

RESEARCH ARTICLE

OPEN ACCESS

NURSING ASSISTANCE TO THE POTENTIAL PATIENT DONOR IN ENCEPHALIC DEATH

Jaqueline Dantas Neres Martins^{1*}, Daniele Melo Sardinha², Roseli Reis da Silva³, Marcelo Williams Oliveira de Souza⁴, Beatriz Duarte de Oliveira⁵, Stephany Siqueira Braga⁵, Flávia Maia Araripe⁶, Ana Karolina Oliveira dos Santos Aguiar⁶, Matheus Lucas Neves de Carvalho⁵, Ana Alice Matias Ambé⁶, Luciano Sales Pereira⁷, Ádria Lorena Oliveira Viana⁶, Larissa Renata Bittencourt Pantoja⁵, Alessandra de Cássia Lobato Dias⁵ and Verena Gabriela Ribeiro Borges⁶

¹Nursing Academic at University of State of Pará-UEPA, President of the Academic League of nursing assistance systematization-LASAE, Belém-Pa, Brazil

²Nurse, Specialist in Cardiology and hemodynamics by the integrated Faculty of the Amazon -FINAMA Teacher at SIEPA School, Collaborator member of the Academic League of nursing assistance systematization-LASAE, Belém-Pa, Brazil

³Nursing academic at the Faculty of Pan-Amazonian –FAPAN, Vice-President of the Academic League of nursing assistance systematization-LASAE, Belém-Pa, Brazil

⁴Nurse, PhD student in the graduate program in biology of infectious and parasitic agents of Federal University of Pará-UFPA, Teacher at the University of State of Pará-UEPA, General coordinator of LASAE, Belém-Pa, Brazil

⁵Nursing Academic at University of State of Pará-UEPA, Member of the Academic League of nursing assistance systematization-LASAE, Belém-Pa, Brazil

⁶Academic of the nursing course of the Metropolitan University Center of Amazonia-UNIFAMAZ, Member of the Academic League of nursing assistance systematization-LASAE, Belém-Pa, Brazil

⁷Nursing Academic, Integrated college Brazil Amazon-FIBRA, Member of the Academic League of nursing assistance systematization-LASAE, Belém-Pa, Brazil

ARTICLE INFO

Article History:

Received 17th July, 2019
Received in revised form
20th August, 2019
Accepted 19th September, 2019
Published online 23rd October, 2019

Key Words:

Encephalic Death, Obtaining Tissues and Organs, Nursing Care, Tissue Donors, Bioethics Family Relations, Nursing Education.

*Corresponding author:

Jaqueline Dantas Neres Martins

ABSTRACT

Objective: To identify nursing care to the potential donor (PD) in encephalic death (ED). **Method:** This is an integrative literature review, conducted in the Databases Latin American literature (LILACS) and National Library of Medicine National Institutes of Health of the USA (PUBMED), in which we obtained a sample of 7 articles. **Results:** On the main nursing care listed in the most present analysis materials were: Early identification of ED, notification of the case to the in-Hospital committee for Organ and Tissue donation, assisting in the procedures of diagnosis of ED, Hemodynamic monitoring, monitoring of respiratory gases, hydroelectrolytic control, assisting in the maintenance and viability of organs, strict control of glycemic, temperature control, assisting the family throughout the course of Patient in intensive care. **Conclusion:** The studies elucidated the main nursing care to PD in ED and how they were fundamental in the preservation and viability of organs and tissues. Although there are countless difficulties that the implementation of such practices is lacking.

Copyright © 2019, Jaqueline Dantas Neres Martins et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Jaqueline Dantas Neres Martins, Daniele Melo Sardinha, Roseli Reis da Silva, Marcelo Williams Oliveira de Souza, Beatriz Duarte de Oliveira, Stephany Siqueira Braga et al. 2019. "Nursing assistance to the potential patient donor in encephalic death", *International Journal of Development Research*, 09, (10), 30625-30630.

INTRODUCTION

Organ and tissue transplantation was one of the most splendid successes of science in the twentieth century, which provided an honorable addition and quality of life to patients with progressive diseases and irreparable lesions in some tissue or organ.

In this context, the conduct of genetics and histocompatibility harmonized certain gains in the development of knowledge about transplantation and consequently, improvement in these practices (Luzia, 2015; Adrieno, 2016). Nevertheless, the complexity of this procedure manifests the need for continuous normative and scientific modifications that collaborate in the best effectiveness of the transplant process.

