

Nurse specialist in the organ and tissue donation process with coordination role: a scoping review protocol

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Donato Longo¹, Nicola Ramacciati², Gian Domenico Giusti³

¹ RN, Intensive Care Unite, "Vito Fazzi" Hospital, Lecce, Italy

² RN, MSN, PhD. Researcher in Nursing Science. Department of Pharmacy, Health and Nutritional Sciences, University of Calabria, Rende, Italy

³ RN, CCRN, MSN. Adjunct Professor, Bachelor Degree in Nursing of Perugia University - Perugia, Italy. Azienda Ospedaliera di Perugia, Perugia, Italy
(email: giandomenico.giusti@unipg.it)

Abstract

Introduction: Organ and tissue donation may be the only therapeutic possibility for some people with an end-stage disease. Good planning and scheduling is required to maximize this important activity. One way to increase the number and quality of organ donations could be to use the role of Nurse Transplant Coordinator.

Objective: The aim of this scoping review is to map the literature to understand whether the figure of Nurse Transplant Coordinator can improve outcomes in the organ and tissue donation process. Inclusion criteria: All study designs carried out from 1990 to today will be included. Studies that include organ and tissue donations in which the figure of a specialized and dedicated nurse with a leadership role is present will be included in the scoping review protocol. Both public and private healthcare settings will be considered.

Methods: The review protocol is carried out using the JBI manual for knowledge synthesis methodology and the PRISMA-ScR guidelines. The scoping review will be completed in five phases: determining the research question, research strategy, inclusion criteria, data extraction and synthesis and presentation of the results. The bibliographic search will be carried out on the Medline, Web of Science, Scopus, CINAHL and Google Scholar search engines. The screening of articles will take place in three phases. Data will be extracted independently by the authors using standardized tools. Data will be summarized and analyzed using graphs and tables and through descriptive and narrative analysis.

Keywords: Transplant, Nurse; Specialist; Donation; Protocol; Scoping Review.

Introduction

Donation should be perceived as a civic act of responsibility¹ and solidarity². All over the world there is great interest and pressure on health services to increase the number of organ and tissue donors³. The aim for countries is to achieve self-sufficiency in this healthcare area^{2,4}, maximizing the therapeutic role of donation and transplant through the creation of an effective planning context¹. Purpose to increase the results of this important activity, from the first decade of the 2000s the need for planning and programming by national governments and National Health Services⁵. The donation process is delicate and complex and requires the participation of multiple professional figures⁶. Organ and tissue transplantation is the product of a multidisciplinary organizational process that begins with the identification of the potential donor and ends with the transplant operation. It represents the culmination of a long and demanding work by many operators belonging to different operational units⁷ where, as argued by Witjes and colleagues⁸, it is important to achieve a good level of collaboration, which would allow the identification of a potential donor in end-of-life care provided even outside the Intensive Care Units, such as in the neurology, neurosurgery, and traumatology operating units. The attitudes, experience and competence of healthcare professionals are one of the main factors that influence the success of this process⁹. Since the early 2000s, studies have focused on the possibility that the inclusion of specialized personnel in an institutionalized role, highly qualified and trained, with responsibility for results, increases the performance levels achieved in this area^{10,11}. In 2008, the European Union issued, through the Commission of the European Communities, an "Action plan for organ donation and transplantation"¹², which describes 10 priority actions with the aim of increasing availability of organs, improve the efficiency and accessibility of transplant systems and improve quality and safety. The 10 priority actions indicated include the progressive appointment of coordinators for donations and transplants in all hospitals where there is a possibility of organ donation. Despite nurses have in their curriculum the technical skills and organizational skills to play a coordination role in donation activities¹³, this nursing figure is not yet widespread in many countries around the world. Where it happened the establishment of the figure of Specialist

Nurses in Organ Donation (SN-ODs), as in Spain¹⁴ and in Great Britain¹³, related to other organizational and legislative measures and to a positive attitude of the healthcare company, results were achieved in a short time very positive in terms of increased donations^{3,4} and reduction of costs for healthcare spending¹⁵. The role of Specialist Nurses in Organ Donation, for which a key point is training¹⁶, is a high specialization and requires technical, emotional, and organizational competence, requires the ability to coordinate multidisciplinary teams, manage information and security¹⁴ and seems to have a great impact especially on the decision of the deceased's family to donate organs³. The key role of the nurse in the coordination of donation finds space in the training of staff in the intensive care and emergency areas, in the early identification of a potential donor and in the implementation of the organ donation procedure, in the care of relationships with the bereaved family and with institutions^{3,10,15}, in promoting the importance of donation among their colleagues, one's family and the community, in promoting clinical audits after a donation to reflect on the process and outcomes, in analyzing the performance data of one's healthcare company and comparing them with national data¹⁷ and, last but not least, in provide assistance to prevent and combat transplant tourism². Staff training is a very important aspect that can provide nurses with a greater chance of success, particularly in communicating with family members at a very delicate moment for them¹⁸.

