

Commentary

Physiotherapy for the Potential Organ Donor- are we maximising our role?

Janis Harvey, BSc, MSc¹

¹ Major Trauma Service, Royal Infirmary of Edinburgh

Keywords: Organ donation, respiratory, physiotherapy

<https://doi.org/10.56792/UGFI9899>

Journal of the Association of Chartered Physiotherapists in Respiratory Care

Vol. 54, Issue 3, 2024

Is there a greater gift than that of an organ for transplant? Optimising the potential organ donor, with the aim of increasing the number of organs available for transplant, has started to receive a lot more attention in the critical care field. This discussion has included how we as physiotherapists could work to maximise our contribution. However, before exploring this further, we need to consider consistency and equity of our practice. Is there discord between *knowing* we as physiotherapists have a role to play in increasing the number of organs available for transplant and translating that to being *actively involved* in optimising the potential organ donor? There is a need for us to understand why and how physiotherapists can contribute while exploring and addressing clinicians perspectives about their role for this patient group.

THE RECIPIENT AND DONOR IMBALANCE

For many living in the UK with organ failure, solid organ transplant remains the only means to restore essential functions and lengthen life. The number of people in need of a transplant in the UK is the highest in the last decade.¹ Unfortunately, the demand for organs continues to exceed supply, and many patients will have a long wait, or die, before suitable organs can be identified for transplant. Opt-in legislation across the UK has seen a steady increase in the number of people on the NHS Organ Donation Register, but only a small number of people die in the right circumstances to be eligible to donate organs.

In the UK there are two deceased organ donation pathways. Donation after circulatory death (DCD) follows confirmation of death using cardiorespiratory criteria. Time to asystole will impact the suitability of a DCD donor. Organ donation after brain stem death (DBD) follows diagnosis of death using neurological criteria. For the DBD donor, once consent/authorisation for organ donation has been established, critical care should transition seamlessly from treatment for recovery, to delivering evidence-based donor management to reduce organ injury. Unlike DCD, the progressive brainstem compression that occurs following neurological death means DBD donors are at significant risk from the adverse haemodynamic, metabolic, and hormonal effects which ensue and threaten organ viability for transplant.

OPTIMISING THE POTENTIAL DONOR

Although referral rate of potential donors to the Organ Donation Services Team remains high, conversion of potential donors to successful donors remains challenging.¹ To maximise the quality and quantity of organs to be donated and thus successful transplantation of the available organs, management of the potential organ donor must be optimised, particularly respiratory function which will enhance donor cardiopulmonary status.² Healthcare staff, especially those within critical care, have a key role in achieving potential donor optimisation, physiotherapists included. Our role as physiotherapists within critical care is well established, particularly in providing respiratory assessment and a range of interventions to prevent, support and resolve respiratory failure,³ optimising respiratory function. This role of the physiotherapist is acknowledged in the NHS Blood and Transplant (NHSBT) DBD donor optimisation care bundles which are in use to promote consistency in clinical practice in adult⁴ and paediatric patients.⁵ Such bundles have also been shown to improve the rate of organs retrieved and function in those transplanted.⁶ The bundle indicates that in addition to delivering lung protective ventilation strategies (which have been shown to double the number of lungs transplanted compared to conventional strategies⁷), head up positioning and airway suctioning, the patient should continue to have physiotherapy input.

A ROLE FOR PHYSIOTHERAPY?

It stands to reason that physiotherapists are well placed to contribute to optimisation of the potential donor- compromised gas exchange and chest x-ray changes are the most common reasons for donor lungs failing to meet transplant suitability criteria⁸ and both can be improved through respiratory physiotherapy interventions. But despite this, best practice in this area of physiotherapy remains unknown⁹⁻¹¹ and physiotherapy practices for the potential organ donor are variable and inconsistent.¹¹ Thus, how can we as a community of respiratory physiotherapists maximise our role in the optimisation of potential organ donors and so contribute to the expansion of suitable organs for transplant?

IS THERE A KNOWLEDGE GAP?

Physiotherapy for the potential organ donor is a limited field of practice within critical care and so can be difficult to amass clinical experience. Utilisation of physiotherapy networks and social media can prove fruitful in sharing resources and has provided connections between clinicians with more (and less) exposure in the field.

In my experience building relationships with local Specialist Nurses in Organ Donation (SN-ODs) has created valuable links between services, enhanced our knowledge, and supported clinical decision making. Having recently been involved in developing an education resource on the role of physiotherapists for potential organ donors for the SN-OD optimisation course, there is raised awareness of the physiotherapist's role and advocacy in the wider multi-disciplinary team. Therefore, it is important that all physiotherapists are aware of our potential involvement with such patients.