This aspect currently influences the promotion of discussions mainly based on the potential donor (PD), usually originating from encephalic death (ED) (Sanchez, 2018; D' arc, 2018; Silva, 2011). In principle, regarding the evaluation of this efficacy it is important to interpret the indicators that can explain the causal factors of all processes that surround the protocol of encephalic death and the attribution of the term potential donor. And on this is founded, the main difficulties and obstacles (Santos, 2019; Pereira, 2017; Associação Brasileira de Transplantes de Orgãos, 2019). It is clear, therefore, that Brazil still has a long line of waiting for patients in transplant needs of some organ. Regarding the achievement of targets of effective donors per million populations, it is important to note that the country did not reach the expected for the year 2017, and that this produced reflexes in the mortality of patients on the waiting list, in addition to social losses and disarrangements Family (Associação Brasileira de Transplantes de Orgãos, 2019; Lei, 2017; França, 2015).

Statistical data show that Brazil still does not have the mastery of good practices and excellence in the identification and maintenance of potential organ donors in ED and that the little progress in the issue in the country has been installed in a wicked way in the different Brazilian regions and states. In the months of January to March 2019, for example, there were 2,722 notifications of potential donors in the country, of these, 1,409 were considered eligible donors, 874 effective donors, and finally there were only 747 donors in which the organs were transplanted (Associação Brasileira de Transplantes de Orgãos, 2019; França, 2015; Delgado, 2012). This enveloped, because it directs the context of care practices and allows to reflect on how the quality of assistance provided to the potential donor can interfere in this interweaving of processes (Delgado, 2012; Lúzia, 2012). According to the intensive Association of Brazilian Medicine (AMIB) and the Brazilian Registry of Transplantation, one of the major obstacles to the number of donors has been constituted of challenges such as: Identification of late ED, delay in Family interview, family refusal, cardiac arrest in potential donors, deficiencies in logistic flows and local structure. Both, capable of solution, from planning and improvement in management and in the team that deals with this process (D' arc, 2018; Associação Brasileira de Transplantes de Orgãos, 2019; Lúzia, 2014; Martins, 2016). From this perspective, it is clear the importance of the team of professionals in the logistic and care network in organ and tissue transplantation. Starting with the nurse, which has as one of the main attributions, the identification of the manifestations of ED, thus, follow for the notification and opening of the ED protocol, if applicable (Dalmaso, 2018; Lima, 2018).

Thus, the complexity in the maintenance of the organs of the potential donor and the favoring of the context the hemodynamic instabilities, adjunct of the need to take over the family, as well as assisting them, are responsible for slowing/prolonging the attainment of Permission of the family to capture the organs. Since this is one of the main causes of non-viable organs^{4-5,16-17}. Considering this context, nursing has an important function that is to maintain the homeostasis and viability of the patient by means of clinical and laboratorial measurements, indispensable for the viability and maintenance of PD. Assistant to family care throughout This process, which includes the metaphysics of singularities that enshrouds the family and their socio-cultural frameworks. Concomitantly, the importance of the present study is to elucidate the main

nursing care to the potential donor and his family, such as: favoring humanized care, promoting greater family adherence to the donation process, maintaining the viability of Potential donor and maintain dignity and ethics in this process. Thus, the present work aims to: identify the nursing care to the potential donor in ED and his family. Having as research question: what nursing care performed to the potential donor in ED described in scientific articles in the last 10 years in Brazil?