Currently, the figure of the Organ Donation Specialist Nurse is not always formally recognized and there is no complete description in the literature of its implementation in healthcare services around the world. This paper describes a Scoping Review protocol, which have the objective of mapping what is present in the scientific literature on a given topic and thus defining a body of knowledge, identifying any gaps in the research^{19,20}, provide background²¹ and understand the extent of knowledge present in an emerging field, including a heterogeneity of types of scientific studies²².

A preliminary search of PROSPERO, MEDLINE, the Cochrane Database of Systematic Reviews, and *JB* Evidence Synthesis was conducted and no current or in-progress scoping reviews or systematic reviews on this topic were identified. The aim of this scoping review is to map the existing knowledge in the literature to understand

how the figure of the Specialist Nurse in Organ Donation in healthcare companies can improve the outcomes of organ and tissue donation activities.

Review question(s)

The research question of this scoping review arose from the discussion between the authors following an initial analysis of the evidence from research carried out in a non-systematic way. This review will answer the following research question: *Can the presence of the figure of Specialist Nurse in Organ Donor in healthcare settings improve results in organ and tissue donation activities?* The general objective of the research is to identify and map the presence of scientific evidence demonstrating that the inclusion of the figure of the Specialist Nurse in Organ Donor in the organizational chart of healthcare companies can improve the outcomes of organ and tissue donation activities.

Sub-questions

The secondary objective is to obtain a mapping of the countries in which the figure of Specialist Nurse in Organ Donation has been adopted and to provide a knowledge base for future studies in this area.

Inclusion criteria

The inclusion criteria of the studies in this scoping review considered the objectives of the study and the relevant data to be extracted. Studies carried out from 1990 to today will be included, to obtain a sufficiently complete bibliographic framework. We limited the search for evidence to 1990 to have a good compromise between obtaining a comprehensive review and including studies that may be relevant to the health, social, economic, and cultural context in which healthcare organizations work today. Furthermore, modern organ procurement organizations were established in the late 1980s and early 1990s^{23,24}.

Based on the Joanna Briggs Institute construct²⁵ we have identified population, concept, and context (PCC) to identify the presence of the figure of nurse coordinator of the donation process in the various healthcare systems.

Participants

This review will consider studies that include organ and tissue donations from both adult and pediatric patients. Donors after brain death and after cardiac death will be taken into consideration. Studies that only addressed tissue

donation will not be included in the review.

Concept

The topic of this scoping review focuses on the activity of organ and tissue donation in which the figure of a specialized and dedicated nurse with a leadership role is present. The role of nurse coordinator in the donation process could be successfully achieved in all phases of the process, from the identification of the potential donor to the maintenance of the donor, to the interview with the family members, in the relationships with all the professionals involved, in the training of the staff.

Context

Given the heterogeneity of healthcare systems around the world, both public and private healthcare settings will be considered. All the organizational models adopted by healthcare organizations that use the nursing figure as leadership will be considered in the review.

Types of sources

This scoping review will consider published and unpublished literature reporting any research: quantitative, qualitative, mixed, or multimethod, including comparative (e.g., randomized, controlled, cohort, quasi-experimental) and non-comparative (e.g., survey methods, narrative studies, audits), teaching materials and reports. Any study design will come.

The study will not make an exclusion based on the language of the documents found.

Methods

This proposed scoping review will be conducted in accordance with the JBI manual for knowledge synthesis²⁵ and in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR)²⁰. The scoping review will be completed in five phases: determining the research question, research strategy, inclusion criteria, data extraction and synthesis and presentation of the results.

The scoping review begins with the a priori definition of the protocol. Drafting the protocol is important to illustrate the research strategy, avoid reporting bias and ensure transparency in the review process¹⁹. As defined by Lockwood and colleagues²⁶, the scoping review requires good preliminary planning to ensure a clear understanding from those involved of how to manage each phase.

The protocol relating to this scoping review

was registered on the Open Science Framework database²⁷ on 3 December 2023 with the reference osf.io/wzxr3. The protocol can be found via the following link: <https://osf.io/e2wf5>.

Search strategy

To identify all available sources of evidence, a comprehensive search strategy will be used. Given the nature of the type of study, the authors will search for sources in different databases. The bibliographic search will be carried out on the MEDLINE (PubMed), Web of Science (Clarivate©), Scopus (Elsevier©) and CINAHL (EBSCOhost©) databases. The grey literature search will be carried out using the Google Scholar search engine.

The search strategies were designed for PubMed and then adapted to other databases. The final search strategy for all databases is reported in Appendix 1.

According to Kitchenham and colleagues²⁸ the scoping review will use measures of sensitivity and precision to evaluate the quality of the research process and measure the likely completeness of the research process. Sensitivity and accuracy will be defined as follows: Sensitivity = $(KPF)/(KP)$, Accuracy = $(KPF)/(TPS)$, where: KP = The number of known documents, KPF = The number of known articles found by the search process, TPS = The total number of documents found by the search process. The articles taken into consideration will be 42: 19 articles found through an initial non standardized search, and 23 articles contained in the bibliography of the article "The role of specialist nurses for organ donation"³. For greater completeness of the review, the articles included in the bibliography of the selected articles will also be evaluated.

