

Brain death determination: the imperative for policy and legal initiatives in Sub-Saharan Africa

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ABSTRACT

The concept of brain death (BD), defined as irreversible loss of function of the brain including the brainstem, is accepted in the medical literature and in legislative policy worldwide. However, in most of Sub-Saharan Africa (SSA) there are no legal guidelines regarding BD. Hypothetical scenarios based on our collective experience are presented which underscore the consequences of the absence of BD policies in resource-limited countries (RLCs). Barriers to the development of BD laws exist in an RLC such as Kenya. Cultural, ethnic, and religious diversity creates a complex perspective about death challenging the development of uniform guidelines for BD. The history of the medical legal process in the USA provides a potential way forward. Uniform guidelines for legislation at the state level included special consideration for ethnic or religious preferences in specific states. In SSA, medical and social consensus on the definition of BD is a prerequisite for the development BD legislation. Legislative policy will (1) limit prolonged and futile interventions; (2) mitigate the suffering of families; (3) standardise clinical practice; and (4) facilitate better allocation of scarce critical care resources in RLCs. There is a clear-cut need for these policies, and previous successful policies can serve to guide these efforts.

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Introduction

Critical care is expanding in Sub-Saharan Africa (SSA) but remains woefully inadequate, with limited numbers of intensive care unit (ICU) beds and ventilators in many countries. Uganda, for instance, has 0.1 ICU beds per 100,000 people as compared to 20 per 100,000 in the USA (Jochberger et al., 2008; Kwizera, Dünser, & Nakibuuka, 2012). Kenya has 37 critical care beds in public hospitals and 57 in fee-paying private facilities for a population of 40 million (Misango, 2012). In spite of this shortage, withdrawal of intensive care in patients with confirmed brain death (BD) remains contentious.

In Kenya, as in most SSA countries, formal BD criteria do not exist either as clinical practice guidelines or as legislated law. A survey of BD policies worldwide found practice guidelines in only three African countries including Tunisia, Tanzania, and South Africa (Wijdicks, 2002). Although the number of patients with BD may be small (less than 5% of the patients in our unit), the lack of formal BD policies in a region with such a limited number of critical care beds, coupled with the catastrophic outcomes in those patients who cannot afford private intensive care, presents a major legal and ethical challenge for clinicians in this part of the world.

The absence of BD guidelines or policies in the majority of the continent suggests that there may be significant cultural and/or structural obstacles to creating such policies. The main obstacle is not simply the lack of resources, as other developing nations have implemented national guidelines. The most notable of these is India (Agarwal, Srivastava, Gupta, & Tripathi, 2012). Of interest is the fact that the Indian law was created in relation to the establishment of organ transplantation programmes, a common but not universal theme, and one that has been standard in the USA and Western Europe (Blank, 2011).

There are several significant reasons why BD criteria and practice guidelines would be reasonable to initiate in SSA. First and foremost, appropriate policies could benefit individual adults and children who in the current situation receive prolonged and futile interventions in the setting of BD. For example, we reference below in the scenarios the 'minimal support' protocol, which our authors have witnessed in practice in Kenya. A patient with BD is placed on a fraction of inspired oxygen (FiO_2) that is equivalent to room air as well as a low rate on the ventilator, and then cardiac arrest is awaited. The time until arrest is variable and often dependent upon the ventilator settings chosen, but can be unduly prolonged. As a second reason, we believe that compassionate and consistent care by physicians and nurses, utilising standard BD criteria for clinical practice, could serve to mitigate (even to a small degree) the suffering and grief of families. Caregivers faced with the challenge of attending to loved ones who have suffered BD, and then the equal or perhaps greater challenge of withdrawing life support after the declaration of BD, would greatly benefit from standardised guidelines. The authors have experienced first-hand the uncertainties and additional emotional burden placed on our ICU staff in the absence of such guidelines. Finally, the community as a whole would benefit from guidelines that result in better allocation of scarce critical care resources. While efforts should be made to both increase the amount of healthcare resources and improve their distribution, wise allocation of existing assets is sensible; expending them on prolonged care for patients with BD seems imprudent in the face of scarcity. Moreover, the existence of clinical standards backed by prescriptive and supportive legislation at the national level would likely enhance their adoption by practitioners and acceptance by the public.

We provide hypothetical scenarios that underscore the heterogeneity of practice across Kenya, the disparities between practice in Kenya and European/North American critical care units, and the potential impact on bed allocation and resource use in SSA in general. These scenarios further highlight the tragedy and hardship for families and caregivers caused by the moral, legal, and medical vacuum created in the absence of formal BD policies.