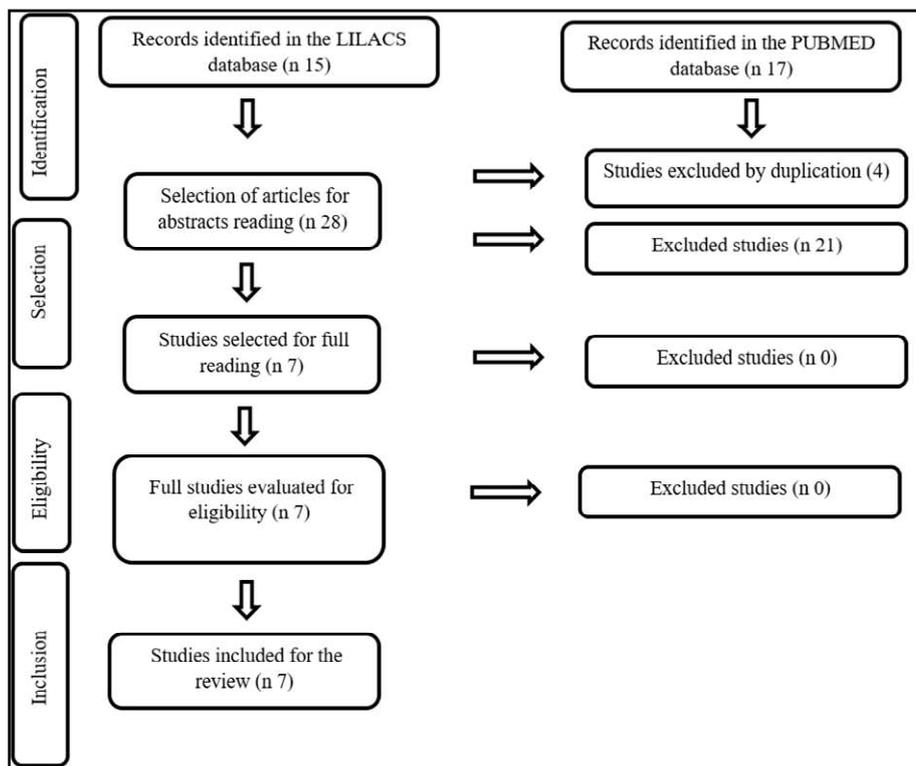
MÉTODOS

This is a bibliographic research, of the Type Integrative Literature review (RIL), which aims to synthesize the main scientific information on certain themes. Specifically, the scope of this study was to elucidate the scientific productions on nursing care to the potential donor in ED in Brazil, in which he needed to discuss the steps contained in the RIL, as well as search in the database. Concomitantly, the operationalization of this study followed eagerly the steps of the RIL: formulation of the problem study theme and research question; Sample of articles obtained by inclusion and exclusion criteria; Inclusion of articles aligned with the theme of study; Analysis of materials; Investigation of articles; Discussion of condensed results and presentation of the RIL (Dal, 2019).

The search for the articles occurred in the following databases: Latin American Literature (LILACS) and National Library of Medicine National Institutes of Health of the USA (PUBMED). For the accomplishment of the search, the descriptors in Health Sciences (DECS) were used: brain death, organ donation and nursing care, using the Boolean operator "AND". In order to ascertain the findings and allocate content in greater consonance with the objective of research, the following inclusion criteria were established: complete original articles; Available in full; Published between 2009-2018; In the languages: English, Portuguese and Spanish; With a protection on nursing care to potential donors in brain death in the title, objective and/or abstract. Finally, the sample of 32 articles was obtained through the criteria proposed. However, 4 were excluded by duplicity. Subsequently, by reading the summaries of the remaining material, 21 articles were excluded for reasons: they focused on the physiopathology of ED, the operational structures and logistic flows of the procedure and/or the perceptions and social representation, procedure Shown better in Figure 1. Concomitantly, after reading the articles in full, the sample of 7 articles was preserved in which the analysis was carried out using material elaborated containing the classification of articles by title, year, periodical, place of study, main results, Illustrated in Figure 2.

RESULTS

From the 7 articles found, the constructs and the interpretative and critical analysis of the nursing care to the potential donor in ED and the implications of this, together with the equations of the transplant conditions in Brazil and Other countries. The selected articles are all from Brazil respectively of the regions with the percentages: 15% (1) from the Midwest, 28% (2) from the southeast and 42% (3) from the northeast and 15% (1) south. Of these, only one article focuses specifically on nursing care with the preservation of the patient's temperature, 2 discuss general direct care to the patient in ED, and 4 were based on the nurses' knowledge about the aforementioned conducts in direct patient care.



Source: Authors ' research.

Figure 1. Flowchart on Study selection procedure, identification and eligibility for analysis. Belém (PA), Brazil, 2019

Figure 2. Identification of the articles selected for analysis, by title, year, Journal, place of study and main results

