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REFLECTIONS

Balancing values: implications of a brain-based definition of death for pluralism in Canada

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In clarifying that the permanent cessation of brain function is what unites neurologic and circulatory criteria for death determination, the updated Clinical Practice Guideline featured in this month's Special Issue of the *Journal* defines human death for the purposes of medical practice as the permanent cessation of brain function.[1] This definition of death relies on the notion that brain function is the necessary and sufficient condition for human life. While widely socially accepted and reflective of the biomedical consensus view,[2,3] this proposition is subject to reasonable disagreement on metaphysical, religious, or other grounds.[4]

The choice of a biomedically informed definition of death is appropriate for a death determination guideline, the scope of which is rightly constrained to medical practice. Nevertheless, it has legal and social implications that extend beyond medical practice and that should be acknowledged and explored. A guideline clarifying that, for the purposes of medical practice, all human death is brain-based privileges one conception of death (i.e., a biomedical perspective) over others (e.g., religiously held cardiopulmonary perspectives).[5] As discussed at length elsewhere in this Special Issue of the *Journal*,[6] this approach is justifiable in view of society's pressing interest in uniformity in this domain. Nonetheless, the use of a uniformly applicable biomedical definition that falls within the context of Canada's pluralistic, multicultural society is arguably in tension with societal values of respect for cultural, religious, and world view diversity. That is, in the context of a multicultural society that embraces difference, the Clinical Practice Guideline could be interpreted as inconsistent with Canada's pluralistic values insofar as it imposes a definition of death on those who may object on principled grounds.

As the Ontario Court of Appeal clarified in *McKitty v. Hayani*, just because medicine defines death does not mean

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that the law must accept this definition.[7] The court concluded that "…who the common law ought to regard as a human being—a bearer of legal rights—is inescapably a question of justice, informed but not ultimately determined by current medical practice, bioethics, moral philosophy, and other disciplines."[7] As such, given that the definition is likely to be challenged before the courts, it is prudent to consider whether and how the views of those who do not accept brain-based conceptions can be accommodated within a health care context.

In this article, we first briefly explain why the normative and practical exigencies of medicine require a uniformly applicable definition of death in the health care context. We then elaborate on the challenge to pluralism posed by this definition by considering how those with alternative world views may interpret the brain-based definition as inconsistent with their conception of death. We conclude by arguing that consistency with Canadian societal values supports reasonable accommodation in some instances—for example, in the form of short delays in the withdrawal of somatic support—but, while the courts have yet to rule on the issue, probably not to the extent of allowing exemptions for those who object on principled grounds. As we discuss below, this is because what counts as "reasonable" accommodation in this context must be weighed against countervailing considerations of broader societal and legal significance. While specific strategies for reasonable accommodation are out of scope (though addressed elsewhere in this Special Issue of the *Journal*),[8] we show why it is incumbent on health care institutions to develop respectful policies and practices that mitigate the harms that may arise from the imposition of a uniform definition of death and provide guidance in instances of conflict or objection to death determination.

Why a definition is needed

The practice of medicine is not value neutral.[9] Respect for persons, culture, religion, world views, and diversity are among the Canadian values that medical professionals incorporate into their practice.[10] While beyond the scope of a clinical practice guideline, varying positions on the definition of death should not be dismissed as inadmissible perspectives when engaging with patients and families. Nevertheless, this does not mean that, for the purposes of clinical decision making, objectors to a brain-based definition necessarily have a right to have an alternative definition apply to them, as medical practice is additionally guided by practical norms guiding the delivery of public health care and other professional duties. These norms include the responsible stewardship of scarce health care resources and the duties to provide care consistent with the best available scientific evidence, to assess risk, and to mitigate harm. Physicians must provide appropriate treatment across the care continuum, and treatment decisions should be evidence informed and consistent with law and distributive justice.[10] When confronted with objections to death determination by neurologic criteria, for example, health care professionals may experience moral distress when seeking to show respect for diverse beliefs while simultaneously believing that continued somatic support is futile, disrespectful to the body of the deceased, and a use of scarce resources that is inconsistent with the principles of distributive justice that they are bound to respect.

Further tension between norms, values, and the exigencies of medical practice arises in the context of deceased organ donation. The "dead donor rule" is the ethical injunction that organ recovery cannot cause a donor's death; it entails that death determination must precede organ recovery.[11] A definition of death and attending criteria are critical to ensuring that practices for death determination in the context of deceased organ donation are consistent with those employed in instances where organ donation is not considered.