Clinical scenarios

In a public hospital ICU in Kenya, a child is determined to be dead by neurologic criteria. 'Minimal support' is instituted. Twenty-four hours later the child is still ventilated.

Meanwhile, an infant with pneumonia deteriorates on the ward. His family cannot afford private care and he succumbs to his illness.

In a paediatric intensive care unit in the UK, a child is determined to be dead by neurologic criteria. The family refuses to accept the diagnosis and asks for time for the news to sink in. There is no other ICU bed in that hospital. Meanwhile, another child who needs intensive care is intubated and transferred to the nearest ICU with an available bed. The National Health Service (NHS) meets the cost of this care.

In a private ICU in Kenya, an adult is determined to be dead by neurologic criteria. The family asks for the ventilator to be switched off. Because there is no protocol or legal guidance, the ICU consultant instead places the patient on 'minimal support'. Twenty-four hours later the patient is still on the ventilator. The family accuses the doctor of keeping the patient on life support for financial gain.

In a private ICU in Kenya, a child is determined to be dead by neurologic criteria. The family asks for the child to be taken off the ventilator for burial before sundown. The family is asked to sign a consent form indicating that they have made the request voluntarily, thus relieving the hospital of all liability. The ventilator is switched off and the child goes into cardiac arrest.

Medical and legal history of BD

Considering the compelling reasons to implement policies governing the care of patients with BD in resource-limited countries (RLCs), their absence suggests important barriers to such policy development. In Europe, the USA, and India, these policies did not arise or disseminate in a moral or intellectual vacuum but rather evolved after careful consensus building among political, medical, legal, and religious leaders. Ideally, this process respects the individual cultural and moral conditions of each country or region. A brief review of the medical and legal history of determination of death by neurologic criteria around the world, with particular attention to the USA, will serve to highlight the challenges associated with achieving consensus as well as point to the way forward in countries without guidelines. This review aims to underscore the need to first achieve consensus in the medical profession, then promote advocacy efforts by healthcare professionals as a next step, and lastly, implement laws and statutes at the national level in Kenya and SSA as a final step in this process.

As early as the 1950s, the term 'coma dépassé' (or 'irreversible coma') had appeared in the medical literature, introduced by Mollaret and Goulon (1959). In 1968, an ad hoc committee at Harvard Medical School further defined irreversible coma as unresponsiveness and lack of reactivity ('A definition of irreversible coma,' 1968). This committee is widely credited with bringing the legal and scientific issues to the attention of the American medical community. Of note is that there were only two non-physician committee members – professors of Theology and of the History of Science at Harvard. The committee quoted the traditional definition of death as:

The cessation of life; the ceasing to exist; defined by physicians as total stoppage of circulation of the blood, and a cessation of the animal and vital functions consequent thereupon, such as respiration, pulsation etc. (Black, 1951)

The Committee advanced the idea that progress in critical care medicine had permitted patients with grievous and previously uniformly fatal brain injuries to survive. These

patients were left with irreversible damage to the entire brain, bereft of even vestigial capacities. They proposed creating a new category of corporal death that could be applied in the setting of termination of all brain function. BD was defined as irreversible loss of all functions of the brain, including the brainstem and involving the key findings of coma, absence of brainstem reflexes, and 'apnoea ('A definition of irreversible coma,' 1968). The extension of the definition of death to include neurologic criteria was an important development of the modern era of advanced technological medicine, and one that became necessary given the ubiquity of mechanical ventilators that artificially support vital activity after cessation of brain function (Wijdicks, 2001).

After the publication of this consensus statement by medical experts, public debate and discussion was surprisingly mute, but given the ad hoc committee's emphasis on changing the legal definition of death, the issue quickly moved to the legislative arena. The first state statute was enacted by Kansas in 1970. The concepts and legal definitions were further refined by Professors Capron and Kass in 1972. Unfortunately, there was substantial variation in the BD statutes enacted by several dozen states in the 10 years after the ad hoc committee report.