TITLE	YEAR/JOURNAL	LOCATION	MAIN RESULTS
1. Knowledge of nurses about conducts in the prevention, maintenance and temperature control of potential organ donors.	2012 Journal of the Health Sciences Institute	Goiânia	The nurse knows the importance of maintaining body temperature for the potential organ donor and also the need to prevent complications that may contribute to make the donation unfeasible. It was also found that the nursing conducts are based on reheating measures and that avoid the loss of heat to the environment, among which are used mainly: temperature monitoring, light focus in the abdominal region and air conditioning of Environment.
2. Knowledge of intensivists nurses about the process of diagnosing encephalic death	2016 Magazine Rene.	Bahia	The nurses conceptualized as the main nursing care: Early identification of ED, through the neurological examination of reflex evaluation, on physical examination; Notification to the in-Hospital committee for Organ and Tissue donation; Perform vital signs monitoring; Attention to changes in temperature, urine and cardiovascular; Maintain the viability of the organs; Provide support to the deceased's relatives.
3. Nursing care to the patient in encephalic death and potential organ donor	2014 Magazine Eletrônica de Enfermagem.	Ceará	The nurses seek to contemplate the technical and bioethical dimensions of care to the patient potential organ donor and his family. Among which the main care provided are: to identify ED; Notify the in-Hospital commission; Assist in the diagnosis of ED; Maintain hemodynamic stability; Watch the family.
4. Knowledge and attitude of nurses in the process of organ donation	2018 Magazine médica de Minas Gerais	Belo Horizonte	It was observed that nurses elicit as actions: maintaining organic functions, correcting/controlling alterations, however, not all nurses knew how to proceed correctly to fulfill the stipulated objectives, in view of this situation
5. Encephalic death and care in maintaining the potential donor organ and tissue for transplantation.	2012 Acta Paulista de Enfermagem.	Rio Grande do Norte	The main interventions listed in PD assistance: maintain temperature; Correction of hydroelectrolytic imbalance; Corneal protection. It was also observed that there are gaps in the knowledge about the identification of ED, as well as certain nursing care to be provided to the potential donor.
6. Nurses ' experiences and expectations in caring for organ donors and their families	2015 Magazine of Escola de Enfermagem da USP	São Paulo	Nurses describe that empathy, welcoming, listening and accessible language are the main skills required in the process of dealing with the family. And that such are essential in the process of promoting family acceptance in making your donor.
7. Knowledge of the nurse in maintaining the potential donor organ and tissue for transplantation.	2016 Magazine of Enfermagem UFPE online	Ceará	Care provided: temperature monitoring; Prevention and correction of hypothermia; Hematological and infectious monitoring; Patient sanitization; Protection of corneas. In the other, it was perceived that there are countless weaknesses in the care implemented, causing disparities between knowing and doing it appropriately.

Source: Authors ' research.

Only 3 articles included the family in the relevance of all these care. On the main nursing care listed in the most present analysis materials were: Early identification of ED, notification of the case to the in-Hospital committee for Organ and Tissue donation, assisting in the procedures of diagnosis of ED, Hemodynamic monitoring, monitoring of respiratory gases, hydroelectrolytic control, assisting in the maintenance and viability of organs, strict control of glycemic, temperature control, assisting the family throughout the course of Patient in the intensive care unit, as described in Figure 2. During the analysis, it was observed that despite the credibility of the nursing team about the importance of the care provided to PD, there was a mismatch with the conducts implemented. Because in all articles, he had some degree of disability in the nursing care proceeding, manifested in actions outside the scientific support, or even in undressed achievements of cost-effectiveness, efficiency.

DISCUSSION

ED configures physiological alterations that will affect hemodynamic, endocrine-metabolic and thermal instabilities, creating a favorable environment for the decay of the organism. Such modifications restrict the working time and viability of organs and tissues. In the face of limited time, the need for promptness of the team is postulated, in early identification of the installation of such event (Silva, 2011; Santos, 2019; França, 2015; Borges, 2012). Thus, the maintenance of the potential donor is a hard and complex process, which requires mastery of scientific content and manual, clinical and interpersonal skills. Nursing, as a member of the multidisciplinary team, has essential attributes in the course of this follow-up. The nurse concentrates care and bureaucratic activities related to the proceeding, such as supervising, planning, coordinating nursing procedures dedicated to PD (Lei, 1997; Borges, 2012; Conselho Federal de Enfermagem, 2004). In this regard, the resolution of the Federal Council of Nursing (Cofen) N ° 292/2004 touts that is included in this wrapped functions the notification of the case, family interview and nursing care in any and all stages related to the maintenance of the donor to capture, as well as watch the family. It is indispensable to apply the systematization of nursing care throughout the course (Conselho Federal de Enfermagem, 2004). It is notorious, because the actions and nursing care developed in the studies selected for this research, however, there was no allusion about the way of operationalizing the provision of assistance to PD, which should legally occur through the Nursing process. The actions described in these articles include all actions that are the competence of the said professional. Corroborating with such information there are studies that make prestige about the importance of such interventions and nursing in improving the care flow and bureaucratic to PD patients, in which the process begins and ends with the presence of a nurse. Furthermore, the connection and link between the other professionals and the PD will be transcurraged under nursing (Paula, 2014; Luzia, 2014; Fagherazzi, 2018). Therefore, nursing care was indispensable for the maintenance of PD, especially the tangible monitoring and family conversation. However, the same studies emphasize the challenges that surround and sometimes overcome the quality of care provided, such as: the lack of knowledge about the maintenance of the potential donor, difficulties in reporting the event the family and also dealing with the mourning of it, attaching the lack of resources and structure needed (Lúzia, 2012; Paula, 2014; Fátima, 2018;

