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Organ donation in the ICU: A document analysis of institutional policies, protocols, and order sets

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ABSTRACT

Objective: To better understand how local policies influence organ donation rates.
Research methodology/design: We conducted a document analysis of our ICU organ donation policies, protocols and order sets. We used a systematic search of our institution's policy library to identify documents related to organ donation. We used Mindnode software to create a publication timeline, basic statistics to describe document characteristics, and qualitative content analysis to extract document themes.
Setting: Documents were retrieved from Hamilton Health Sciences, an academic hospital system with a high volume of organ donation, from database inception to October 2015.
Findings: We retrieved 12 active organ donation documents, including six protocols, two policies, two order sets, and two unclassified documents, a majority (75%) after the introduction of donation after circulatory death in 2006. Four major themes emerged: organ donation process, quality of care, patient and family-centred care, and the role of the institution. These themes indicate areas where documented institutional standards may be beneficial.
Conclusion: Further research is necessary to determine the relationship of local policies, protocols, and order sets to actual organ donation practices, and to identify barriers and facilitators to improving donation rates.

Implications for clinical practice

- Institutional policies, protocols, and order sets represent an opportunity to standardise and improve the care of organ donors in the intensive care unit
- Organ donation in the intensive care unit has six key steps: identification and referral of patients; medical management of donors; assessment of suitability; discussions with families about donation; provision of end of life care; and after-life care, including organ and tissue retrieval
- Key areas to consider when developing policies, protocols and order sets with regard to organ donation include identifying practices for quality care, patient and family centred care, and specifying role of the institution in the organ donation process

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Introduction

As in many countries, there is a pressing need to increase the number of transplantable organs in Canada. Every year while awaiting a transplant, over 600 Canadians die and thousands more suffer from poor quality of life (Canadian Institutes of Health Research, 2015). While introduction of donation after circulatory death (DCD) has increased the number of eligible organ donors (Shemie et al., 2006), only 14–17% of eligible donors in Canadian intensive care units (ICUs) have organs recovered for transplantation (Canadian Institutes of Health Research, 2014). Furthermore, the proportion of potential deceased organ donors who go on to donate varies between 48%–89% in otherwise comparable ICUs (Trillium Gift of Life Network, 2016) and patient and family demographics alone cannot explain this variability (Collegè des Meídecins du Queíbec, 2015).

The variability of deceased donation rates suggests an opportunity to enhance organ donation practices in ICUs by harmonising institutional policies and clinical protocols with best practices, such as those endorsed by the Canadian Council for Donation and Transplant and Canadian Blood Services (CBS) (Canadian Council for Donation and Transplant, 2006; Shemie et al., 2008; Canadian Blood Services, 2014). For example, changing approaches to discussing deceased donation with potential donor families can influence donation rates (Ebadat et al., 2014). Enhancement of institutional donation policies may increase the consistency with which potential donors are identified (maximising the opportunities for patients to donate), and optimise the medical management of deceased donors (increasing the number and quality of organs available for transplant) (Canadian Institutes of Health Research, 2014). Despite the potential influence of institutional policies and protocols, little research has described their range, scope or actual impact upon organ donation activity in the ICU. To better understand their role, we therefore conducted a document analysis of our institution's policies, protocols and order sets. Document analysis is a method which can provide context for understanding practice, track change and development over time and identify areas for further inquiry (Bowen, 2009).

Methods

Study objectives

The three main objectives of this research were: (1) to sequence the key steps in the organ donation process in the ICU, (2) to describe the range and scope of policies, protocols and order sets in the institutional context of the ICU's organ donation practices and (3) to elucidate the evolution of organ donation policies over time.

Setting

Hamilton Health Sciences (HHS) is a health care corporation including seven hospitals. The majority of organ donation at this institution takes place at the Hamilton General Hospital site, an academic, tertiary-care hospital and regional referral centre for trauma, cardiac, and neurologic care with a 30-bed medical and neuro-trauma ICU. Hamilton General Hospital has been recognised as a centre of excellence for organ donation (Lo et al., 2009), consistently having amongst the highest number of organ donors in Ontario, as reported by Trillium Gift of Life Network, the regional organ donation organisation (ODO) (Trillium Gift of Life Network, 2016).

Ethical approval

As this project did not involve research with human subjects, approval from the local research ethics board was not required. This document analysis is part of a larger mixed-methods study of organ donation in the ICU, and the project as a whole (including the document analysis) was approved by the local research ethics board in June 2016.

Document identification

One investigator (SO) searched the HHS online document library for the concepts "organ donation," "neurologic [brain] death," "circulatory [cardiac] death," and "end of life" from database inception (1996) to October 2015, then hand-searched the references of the retrieved documents, as well as archived documents, to capture all institutional documents relevant to organ donation in the ICU. If a document replaced a previously existing document, we collected the publication and revision dates for both versions. To provide external context, we collected all available donation-related documents over the same time period from the websites of Trillium Gift of Life Network and Canadian Blood Services, and contacted the organisations to obtain any other available organ donation documents, revisions and publication dates.

Data collection

Documents were uploaded into NVivo for Mac for organisation and analysis (NVivo, 2016). We grouped documents by source (HHS, Trillium Gift of Life Network, or Canadian Blood Services) and, within each source, categorised documents by type (policy, protocol, or order set). HHS defines a "policy" as a "brief, clear, formal and authoritative written document that defines the HHS standard.Ä 'protocol' is defined as "A document containing a policy. . . procedure. . . or guidelines. . . and include a statement of principles outlining the general policy behind the protocol." "Order sets" are documents containing sets of medical orders that can be activated by authorised clinicians to direct patient care. We also recorded document titles, dates of publication and revision, purpose (stated or inferred), target audience (stated or inferred), document authorship and approvals, and References

Data analysis

We analysed the documents using quantitative and qualitative methods. Descriptive statistics summarised general document characteristics. Document analysis was guided by the methodological orientation of qualitative description, which aims to describe and summarise themes and patterns within the data (*eg.* document text) in plain language, with minimal interpretation or application of theory, promoting validity and trustworthiness (Sandelowski, 2000, 2010). This design provides unadorned answers to the research question which emerge directly from the data. We used qualitative content analysis to code and reduce textual data into smaller meaningful units organised in a structured, theoretical way (for example, a chronology of events) (Hsieh and Shannon, 2005; Miles et al., 2013).

Two investigators (SO, JC) independently coded one document (the HHS Organ and Tissue Donation Referral Protocol), then met in person to establish inter-coder agreement through discussion to increase reliability. An initial coding framework was generated with open codes, organised into categories and sub-codes. As coding continued, the two investigators met in person three times to update the coding framework and presented the results to the research team for feedback every 4–6 weeks until document coding was complete (Miles et al., 2013). Descriptions and exemplar

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