The issue of guideline uniformity was addressed in 1975 by the Law and Medicine Committee of the American Bar Association (ABA) when it formulated the definitions and policies that became the basis of the Model Definition of Death Act. In 1978, the National Conference of Commissioners on Uniform State Laws (NCCUSL) drafted the Uniform Brain Death Act. The NCCUSL is a non-profit, unincorporated association consisting of commissioners appointed by each state and the US territories and addresses areas of law which require uniformity among these entities. The NCCUSL proposed the drafted Uniform Acts to the various jurisdictions seeking to minimise legal ambiguity over determination of death. The Act was revised in 1981 to become the Uniform Determination of Death Act (UDDA, 1981) which has since been adopted by the majority of US states and the District of Columbia. In a two-part statement, the UDDA first restated the existing common law definition of determining death as applied to 'an individual who has sustained either irreversible cessation of circulatory and respiratory functions'. In the critical second part, this common law was extended to include those with 'irreversible cessation of all functions of the entire brain, including the brain stem'. When artificial means of support preclude a determination as described above, the Act recognised that death could be determined by alternative procedures. The American Academy of Pediatrics and the American Academy of Neurology have published similar guidelines related to paediatric BD (Nakagawa, Ashwal, Mathur, Mysore, & Committee for Determination of Brain Death in Infants Children, 2012). There remain significant differences in clinical and legal practice in this domain between the USA, the UK, and Continental Europe (Wijdicks, 2012).

In the UK, in order to address concerns regarding 'when to switch off the ventilator' in the era of 'intensive care techniques and their wide availability', a definition of BD was developed by expert consensus in the UK. The report states: 'It is agreed that permanent functional death of the brain stem constitutes brain death and that once this has occurred further artificial support is fruitless and should be withdrawn' ('Diagnosis of brain death,' 1976, p. 1187). Despite the absence of a law defining death in the UK, BD is covered by common law and is therefore a legally accepted definition of death in the UK (Academy of Medical Royal Colleges, 2008).

Application to Kenya

The aforementioned heterogeneity of statutes across state legislatures in the USA speaks to the future need for a single national uniform statute in Kenya and other countries in SSA. A search of the Kenyan Law Database confirmed that no law in Kenya specifically defines death or seeks to interpret BD. The closest approximation to a definition is provided by the Human Tissue Act, an Act of Parliament that regulates the use of body parts of deceased persons (The Republic of Kenya, 1967). The Tissue Act does not define death even in these circumstances, except to say that a licensed physician must 'satisfy himself by personal examination that life is extinct'. The political and legislative process in Kenya and SSA must therefore begin by putting into place the critical framework for formulating a definition of BD, and from there attempt to develop a uniform statute regarding the practices surrounding BD. The narrative of this process in the USA and Europe underscores the importance of developing guidelines that are as uniform as possible but meanwhile recognise the diversity of opinion and practices across regions as diverse as Kenya and SSA. It may also be worth considering that Kenyan law is based on British law, suggesting that a concerted effort at incorporating the UK common law definition of death and BD may be the more pragmatic course to navigate in this legislative process. However, this may be difficult given that after Kenya gained her independence from Britain in 1963, English common law was deemed 'only applicable to the Kenyan inhabitants in so far as the circumstances of Kenya permit' (Ojienda & Aloo, 2006).

This review will not delve deeply into the issue of organ donation, but we would be remiss if it were not mentioned even briefly. A driving force behind the development of guidelines in the USA, Europe, and elsewhere – while perhaps less relevant today in Kenya and SSA – is the tight linkage between the implementation of BD clinical criteria and the concurrent evolution of solid organ transplantation. Many authors have commented on this association, and review of the transplant system in India most clearly delineates the close connection between the BD policies and organ donation (Agarwal et al., 2012). Widespread solid organ transplantation is neither on the immediate horizon for our institution in Kenya nor in most of SSA, but there has been recent attention in the media on the need for wider availability of donated organs. This much-needed public discussion has focused primarily on the lack of locally available donor corneas. While 50,000 Kenyans suffer from keratoconus, the \$2000 cost of a cornea from the US commercial organ/tissue market is prohibitive for most Kenyans and creates significant ethical and medical problems in Kenya and other developing countries (Soy, 2015). Media scrutiny has also been focused on barriers to kidney and liver donation due to the lack of uniform donation laws (Okeyo, 2015). Organ transplantation, while not germane to the current discussion of BD in Kenya and SSA, is important to recognise as an issue that will likely become critically relevant in the future.