Donor management protocols often include strategies to optimise oxygenation which overlap with physiotherapy interventions but fall short of specifying continuation of physiotherapy. It is possible that this may impact engagement of physiotherapists with such patients,⁹ but there is clear recognition of role contribution in the NHSBT donor optimisation bundle, which should be harnessed as an invitation for physiotherapists in the UK to advocate for their involvement with this patient group.

I have seen firsthand that delivering physiotherapy to potential organ donors is not a consistent priority, likely being compromised by competing clinical demands.¹¹ It is widely recognised that many acute physiotherapy teams are under pressure to efficiently utilise an already limited resource. Is prioritising out the potential organ donor simply due to this? Or does a lack of knowledge about the physiotherapist's role/physiotherapists perspective of their role in this circumstance play a factor? This remains largely unexplored for UK physiotherapists in the available literature.

The introduction of protocols to guide physiotherapy for potential organ donors could aid in achieving consistency of input. A 2021 Australian survey¹⁰ showed such protocols to be preferred in lower donation rate hospitals, but clinical reasoning preferred in higher donation rate hospitals. This may reflect organ donation being a small field of practice, so protocols are welcome in supporting less experienced teams/staff members. It seems logical for such guidance to be established by higher donation hospitals who have more exposure to this patient group. This is why in Edinburgh, where we have the highest number of organ donors in Scotland,¹ a collaboration between physiotherapy and SN-ODs led to the development of local guidance for physiotherapy management during donor optimisation, which has since been adopted in other hospitals across Scotland and adapted for use in other UK hospitals ([Image 1](#)).

Ultimately, a consensus statement on the role of the physiotherapist for the potential organ donor would be a positive start towards improving consistency of input, as would UK based research to explore current usual care. In the meantime, this is a call to all physiotherapists who may

be involved with this patient group to be curious- consider current practice, openly discuss the potential impact of respiratory physiotherapy for this patient group, connect and collaborate with local SN-ODs and most importantly, advocate for our role in donor optimisation.

Key points

- The number of people in need of a transplant in the UK continues to exceed supply.
- To maximise the quality and quantity of organs to be donated, it is crucial that potential organ donors are optimised, particularly respiratory function.
- Physiotherapists should be well placed to contribute to potential donor optimisation as respiratory physiotherapy assessment and intervention can improve compromised gas exchange and chest x-ray changes.
- Physiotherapy for the potential organ donor is a limited field of practice within critical care and so can be difficult to amass clinical experience.
- Utilising professional networks, local specialist nurses in organ donation, accessing available physiotherapy management protocols can all contribute to narrowing knowledge gaps, but ultimately UK based research is needed to explore current physiotherapy practice for this patient group.

FUNDING

None to declare.