Leal, 2015; Conhecimento de enfermeiros intensivistas acerca do processo de diagnóstico da morte encefálica, 2016). In all the articles found, there are varying degrees of deficiencies in the conducts provided and in the knowledge about nursing care to PD. Starting with the request for the work itself, the profile of professionals ' training in these studies, in countless times, are the following: Half do not have specialty in intensive care unit (ICU) and a small percentage works in the ICU and with PD patients and has no specialty (Lúzia, 2019; Fátima, 2018; Borges, 2012). The cases in which the nurse who provides assistance to PD has specific training in this area are rare, and they affirm that the tenuous knowledge they possess are from lectures, short courses, among others (Fátima, 2018; Borges, 2012). Another concurrent situation, which often happens is that the route of opening of ED, is not always fulfilled, or when effective to give up to late, in which sometimes the deteriorating state of the potential donor annihilates the viability of the transplant. Occurrence commonly described in the surveys, one of them performed in Rio Grande do Sul¹⁰, revealed that the time of diagnosis of ED is higher than that recommended by the normative. Other researches aligned on the same theme explain the results of implementation of assistive technologies and other methods of expanding active search for potential donors, in which they often produce the sample increase of patients (Silva, 2011; Sanchez, 2018; Luzia, 2014; Fagherazzi, 2018; Fernanda, 2017).

It is important to emphasize that these aforementioned problems are derived from the entire care framework provided to the PD, in which they overcome the governability of nursing. In terms of standardization, the health system ensures the integrality of donors and organ/tissue receptors through the unified Health System (SUS), however, the effective and normative operationalization are insipid and tenuous (Luzia, 2015; Adrieno, 2016; D' arc, 2018; Silva, 2019). These characteristics are reproduced in numbers. As for example, Brazil's non-reach of the PMP donation goal in the year 2017, as well as the causal factors of a large part of the non-donation, respectively: Family refusal (39%), medical contraindication (15%) and cardiac arrest (9%) (D' arc, 2018; Pereira, 2017; Associação Brasileira de Transplantes de Orgãos, 2019). Another fact to highlight is the discrepancies in family refusal of donation between the regions, a factor interconnected to the care strategies implemented in each state. In which the regions with the worst indices in the non-realization of the donation are interconnected to low management capacity, absence of evaluation of the Transplantation Services (or inoperable), lack of active search and absence of permanent education (Sanchez, 2019; Associação Brasileira de Transplantes de Orgãos, 2019; Fernanda, 2017; Silva, 2015; Aline, 2019). These factors, however, produce surpluses that usually transposes the administrative barriers, and will flow in the non-effectivation of the donation and consequently in the waiting line for transplantation and morbidity and mortality⁸. About the productions found in the literature lacks innovative materials that prepay for the reorganization of care, better cost-effectiveness of the donation in which immanent characteristics are incorporated necessary to better operationalization and increase in Effective donor transplantation. Concomitantly, the permanent education of the professionals and the expansion of information to the community as inexorable in the realization of the improvement of the care practice to the PD are considered. Studies demonstrate the efficacy and effectiveness of such pleas in Fluidity of this process (Silva, 2011; Pereira, 2017; Martins, 2016; Fagherazzi, 2018; Matesanz, 2011).

As for example, on this implementation, it is important to elucidate as a prototype, Spain, one of the world references in transplant with low family refusal and in which in the last two decades there was an increase of effective donors per million population (Sanchez, 2018; Silva, 2011; Pereira, 2017; Fernanda, 2017; Matesanz, 2011). Results obtained thanks to the longitudinality of actions settled in the country, such as the integration of various social segments, expansion of information on the theme of society, permanent training of the team to deal with the maintenance of PD and with the family, Incentive for specialization in the area, strategies that increase the active search for potential donors, a centralized family approach (Sanchez, 2018; Conhecimento de enfermeiros intensivistas acerca do processo de diagnóstico da morte encefálica, 2016; Matesanz, 2011; Sofia, 2018; Lima, 2019). Nevertheless, this study presents as limitations the small sample size in the theme and the difficulty of finding specific research on nursing care for PD, which partly directs that the enlargement of the subject is recent in the last ten years and, Therefore, it still presents weaknesses in its implementation. In this annex, most of the subjects discussed in this subject refer to the nurses' knowledge measurements and not necessarily to the experiments conducted/benefits obtained from nursing interventions to PD.