Barriers to BD guidelines in Kenya and SSA

Why have practice guidelines for BD determination not been implemented in Kenya and most of SSA? While the authors' first-hand experience is limited to Kenya, we are confident that medical practitioners in other countries in SSA face similar professional and ethical challenges in caring for the unfortunate individuals who suffer BD. One can

point to a complex political, cultural, religious, and legal landscape which has constrained the process of development of formal BD criteria. In SSA, there has been no recent advancement in the professional discussion of BD and the need for legislative guidelines. Our authors searched Africa Law Online using multiple relevant search criteria, but were unable to find additional legislation or publications on this topic other than what has already been stated here. Furthermore, the aforementioned finding that only three countries in Africa have BD laws provides additional evidence of the lack of recent progress (Wijdicks, 2002).

We have shown how the process in the USA began with medical consensus, moved into the legislative arena and after a few inevitable detours arrived at the formulation of uniform statutes across the USA. The application of this narrative to the SSA region presumes the ultimate responsibility of codifying BD statutes will fall to Kenyan and other national and regional legislative bodies. However, one must point out that the US legislative branch never passed laws governing BD determination. Instead, this process was placed in the hands of a conference of commissioners. Its recommendations were then passed on to state governments for enactment into laws. Could this paradigm have special application to Kenya? In August of 2010, Kenya formally adopted a new constitution that includes provisions for devolution or decentralisation to the county level of many previously federal legislative functions, including health care. If an overarching guideline for BD determination were developed, it is not known whether devolution would hasten or complicate the process of translating this into statutes guiding the care of patients experiencing BD.

Wherever the legal process as a whole ultimately resides, it is clear that legislative action to legally define death should occur on the national level. As we have seen from the early history of the process in the USA, there was substantial confusion when the legal definition of death was left to state legislatures. In SSA and in Kenya (devolution or not), a clear and overarching definition of death including BD is a basic prerequisite for comprehensive legislation.

Beyond issues related to the political and legal processes in Kenya and other countries in SSA, a more imposing barrier to the development of BD legislation may be the presence of enormous ethnic diversity. There are over 40 distinct ethnic groups in Kenya, ranging in size from about 7 million Kikuyu to about 500 El Mole living on the shore of Lake Turkana. No single ethnic group constitutes a majority of Kenya's citizens, and the largest, the Kikuyu, make up only 20% of the population. Five ethnic groups – the Kikuyu, Luo, Luhya, Kamba, and Kalenjin – account for 70% of the population (The World Factbook, 2014). Central to this variegated landscape are diverse cultural norms and mores including those regarding death. Although death is universal, cultures vary in conceptualisation of death and its consequences. Death must be considered in a given social context, with the understanding that culture shapes how people make sense of health, illness, and dying. What Kenyans believe about the meaning of death, how death should be faced, and what happens after physical death varies according to culture and its associated religions (Braun, Pietsch, & Blanchette, 1999). Kenya is a tapestry of diverse cultures with enormous heterogeneity in social economic status, ethnicity, educational background, and religious beliefs. These personal and socio-economic factors influence how individuals will handle death and dying. For each unique cultural and religious group, there may be starkly different answers to the critical questions:

What is defined as the actual moment of death? What is the relationship between the patient's spirit and his/her organs? What rituals apply during dying or preparation for death?

In Kenyan communities, dying is normally associated with old age. Thus, death is regarded as the completion of the life cycle (Hooyman & Kiyak, 2005). When an old person dies, the funeral is a celebration of life and a statement that a member of the community has completed his or her life's journey. On the other hand, the death of children or younger adults is regarded as a grievously evil event that should be avoided at all costs (Howarth & Leaman, 2001). When children die, their death is considered untimely and abnormal. This concept could substantially affect the public acceptance of paediatric BD practice guidelines. Where death and burial rites are not meticulously observed, many believe, as the Luo tribe of Kenya does, that the departed become unfriendly demons (Van Rheenen & Okoth, 2002). Looking at African philosophies and religions, reality has two modes of existence, namely, the visible and the invisible (Mugambi, 1989). People refer to dying as 'returning home', 'going away', 'being called away', and 'becoming God's property' (Mbiti, 1991). Death is not perceived as an end; life goes beyond death. According to Sullivan (1995), in traditional African philosophy, life and death (consequently the material and spiritual) are not dichotomous. Death is simply a different dimension of life. Departed relatives remain in the family circle as the living dead – they remain almost literally 'alive' in memories of surviving families (Mbiti, 1969; Sullivan, 1995). For example, as Mbiti (1969, p. 83) notes,

The departed of up to five generations are ... in the state of personal immortality, and their process of dying is not yet complete ... They are still 'people,' and have not yet become 'things,' 'spirits,' or 'its.' They return to their human families from time to time, and share meals with them, however symbolically.

