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A Narrative Literature Review and Comparison of Differences Between Competencies Needed in Nursing Care for Potential Donors After Brain Death and Routine Nursing Care for Patients in Intensive Care Units: Study Protocol

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ADMINISTRATIVE INFORMATION

Support - The authors declare that this study will not receive any specific grants from any funding agency in the public, commercial, or nonprofit sectors. The research will be conducted without external financial support or sponsorship.

Review Stage at time of this submission - Initial searches.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 October 2025 and was last updated on 21 October 2025.

INTRODUCTION

Review question / Objective This study aims to answer the question: “What additional nursing competencies, if any, beyond routine ICU care, must nurses have to provide appropriate care to potential donors after brain death (DBDs)?”

This study aims to identify the skills nurses need for effective management of DBDs in intensive care units (ICUs) and to compare the care provided to standard ICU patients and those with DBDs.

Search strings will be processed using the PICO framework formatted as follows:

- Population: DBDs.
- Intervention: nursing care.
- Comparator: non-DBD patients admitted to ICUs.
- Outcome: additional nursing competencies required by nurses in the management of DBDs.

Rationale Organ transplantation can extend survival and improve quality of life for patients with

end-stage organ failure. Increasing both the number and quality of donor organs is vital to meet the rising demand, which involves optimizing the role of intensive care professionals. The chance to identify a potential organ donor often occurs in the ICU, where nurses play a crucial role in managing potential donors but need additional training to understand the process and provide proper nursing care. In ICUs, nurses are key to delivering intensive monitoring, treatment, and end-of-life care to patients with poor prognoses. ICUs are complex healthcare environments that address the sensitive health needs of critically ill patients and their families. As care becomes more complex, nurses must have a specialized set of skills, knowledge, and attitudes. Treatment goals for ICU patients differ significantly from those of DBDs: brain death causes major metabolic, hormonal, and hemodynamic changes that must be properly managed to maintain organ quality. Providing appropriate support for a potential donor offers an opportunity for a patient on the waiting list to

receive an organ and helps ensure the organ functions well after transplantation. Several studies have examined the nursing skills needed to care for potential donors, but none have explored how this differs from routine ICU patient care.

Condition being studied Nursing care for brain-dead patients who are potential organ donors.

A comparison will be made between the care content, procedures, technical skills, competencies, and soft skills required of nurses in assisting potential organ donors, as identified through the narrative review of the literature, and those necessary for critical care nurses, according to the European Federation of Critical Care Nurses Associations (EfCCNa) Critical Care Nursing competency tool.

METHODS

Search strategy The search for available evidence sources will be conducted on the MEDLINE (PubMed), Web of Science (Clarivate®), Scopus (Elsevier®), and Cochrane Library® databases. The search for gray literature will be conducted using the Google Scholar search engine.

The search strategies will be designed for PubMed and then adapted to other databases.

The search string used in the Medline database will be as follows:

(((((organ donor) OR (organ transplant)) OR (organ donation)) OR (organ procurement)) OR (deceased donor)) OR (DBD)) OR (donation after brain death)) AND (((nursing care) OR (nursing)) OR (specialized nurses)) OR (advanced practice nurses)) OR (professional nurses)) OR (clinical nurses)) OR (role of the nurse))) AND (((standard of care) OR (intensive care unit) OR (ICU) OR (intensive care) OR (intensive care nursing))) AND (((management) OR (disease management) OR (case management) OR (clinical competence)))

Filters: in the last 10 years.

The selection of studies will be carried out in accordance with the PRISMA Statement.

Participant or population This study will include evidence sources focused on potential donors who have died based on neurological criteria. Studies involving donors who have died based on cardiologic criteria (donors after cardiocirculatory death, DCD), living donors, bone marrow donors, and tissue-only donors will be excluded.

Intervention The focus of the search for evidence is nursing care. Lynda Juall Carpenito-Moyet's bifocal model will serve as a reference to identify the clinical activities performed by nurses and their skills. This model outlines the two essential

aspects of clinical nursing that underpin care: nursing diagnosis (clinical judgments about the responses of the person, family, or community to health problems, which guide the selection of interventions nurses are responsible for) and collaborative problems (complications that nurses monitor to prevent or lessen their effects, managing them with interventions prescribed by doctors or other professionals).

Comparator The comparison parameter considered will be routine nursing care for patients admitted to ICUs, based on the domains and subdomains described by the EFCCNa intensive care nursing competency assessment tool: clinical (nursing assessment and diagnosis, planning, implementation, evaluation), professional (complex decision-making, ethics and legality, communication), managerial (unit management, team management, health and safety, quality assurance), training and development (personal development, development of others, evidence-based practice).