Finally, because certain legal rights are available only to the living in Canada, important moral and legal questions of broader societal significance turn on whether a person has died. The social role of determining death typically falls on medical personnel, and this determination has significance not only for patients, families, and health care professionals, but also for society generally.[12] Indeed, death determination affects matters of resource allocation, criminal and family law, the disposition of estates, and more.

Among other normative and practical exigencies, a uniform definition of death is necessary to differentiate between treatment and somatic support of deceased persons, to inform appropriate resource allocation in the context of publicly funded health care systems, to reassure physicians of the integrity of their death determinations, to ensure adherence to the dead donor rule, and to facilitate societal practices pertaining to death. Hence, although it generates tensions with pluralism, health care professionals need a uniformly applicable definition of death to responsibly discharge their duties to patients and society.[6,13]

Defining death

Since a definition of death is required in the health care context, a further question is what it should be. There are several levels of abstraction at which we might conceptualize death:

(1) nonphysiologic religious, metaphysical, or spiritual concepts (e.g., absence of soul, animating essence, life force),
(2) quasiphysiologic concepts (e.g., loss of integrated physiologic functioning as a whole), and
(3) physiologic concepts related to the absence of certain functions (e.g., permanent cessation of brain function).

Levels 1 and 2 propose more or less abstract and contestable concepts of death that cannot be empirically proven; they are metaphysical or quasiphysiologic conceptions of death that are, as such, subject to reasonable disagreement. Level 3 operationalizes death with reference to specific physiologic functions.

Because medicine relies on objective and empirically verifiable evidence, only level 3 is appropriate for a clinical practice guideline.[14] Any biomedical definition of death must be informed by current understandings of the observable dimensions of death. A practical definition of this kind has been termed an "operational definition" to distinguish it from religious, spiritual, or philosophical conceptualizations.[15]

While some states of the human body unequivocally indicate the death of the person (e.g., an advanced state of decomposition), the advent of organ-supporting technologies stimulated the need for precise indicators of death when these technologies are employed.[5] While in the past the loss of cardiopulmonary function was thought to be the necessary and sufficient condition for death, technological advances that support these vital functions made this notion obsolete from a medical perspective. The social and biomedical evolution toward a brain-based definition of death emerged from a recognition of the centrality of brain function for human life.[6] Near-universal biomedical consensus holds that death determined by cessation of cardiopulmonary function was, in effect, always a proxy for permanent loss of brain function.[16] Hence, from a biomedical perspective, all death is brain based.

Conceptual implications of a brain-based definition

Although medicine has clearly accepted a brain-based definition of death, commentators continue to debate the definition of death on a myriad of religious, cultural, empirical, and philosophical grounds.[4] Given intractable metaphysical commitments, debates among those with diverse perspectives cannot be resolved empirically because metaphysics is concerned with the nature and meaning of abstract concepts that are not generally subject to empirical inquiry.[17] Nor, as *McKitty v. Hayani* emphasized, is medicine the sole arbiter of the meaning of death.[7] Successful dissemination and uptake of the brain-based definition of death within the Clinical Practice Guideline will, thus, predictably lead to objections from those who hold differing conceptions of death.[18]

To avoid the challenge to pluralism posed by a brain-based definition, some might try to position the guideline as metaphysically neutral to avoid contention. The argument would contend that, although the definition offers a physiologic standard for death (i.e., the permanent cessation of brain function at level 3), it does not offer a definition of any contentious underlying concept of death (e.g., the permanent cessation of integrated organismic functioning at level 2; the departure of the soul at level 1), nor did metaphysical considerations play any role in deriving the biomedical concept. This approach would attempt to facilitate practices in clinical care while avoiding complex metaphysical debates.

Nevertheless, for those who object to the biomedically informed definition of death, this strategy is bound to fail. Whether a physiologic standard for death determination will be considered legitimate is contingent on underlying assumptions about the nature of human death—what death *is*, ontologically and conceptually.[19] Standards or criteria for death determination are just the routes to determining whether a body is in the "state" of death.[20] If these standards and criteria do not identify the necessary and sufficient condition for death that an objector espouses (e.g., a religiously held cardiopulmonary perspective), then they may cogently argue that there are metaphysical implications to a brain-based definition.[21,22]

To see this, consider that if we claim that a person is deceased because they have permanently lost all brain function, an objector can still fairly ask *why*. Medicine is satisfied that the patient is deceased because they have lost all brain function, but an objector may wish for further justification when their contrary viewpoint suggests otherwise. If we are to avoid circularity, answering this question requires us to resort to some deeper, contestable, empirically unprovable conception at levels 1 or 2 that is consonant with the biomedical definition (e.g., death is the loss of personhood or the loss of integrated organismic functioning).[21] Hence, a hard distinction between metaphysical and metaphysically neutral biomedical definitions is untenable. Medical guidelines defining death, therefore, arguably rely on an implicit metaphysics that privileges biomedical conceptions over others.[21]