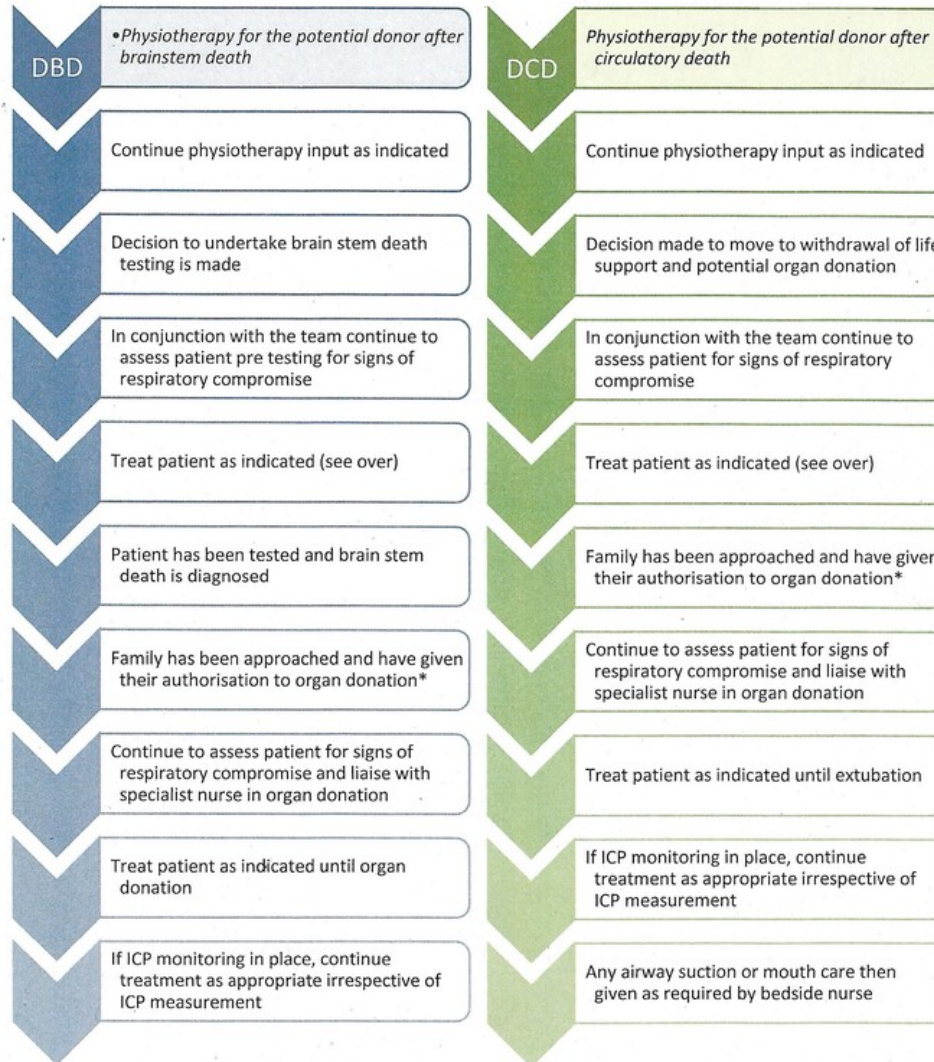
DECLARATION OF INTEREST

None to declare.

Submitted: July 30, 2024 GMT, Accepted: October 04, 2024 GMT



Donor optimisation -physiotherapy management



*In the event family do not give authorisation to organ donation, there will be a move to end-of-life care and no further formal physiotherapy input will be required.

Janis Harvey
 Physiotherapy Consultant Major Trauma
 August 2022, Reviewed July 2024

Image 1



This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CCBY-4.0). View this license's legal deed at <http://creativecommons.org/licenses/by/4.0> and legal code at <http://creativecommons.org/licenses/by/4.0/legalcode> for more information.

REFERENCES

1. NHS Blood and Transplant. Organ and Tissue Donation and Transplantation- Activity Report 2023/2024. 2024. Accessed July 26, 2024. <https://nhsbtbde.blob.core.windows.net/umbraco-assets-corp/33778/activity-report-2023-2024.pdf>
2. Wood KE, Becker BN, McCartney JG, et al. Care of the potential organ donor. *New England Journal of Medicine*. 2004;351(26):2730-2739. doi:10.1056/NEJMr013103
3. Intensive Care Society. Guidelines for the Provision of Intensive Care Services v2.1. 2022. Accessed July 26, 2024. <https://www.ficm.ac.uk/sites/ficm/files/documents/2022-07/GPICS%20V2.1%20%282%29.pdf>
4. NHS Blood and Transplant. Donation After Death Using Neurological Criteria- Donor Optimisation Care Bundle- Adult. 2023. Accessed July 29, 2024. <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fnhsbtbde.blob.core.windows.net%2Fumbraco-assets-corp%2F29992%2Ffm7261.docx&wdOrigin=BROWSE LINK>
5. NHS Blood and Transplant. Donation After Death Using Neurological Criteria- Donor Optimisation Care Bundle- Paediatric. 2024. Accessed July 30, 2024. <https://nhsbtbde.blob.core.windows.net/umbraco-assets-corp/33301/fm7352.docx>
6. Fleming G, Thomson EM. Organ Donation and Management of the Potential Organ Donor. *Anaesthesia & Intensive Care Medicine*. 2021;22(8):475-481. doi:10.1016/j.mpaic.2021.06.007
7. Mascia L, Pasero D, Slutsky AS, et al. Effect of a Lung Protective Strategy for Organ Donors on Eligibility and Availability of Lungs for Transplantation: A Randomized Controlled Trial. *JAMA*. 2010;304(23):2620-2627. doi:10.1001/jama.2010.1796
8. Raios C, Skinner EH, Keating JL. Lung Management Protocols Increase the Incidence of Lung Procurement and Organ transplantation: A meta-analysis. *Physiotherapy Theory and Practice*. 2018;36(4):1-10. doi:10.1080/09593985.2018.1488907
9. Raios C, Keating JL, Stitt N, et al. Challenges in Providing Timely Physiotherapy and Opportunities to Influence Outcomes for Potential Lung Donors. *Progress in transplantation*. 2016;27(2):112-124. doi:10.1177/1526924816680098
10. O'Connor LR. Physiotherapy in Patients on the Organ Donation Pathway: A Survey of Current Practice. *Transplantation Proceedings*. 2021;53(7):2157-2161. doi:10.1016/j.transproceed.2021.07.034
11. Raios C, Keating JL, Skinner EH, et al. Exploring Current Physiotherapy Practices in the Care of People who are Potential Lung donors: A Qualitative Study. *Australian critical care*. 2024;7(4):539-547. doi:10.1016/j.aucc.2023.12.003