Thus, for many communities, one does not die completely when his or her heart stops beating. Given this African viewpoint, is there confident resolution that a brain dead patient is really dead? Is a patient 'alive' because there is 'life' in the body, despite the irreversible failure in functioning of the brain? Adhering to the African belief in continuation of life beyond the grave, it would be reasonable to assume that many families believe that a brain dead patient breathing with the support of mechanical ventilation is alive and should thus get all possible medical care to delay physiological death.

In addition to these powerful cultural and ethnic currents, there are important religious beliefs that must be considered in the strategy of promulgating BD statutes in Kenya. Although ethnicity is the dominant cultural force in Kenya, the population is deeply religious. Today, Protestant denominations ... make up about 47.4% of the country's religious composition. The Roman Catholic Church represents 23.3% of the population. Islam is the religion of approximately 11.1% of the Kenyan population (The World Factbook, 2014). While each religion possesses unique perspectives regarding the definition of death and rituals around dying, Islamic beliefs typify both the complexity and the sensitivities surrounding the definition of BD. Among Muslims, death is viewed as part of God's divine plan, a return to God where the ugliness of the present world ends and the afterlife begins (Long & Elghanemi, 1987). However, Islamic ethical and legal opinions regarding BD are controversial (Arbour, AlGhamdi, & Peters, 2012). Some Islamic ethicists and religious leaders have concluded that BD is equivalent to cardiopulmonary

death; other thought leaders believe that it is an intermediate state between life and death. For some, BD does not meet the standards for legal death (Padela, Arozullah, & Moosa, 2013). Muslims believe that children are innocent and that after death their souls ascend to paradise (Gatrad & Sheikh, 2002). Muslims also believe that the more prayers said at the time of death and in the seven days after death, the more peaceful the departure to the next world (Gilanshah, 1993). As with Kenyan culture as a whole, there are powerful issues in Islam surrounding the death of children: When does the child cease to be alive? How would the 'seven days after death' be determined? There are many more both overt and nuanced views of what some have believed to be an artificial category imposed on a natural phenomenon, as a review of the history of the debate from a variety of disparate cultures and countries makes clear (Cohen, Ashkenazi, Katvan, & Singer, 2012; Keown, 2010; Robson, Razack, & Dublin, 2010; Yamazaki, 2013).

Legislative experience in the USA may offer some insight into how ethically appropriate guidelines, which are respectful of religious beliefs, might be brought forward in Kenya and SSA. BD statutes from the state of New York contain modifications to address religious beliefs, widely thought to address concerns of Orthodox Jewish religious leaders.

The New York statute (New York State Department of Health and New York State Task Force on Life and the Law, 2011) states:

Hospitals must establish written procedures for the reasonable accommodation of the individual's religious or moral objections to use of the brain death standard to determine death when such an objection has been expressed by the patient prior to the loss of decision-making capacity, or by the Surrogate Decision-maker. Policies may include specific accommodations, such as the continuation of artificial respiration under certain circumstances, as well as guidance on limits to the duration of the accommodation.

Although the NY statute's definition of 'reasonable accommodation' is intentionally imprecise (Olick, Braun, & Potash, 2009), this language and modification may have traction in a society such as Kenya where the combination of deep religiosity and intrinsic ethnic and cultural values may mandate that such flexibility is written into statutes and guidelines. However, we acknowledge that an imprecise definition could lead to prolonged support of legally dead patients in a setting with already scarce critical care resources.

The religious, social, and ethnic challenges to the creation of BD law in Kenya crystallise in public perspectives about futile medical treatment and withdrawal of life support. Our authors who have trained or worked in both Kenya and in the USA or UK find this to be the single most difficult aspect of practicing critical care in Kenya. There are no laws or guidelines in Kenya to address limitation or withdrawal of life support. Advance directives do not exist; families are consistently unprepared and overwhelmed by conversations about futility and end of life care. Even our dedicated and compassionate staff expresses reservations about the appropriateness of such conversations. This suggests that the basic philosophical framework for discussions about futility and BD determination either does not exist within the healthcare sector in Kenya or is exceedingly tenuous. Clearly, there is a need for a simultaneous effort to advocate for the creation of laws governing advance directives and provisions for withdrawal of life support outside of the relatively narrow parameters of BD. This effort can only occur after the healthcare profession and the general public engage in what may be a long and difficult discussion and educational process on medical care at the end of life. The Capetown Palliative Care

Declaration, while not mentioning BD or limitation of life support, nonetheless underscores the need for 'palliative care education' at all levels of the learning continuum for all formal and informal caregivers, including medical and nursing trainees, community workers, volunteers, and informal caregivers (Mpanga Sebuyira, Mwangi-Powell, Pereira, & Spence, 2003).