Balancing act

Given the arguable dependence of death determination criteria on underlying death concepts, we must acknowledge that even an operational, brain-based definition of death may imply contestable metaphysical

propositions for some in society. While the proposition that the permanent cessation of brain function equates to death accords with scientific understandings of the vital role played by the brain in the human organism, this makes it no less metaphysical. Indeed, although a biomedical definition is not necessarily explicitly informed by metaphysics, it is false to assert that the biomedical definition has no metaphysical *implications*, for it excludes some metaphysical, spiritual, or religious conceptions while accommodating others. As a metaphysical proposition, it is subject to reasonable disagreement that may be brought before the courts. For this reason, health care professionals and institutions should consider carefully whether and how objections to brain-based death determination may be accommodated.[8] Exploring reasonable accommodation will not only show respect for pluralistic values but may also have the benefit of averting legal challenges and moral distress in the event of conflict or objection to death determination.

In a small number of jurisdictions (e.g., New Jersey), legislatures have approached the problem of defining death in the context of a pluralistic society by allowing religious exemptions to brain death diagnosis.[18] Yet this approach may not be appropriate to the Canadian context, where publicly funded health care systems accentuate considerations of distributive justice. Further, as the Supreme Court of Canada has opined, although differences in world view ought to be respected, not all barriers to their expression are arbitrary:

> Determining when the assertion of a right based on difference must yield to a more pressing public interest is a complex, nuanced, fact-specific exercise that defies bright-line application. It is, at the same time, a delicate necessity for protecting the evolutionary integrity of both multiculturalism and public confidence in its importance.[23]

The "pressing public interest" at issue here is the need for uniformity described above (and elsewhere in this Special Issue of the *Journal*).[6] Although this has yet to be explored in the courts, our view is that this "fact-specific exercise" ought to take into account countervailing reasons that support accommodation only to the point of reasonableness, such as justice in resource allocation or the moral distress health care providers may experience when asked to continue somatic support of the deceased. In this context, "reasonableness" would not extend to imposing an undue burden on health care institutions, systems, or health care providers, as would be the case with an indefinite extension of somatic support for an individual who has permanently lost all brain function.

If full accommodation (i.e., pluralism with respect to death concepts) is unreasonable in the Canadian context, this does not entail that nothing ought to be done for those who object to a brain-based definition of death. Indeed, respecting pluralistic world views need not be an all-or-nothing affair. Health care professionals facing objections to death determination ought to try to understand what is at stake for the parties involved and attempt to resolve conflicts within the constraints of the law according to values and procedures that mitigate (if not eliminate) harms that may arise from the imposition of a brain-based definition of death.

Health care institutions should work with legal scholars, ethicists, social workers, spiritual care practitioners, health care professionals, and patient and family partners to develop respectful ways to manage conflict by outlining policies for reasonable accommodation.[8] Determining which accommodations are "reasonable" will depend upon balancing the interests of all concerned—patients, families, health care professionals, and society. When conflicts arise, the values of respect for persons, culture, and diversity should frame the procedures by which such conflicts are resolved. The articulation of policies and procedures guided by these values represents a compromise that acknowledges and respects diversity, yet that unfortunately must necessarily fall short of fully accommodating alternative world views for the consequentialist reasons described above. Whether these policies will involve reasonable delays between death determination and withdrawal of ventilation, facilitation of family efforts to transfer the deceased to private facilities, the involvement of spiritual care practitioners, or other measures, such policies and procedures can help uphold the values of Canada's pluralistic society while facilitating medical practices pertaining to death. In the absence of direction from the courts and in the interest of justice, institutions should strive for uniformity in policies.

Conclusion

As an event with significant social and legal implications, it is in the interest of health systems and society to have clarity and uniformity concerning Canada's biomedical definition of death and the criteria for its determination.[6] The new Clinical Practice Guideline offers updated criteria for making this determination consistent with modern understandings of the biological basis of death. Nonetheless, principled objections to brain-based death determination can be expected from those who espouse alternative conceptions of death. While exemptions to Canada's updated biomedical definition are likely not practicable because of countervailing considerations, wherever possible, the exigencies of medical practice

should be balanced with respect for pluralistic views on the definition of death.