Study designs to be included The review will examine published literature reporting any type of research: quantitative, qualitative, mixed, or multimodal, including comparative studies (e.g., randomized, controlled, cohort, quasi-experimental) and non-comparative studies (e.g., survey methods, narrative studies, audits), as well as teaching materials and reports.

Eligibility criteria Studies on nursing care for DBDs in the ICU will be included in the review. The literature search will be limited to the past 10 years, from 2015 to 2025, to gather recent evidence relevant to today's social, cultural, economic, and historical context. No filters will be applied based on publication language.

Information sources The search for evidence will be conducted using the databases Medline, Web of Science, Cochrane, Scopus, and the Google Scholar search engine.

Main outcome(s) The following data will be extracted from the selected articles and summarized in tables:

- Reference, first author
- Country
- Date of publication
- Analysis (if applicable)
- Analyzed, no. (if applicable)
- Data collection method
- Intervention
- Results

The results to be considered pertain to nursing competencies, procedures, technical skills, and soft skills in managing potential DBD donors during the subsequent phases:

- Identification of potential organ donors,
- Clinical management of potential organ donors,
- Interviews with family members to obtain consent for donation,
- Staff training.

If more data relevant to the study becomes available, it will be collected and organized properly.

The data will be extracted in the first phase in parallel by the reviewers and will be discussed in a second phase to verify their consistency.

Data management The identified records will be collected and uploaded into the Zotero (www.zotero.org) reference management software, and duplicates will be removed. Two independent reviewers will then review the titles and abstracts to evaluate their eligibility based on the review's inclusion criteria. Articles will be excluded if, after reviewing the title and abstract, they are clearly irrelevant to the topic, do not assess nursing care in donor management, or do not consider organ donation. Finally, a full-text review of the remaining articles will determine their compliance with the inclusion and exclusion criteria. The article selection will be conducted independently by two authors; articles will be categorized as "Yes," "No," and "Maybe." The reasons for excluding full-text articles that do not meet the inclusion criteria will be documented.

Any disagreements that may arise during the selection process will be resolved through discussion among the authors and the addition of a third reviewer. Materials will be shared via a Google Drive folder.

Quality assessment / Risk of bias analysis The quality of the studies will be assessed based on their conduct and reporting, using the Critical Appraisal Skills Program (CASP) checklists.

Strategy of data synthesis The data gathered from the literature review will be organized and displayed using descriptive statistics, which may include frequencies and measures of central tendency. Graphs and tables will be used to illustrate concepts or aspects of the population's characteristics or context.

Given the purpose of this review, no inferential statistical analyses will be performed on any collected quantitative data.

The characteristics of the studies will be summarized, and a structured report of the results will be provided, described, and interpreted. A

general interpretation of the results will be offered concerning the hypothesis that "managing DBDs necessitates additional nursing skills beyond routine care for patients admitted to intensive care".

Given the qualitative nature of most expected data, the synthesis of results will be conducted following the guidelines provided by the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis. This outline includes a three-step process: 1) Extracting results from included articles along with illustrations; 2) Developing categories for sufficiently similar results, with at least two results per category; 3) Creating one or more synthesized results from at least two categories.

Since the study aims to identify differences between nursing care for potential organ donors and routine care for patients in ICUs, the Best Fit Framework Synthesis methodology will be used. This approach begins with a reference framework that is considered "sufficiently good." The reference framework will be based on the EFCCNA intensive care nursing competency assessment tool. It will be filled with data from the studies included in the literature review; data that do not "fit" into the established categories will be inductively synthesized using thematic synthesis methods to develop additional themes, representing the extra competencies needed for caring for potential organ donors.

Subgroup analysis DBD and routine ICU patient groups will be compared based on available data and studies.

Sensitivity analysis Since this review is a narrative one, no sensitivity analysis will be conducted.

Language restriction There will be no language restrictions during the search for evidence.

Country(ies) involved Italy.

Other relevant information None.

Keywords Organ Donation, Brain Death, ICU nursing, Nursing Clinical Competence, Comparative Study.

Dissemination plans The study will be shared via publication in a peer-reviewed journal and presentations at conferences.

Contributions of each author

Author 1 - Donato Longo - Study design. Definition of search strategy. Paper collection and evaluation. Data analysis. Manuscript drafting.

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