developed.[18] This will require an interdisciplinary approach involving donation and transplant organisations, health care staff from intensive care as well as the community, and legal and ethics experts. We must inform and support health care professionals in order to enable their role, including health professionals within and outside of the hospital setting. Also, there should be a process in place to document and review cases of donation after VAD in order to improve practice until it is an established pathway to donation.

Acknowledgement: An earlier draft of this article was submitted as part of coursework undertaken for the Melbourne Law Masters program and the University of Melbourne.

Competing interests
None declared.

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