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References

1. *Shemie, S, Wilson, LC, Hornby, L, et al*. A brain-based definition of death and criteria for its determination after arrest of circulation or neurologic function: a 2023 Clinical Practice Guideline. Can J Anesth 2023; https://doi.org/10.1007/s12630-023-02431-4
2. *Zheng K, Sutherland S, Hornby L, Wilson L, Shemie SD, Sarti AJ*. Healthcare professionals' understandings of the definition and determination of death: a scoping review. Transplant Direct 2022; 8: e1309. https://doi.org/10.1097/txd.0000000000001309
3. *Zheng K, Sutherland S, Hornby L, Shemie SD, Wilson L, Sarti AJ*. Public understandings of the definition and determination of death: a scoping review. Transplant Direct 2022; 8: e1300. https://doi.org/10.1097/txd.0000000000001300
4. *Veatch RM*. Controversies in defining death: a case for choice. Theor Med Bioeth 2019; 40: 381–401. https://doi.org/10.1007/s11017-019-09505-9
5. *Zeiler K*. Deadly pluralism? Why death-concept, death-definition, death-criterion and death-test pluralism should be allowed, even though it creates some problems. Bioethics 2009; 23: 450–9. https://doi.org/10.1111/j.1467-8519.2008.00669.x
6. *Murphy NB, Hartwick M, Wilson LC*. Rationale for revisions to the definition of death and criteria for its determination in Canada. Can J Anesth 2023; https://doi.org/10.1007/s12630-023-02407-4
7. *McKitty v. Hayani* (2019) ONCA 805 (Ontario Court of Appeal). https://www.canlii.org/en/on/onca/doc/2019/2019onca805/2019onca805.html (accessed January 2023).
8. *Simpson C, Lee-Ameduri K, Hartwick M, et al*. Navigating disagreement and conflict in the context of a brain-based definition of death. Can J Anesth 2023; https://doi.org/10.1007/s12630-023-02417-2
9. *Kelly MP, Heath I, Howick J, Greenhalgh T*. The importance of values in evidence-based medicine. BMC Med Ethics 2015; 16: 69. https://doi.org/10.1186/s12910-015-0063-3
10. *Canadian Medical Association* (2023) CMA code of ethics and professionalism. https://www.cma.ca/cma-code-ethics-and-professionalism (accessed January 2023).
11. *Robertson JA*. The dead donor rule. Hastings Cent Rep 1999; 29: 6–14.
12. *Chandler JA, Pope TM*. Legal considerations for the definition of death in the 2023 Canadian Brain-Based Definition of Death Clinical Practice Guideline. Can J Anesth 2023; https://doi.org/10.1007/s12630-023-02410-9
13. *Magnus DC, Wilfond BS, Caplan AL*. Accepting brain death. N Engl J Med 2014; 370: 891–4. https://doi.org/10.1056/nejmp1400930
14. *President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research*. Defining death: medical, legal, and ethical issues in the determination of death, 1981. United States Government Printing Office, Washington, DC. https://repository.library.georgetown.edu/bitstream/handle/10822/559345/defining_death.pdf (accessed January 2023).
15. *Shemie SD, Hornby L, Baker A, et al*. International guideline development for the determination of death. Intensive Care Med 2014; 40: 788–97. https://doi.org/10.1007/s00134-014-3242-7
16. *Shemie SD, Baker A*. Uniformity in brain death criteria. Semin Neurol 2015; 35: 162–8. https://doi.org/10.1055/s-0035-1547538
17. *Murphy N, Weijer C, Smith M, et al*. Controlled donation after circulatory determination of death: a scoping review of ethical issues, key concepts, and arguments. J Law Med Ethics 2021; 49: 418–40. https://doi.org/10.1017/jme.2021.63
18. *Pope TM*. Brain death forsaken: growing conflict and new legal challenges. J Leg Med 2017; 37: 265–324. https://doi.org/10.1080/01947648.2017.1385041
19. *Youngner SJ*. Defining death: a superficial and fragile consensus. Arch Neurol 1992; 49: 570–72. https://doi.org/10.1001/archneur.1992.00530290162028
20. *Sulmasy DP*. Whole-brain death and integration: realigning the ontological concept with clinical diagnostic tests. Theor Med Bioeth 2019; 40: 455–81. https://doi.org/10.1007/s11017-019-09504-w

21. *Bishop JP*. When is somebody just some body? Ethics as first philosophy and the brain death debate. Theor Med Bioeth 2019; 40: 419–36. https://doi.org/10.1007/s11017-019-09508-6
22. *Nair-Collins M*. Taking science seriously in the debate on death and organ transplantation. Hastings Cent Rep 2015; 45: 38–48. https://doi.org/10.1002/hast.459
23. *Bruker v. Marcovitz* (2007) SCC 54 (Supreme Court of Canada). https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/2397/index.do (accessed January 2023).