

Ethical Imperatives for Harmonizing Brain Death Standards in the United States and Globally

Calixto Machado^{1*}, Jose J. Sanchez², Beata Drobna Saniova³, Michal Drobny³, Arthur Schiff⁴

¹ Institute of Neurology and Neurosurgery, Department of Clinical Neurophysiology, 29 y D Vedado, 10400 La Habana, Cuba

² Better Call Agency,

1545 NW 15th Street Road, Miami, FL 33125, USA

³ Clinic of Anaesthesiology and Intensive Medicine, Comenius University in Bratislava, Jessenius Faculty of Medicine and University Hospital in Martin,

2 Kollarova Str., 03659 Martin, Slovak Republic

⁴ Northside Hospital Gwinnett,

500 Medical Center Blvd, Suite 350, Lawrenceville, GA 30046, USA

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*Correspondence to: Calixto Machado, cmachado180652@gmail.com

Summary

The determination of brain death/death by neurological criteria (BD/DNC) is a critical medical and legal process. The Uniform Determination of Death Act (UDDA) provides a legal framework, yet significant state-by-state inconsistencies persist in its interpretation and implementation. These disparities create ethical concerns related to justice, patient autonomy, informed consent, and public trust in medical determinations of death.

This paper argues for urgently harmonizing BD/DNC criteria across the United States and globally to uphold ethical medical practice, ensure consistency in end-of-life care, and preserve public confidence in the organ donation system.

Ethical considerations are examined, including fairness in healthcare access, respect for religious and cultural beliefs, and the implications for organ procurement policies. The call for national and international standardization aligns with bioethical principles and medical best practices, aiming to reinforce ethical and legal integrity in BD/DNC determination.

Keywords: brain death; death by neurological criteria; medical ethics; justice; public trust; legal standards; global health policy; organ donation; informed consent

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Information about the authors:

Machado Calixto: <https://orcid.org/0000-0002-0539-5844>

Saniova Drobna Beata: <https://orcid.org/0000-0002-0833-9493>

Drobny Michal: <https://orcid.org/0000-0001-9312-558X>

Introduction

Brain death/death by neurological criteria (BD/DNC), as defined by the UDDA, requires the irreversible cessation of all brain functions, including the brainstem. However, state-level variability in BD/DNC determination has created inconsistencies that undermine the ethical foundation of death determination. These inconsistencies result in unequal treatment of patients based on geographical location, affecting their legal status and eligibility for organ donation. Furthermore, international standards for BD/DNC vary widely, further complicating the definition and acceptance of brain death [1–10].

This paper explores this fragmentation's ethical dilemmas and calls for standardized national and global guidelines.

Challenges in Brain Death Diagnosis

The diagnosis of BD/DNC relies on clinical assessments that evaluate the absence of brainstem reflexes, irreversible coma, and the inability to breathe independently. Additional confirmatory

tests, such as cerebral blood flow studies or electroencephalography, may be used when inconclusive clinical exams. However, discrepancies exist in how these tests are applied across jurisdictions, contributing to ethical and legal uncertainties [6, 11–13].

Some key challenges in BD/DNC diagnosis include:

- Variability in required clinical examinations and confirmatory tests between states and countries.
- Differences in physician training and expertise in BD determination.
- Ethical concerns regarding misdiagnosis, particularly in patients with complex neurological conditions.
- Religious and cultural objections to BD that further complicate standardization efforts.

Ethical Issues in BD/DNC Determination [8, 9, 14–17]

1. Justice and Equity — The principle of justice demands that all patients be treated equally, yet

current BD/DNC criteria vary by state and country. Patients and families in different jurisdictions may receive different determinations of death, leading to inequities in care and access to organ transplantation.

2. **Autonomy and Informed Consent** — Many families struggle with BD diagnoses, particularly when state laws and hospital policies differ. Lack of uniform communication and inconsistent criteria compromise informed consent, leaving families uncertain about their loved one's medical status.

3. **Public Trust and Legitimacy** — Public confidence in BD/DNC is critical, particularly in organ donation. The presence of varying state and international criteria risks eroding trust in medical professionals and the ethical integrity of brain death determinations, potentially impacting organ donation rates.

4. **Religious and Cultural Considerations** — Ethical concerns arise when diverse religious and cultural beliefs are not uniformly considered in BD/DNC protocols. The lack of a standardized approach can lead to unnecessary conflicts between medical teams and families who dispute BD determinations on cultural or religious grounds.

5. **Legal and Policy Implications** — The legal definition of death should be coherent and consistently applied. The variation among states and countries challenges the credibility of BD as a legal and medical standard, opening the door for legal disputes and further ethical ambiguities.

The Need for National and Global Standardization: Harmonizing BD/DNC standards across all U.S. states and internationally is an ethical imperative to protect patients, families, and the medical community. National and global guidelines should ensure that BD determination is scientifically rigorous, ethically justified, and legally enforceable [18–22].

Key recommendations include:

- Adoption of a single, national BD/DNC standard to ensure consistency in death determination across U.S. states.
- Development of international BD/DNC guidelines under organizations such as the World

Health Organization (WHO) to facilitate global alignment on BD criteria.

- Strengthening communication and transparency in BD diagnoses to improve public trust.
- Considering cultural and religious perspectives in BD determinations to uphold ethical inclusivity.
- Enhancing medical education and physician training to ensure accurate and ethical BD diagnoses worldwide.

Discussion

The ethical necessity of standardizing BD/DNC criteria extends beyond national borders. Countries such as Japan, Israel, and some Muslim-majority nations have different approaches to BD due to cultural, religious, or legal reasons — this global diversity challenges medical professionals and policymakers seeking a unified approach. The absence of universal BD standards complicates international organ donation efforts, raises ethical dilemmas regarding patient rights, and fuels skepticism toward BD determinations. The global medical community must engage in interdisciplinary discussions to achieve greater harmonization of BD/DNC policies, ensuring ethical and legal consistency across borders [19, 21, 23–25].

Conclusion

The ethical challenges posed by inconsistent BD/DNC criteria demand immediate attention. A nationally and internationally unified approach to BD determination aligns with justice, transparency, and medical integrity principles. Standardizing BD/DNC guidelines will enhance ethical medical practice, ensure fairness in healthcare decisions, and reinforce public confidence in determining death and organ donation systems. The time has come for a comprehensive, evidence-based, and globally accepted BD/DNC determination framework.

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