Conclusions and the way forward

Our call for policy and legislative initiatives to develop BD criteria in SSA is based on the four objectives listed in the abstract. First, medical consensus and standard treatment guidelines must be developed to ensure uniform and ethical care of brain dead patients. We have described possible roadmaps for this process in the history of medical consensus building in the USA and the UK. Second, we have emphasised that while the overall number of patients who present with or deteriorate to BD status may be small, these unfortunate patients deserve compassionate care at the time of their death. We strongly believe that the care of these patients, already emotionally and professionally challenging, is made all the more difficult by the absence of uniform protocols. Third, these challenges are invariably felt by families, increasing the need to extend every effort to mitigate their distress during this tragic process. The authors who work in the USA or the UK have observed that families frequently benefit from the support of protocols which respect their devastating grief but assist them in the difficult task of accepting that their loved one is dead. This should include appropriate accommodations for individual religious and cultural beliefs. The detailed discussion of statutes in New York State underscores that even within uniform laws and procedures, accommodations for religious or cultural beliefs are sustainable. Fourth, we have highlighted the importance of BD policies and laws in facilitating better allocation of scarce critical care resources in RLCs. In our Kenyan institution, critical care faces the same enormous economic, infrastructure, and ethical challenges encountered in similar resource-limited settings around the world (Riviello, Letchford, Achieng, & Newton, 2011, p. 83). While the number of patients who develop BD maybe modest, the burden and limitations placed on already strained resources is substantial. We firmly believe that despite the cultural and social differences we have highlighted, Kenyan families and Kenyan society as a whole will benefit from the close communication and care that are implicit in guidelines addressing patients with BD. The challenges facing the development of statutes and guidelines which respect the diverse cultural and religious currents in Kenya and SSA are not insurmountable.

We propose a multipronged effort to bring this issue forward with the goal of creating uniform procedures for BD determination for adults and children which are derived from either consensus guidelines developed by adult and paediatric professional organisations (Wijdicks, 2001) or actual statutes that provide clear and concise guidelines. It is critical to first derive consensus from the entire breadth of medical, legal, and religious bodies in Kenya, with the hope of preventing a potentially fractured and contentious process. In a manner opposite to the USA (where early laws were not standardised and public discussion was limited), we would advocate for vigorous public discourse in churches, the media and other social organisations directed at providing information and encouraging dialogue.

In the USA, the effort towards establishment of BD guidelines began with the Harvard working group, collaborators who have served as an example for our own academic group,

clearly stating the scope of the problem and recommending the way forward. The groundwork for achieving uniform BD procedures necessarily begins with a campaign to educate and inform professional groups and the public. Educational programmes for healthcare professionals through presentations at national and regional meetings of professional organisations will be critical to marshalling support for development of BD statutes. Endorsement from the next generation of healthcare professionals is a priority and should be sought through lectures and dialogue at schools of medicine and nursing. Leaders across the spectrum of faiths and ethnicity in Kenya should be engaged in the conversation to seek their agreement on the framework of BD determination. Once achieved, a uniform policy (the product of this consensus effort) would then be presented to the national legislature for deliberation and hopefully enactment into law. The role of the legislative body will be crucial in defining special accommodations of the type enacted by several US states as discussed above. It is critical that this effort seeks alignment with on-going efforts by palliative care organisations in Kenya and Africa as a whole. These organisations should be asked to consider adding the development of BD guidelines to their priorities for growing palliative care in Africa. Hopefully, all of these efforts will translate into opportunities for dissemination of information to the public through local, regional, and national media.

The absence of policies in Kenya to guarantee compassionate and ethical care at the end of life for patients with devastating neurologic injury leading to BD is unacceptable. The additional insult of the emotional and economic burden imposed on grieving families by extending critical care in the absence of life cannot be justified. Hospitals, already struggling to allocate scarce critical care resources, are prevented from offering potentially life-saving intensive care to those who might truly benefit. For these reasons, even with the enormous challenge of tackling an issue imbued with a seemingly unresolvable dynamic of law, medicine, and ethics, it is imperative that critical care practitioners in Kenya and SSA take the lead in advocating for the development of BD guidelines and legislation.

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