Study/Source of evidence selection

Following the search, all identified records will be collated and uploaded into Mendeley Reference Manager 2.104.0 (©2023 Mendeley Ltd., Elsevier, Netherlands) software and duplicates removed. Titles and abstracts will then be screened by 2 independent reviewers for assessment against the inclusion criteria for the review. Articles will be excluded which, reading the title, are clearly not relevant to the topic covered and articles which, reading the abstracts, clearly highlight that they do not evaluate the role of the nurse who coordinates the donation process or do not consider organ donation; finally, reading the remaining articles in full will allow to evaluate their correspondence with the

inclusion and exclusion criteria. Citation details of relevant papers will be imported into the JBI System for the Unified Management, Assessment and Review of Information (JBI SUMARI; JBI, Adelaide, Australia)²⁹. The screening of the articles will be carried out independently by two authors; articles will be categorized as "Yes", "No" and "Maybe". Reasons for exclusion of full-text papers that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved through discussion between the authors and the inclusion of a third reviewer. The selection of articles will be summarized in a flow diagram following the PRISMA Statement³⁰, reporting the reasons for excluding articles at each step.

Data extraction

From the selected articles, will be extracted and summarized in a table form, extracted by Tricco and colleagues²⁰, the data relating to:

- Reference, first author, date
- Country National or regional
- Date of collection, survey/recruitment
- Analysis (if applicable)
- Analyzed, n. (if applicable)
- Sample age, n. (if applicable)
- Data collection method
- Environmental intervention
- Outcomes.

The outcomes that will be taken into consideration are linked to the performance related to the presence of the coordinating nurse in the donation process, in the phases of: - Identification of the potential donor - Retention of the potential donor - Interview with family members to obtain consent for donation - Staff training. The data will be extracted in a first phase in a parallel manner by the reviewers and will be discussed in a second phase to verify agreement. A deductive approach will be used to collect data³¹: - The framework has already decided on, and the reviewers will extract data according to this framework. - The reviewers will read evidence source, extract the relevant information, and organize this information according to the established framework. - The reviewers will review the organized extraction and ensure that the information appropriately describes the framework. Discrepancies noted in data extraction will be resolved through discussion between reviewers.

A draft extraction tool is provided (see Appendix II). The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included paper. Modifications will be detailed in the full scoping review.

Data analysis and presentation

The data used in the review will be descriptive, this may include frequencies and measures of central tendency. Graphics and tables will be used that indicate concepts or aspects of population characteristics or context. The coverage areas of the topic will be presented, showing the areas with little research availability and those with larger numbers of studies using colour codes to visually separate the data. Given the nature of a scoping review, no statistical analyses will be carried out on the data collected. The characteristics of each study will be summarized in a table “Results of individual sources of evidence”, which notes “Author, Article type, Outcome, Population”, according with Tricco et al.²⁰. It will be determined which studies are similar enough to be grouped by comparing the characteristics of the studies and what data is available for synthesis. It will be assessed whether a change to the planned results is necessary or whether new results need to be included, noting any deviations from the protocol plans. The characteristics of the studies will be summarized and structured reporting of outcomes will be provided, described and interpreted. A general interpretation of the results will be provided with respect to the hypothesis that the presence of a nurse specialized in the organ and tissue donation process who takes on the role of coordination and leadership can improve the outcomes. The synthesis of the results will be carried out by two researchers independently. This will be reviewed by a third researcher. Differences in the summary of results will be resolved through discussion between researchers.

Expected results

As identified by Tocher and colleagues³, the role of the Specialist Nurse in Organ Donation needs to be recognized. This scoping review could provide a clear picture of which National Health Services have recognized and implemented this figure in their organizations and which are the areas of expertise in which the nurse could provide a positive contribution. The expectations are to detect the studies that report the implementation of organizational

approaches that place the figure of the nurse at the center in the organ and tissue donation process.

Discussion

As also expressed by Ruta and colleagues³², the nurse has the skills necessary to coordinate the donation process, allowing quality care to be provided for the donor and his family. In agreement with Palena and colleagues, the need to formally recognize the figure of Nurse Specialist in Organ Donation in healthcare organizations emerges³³, which could favor the increase in the number of donations^{3,4} and the reduction of costs¹⁵. Having a complete mapping regarding the knowledge that has emerged from the contexts in which this emerging nursing figure has already been implemented can facilitate an evaluation of the advantages that can be obtained for patients, their families, healthcare organizations and the professionals themselves.

Limitations and strength

To our best knowledge, this is the first scoping review that aims to map knowledge at an international level regarding the opportunity for nurses to take on a coordination role in the organ and tissue donation process.

The limitations of the present study protocol could be represented by the international heterogeneity with respect to the type of health system and cultural aspects. Furthermore, given the broad time range used in the search strategy and the inclusion of all study designs, including gray literature, some documents may be difficult to find. The study protocol has some strengths represented by the reduced number of exclusion criteria and few limitations used in the research.

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