Conclusion

Therefore, the present studies elucidated as the main nursing care to PD in ED the notification of the case to the transplant center, the monitoring of PD, maintenance of temperature and glycemic, control of the processes of entry and exit of the responses of Patient, as well as family care. These were fundamental in the preservation and viability of organs and tissues. It should also be emphasized that the dedicated productions on effective nursing care with better levels of evidence were rare. The scientific production focused on this theme is still lactonic and superfluous, in which studies on subjectivity, perceptions and knowledge verification predominate. Sanctioning that there is still deficiency in knowledge and conducts, insufficiency of safety of professionals in the proceeding that overflow and reverberate in the care practices, confirmed by the statistical data. Therefore, despite the importance of such nursing care described in the literature, however, it can be considerably improved. It is important to be consistent that there are the challenges that surround the best effectivation of such practices and that are responsible for a great loss of PD annually. It is indispensable the alignment of strategies directed to the rectification of gaps and deficits that correspond mainly in the firmment of permanent education and the best care and family interview. In which the benefits collected by these strategies have been observed in various locations and countries.

REFERENCES

- Adriano GW, Duro VG, Lisboa RS, Augusto CF, Daberkow KV, Renata VZB et al. 2019. Guidelines for the assessment and acceptance of potential brain-dead organ donors. *Rev Bras Ter Intensiva* [Internet]. 2016 [Acesso em 27 jun]; 28 (3): 220-255. DOI: DOI: 10.5935/0103-507X.20160049.
- Aline FAZ., Sampaio DPC., Abraão JCL., Francisco JR., Vitor GSC., Maria BVTN. 2018. Brain death and organ maintenance: knowledge of intensive care professionals. *Rev enferm UFPE on line* [Internet]. [Acesso em 2019 29 jun]; 12 (1): 51-8. DOI: <https://doi.org/10.5205/1981-8963-v12i01a25130p51-58-2018>.
- Associação Brasileira de Transplantes de Órgãos (ABTO). Registro brasileiro de transplantes. Dados numéricos da doação de órgãos e transplantes realizados por estado e instituição no período janeiro/ março-2019 [Acesso em 2019 27 jun]. Ano XXV n° 1. Disponível em: <http://www.abto.org.br>.
- Borges JG., Moreira NB., Abreu MB., Sena XP. 2012. Conhecimento dos enfermeiros sobre condutas na prevenção, manutenção e no controle da temperatura de potenciais doadores de órgãos. *J Health Sci Inst* [Internet]. [Acesso em 2019 27 jun]; 30 (4): 365-8. DOI: < <http://dx.doi.org/10.1590/1983-80422016242137>>.
- Conhecimento de enfermeiros intensivistas acerca do processo de diagnóstico da morte encefálica. *Rev Rene*[Internet]. 2016 set-out [Acesso em 2019 29 jun]; 17 (5): 691-8. DOI: 10.15253/2175-6783.2016000500015.
- Conselho Federal de Enfermagem. Resolução 292/2004. Dispõe sobre a Normatiza a atuação do Enfermeiro na Captação e Transplante de Órgãos e Tecidos. [Internet]. 2004 [citado em 2019 Jun 29]. Disponível em: http://www.cofen.gov.br/resoluo-cofen-2922004_4328.html.
- D' arc JAA., Coelho AB., Grudka GL., Emília FCVF., Alves RM. 2019. Experiences and strategies of an organ procurement organization. *Rev enferm UFPE on line* [Internet]. 2018 [Acesso em 27 jun]; 12 (4): 857-64. DOI: <https://doi.org/10.5205/1981-8963-v12i4a110257p857-864-2018>.
- Dal KSM., Cristina RCPV., Maria CG. 2008. Integrative literature: a research method to incorporate evidence in health care and nursing. *Texto Contexto-enferm* [Internet]. [Acesso em 2019 27 jun]; 17 (4): 758-64. DOI: <http://dx.doi.org/10.1590/S0104-07072008000400018>.
- Dalmaso FT, Camponogara S, José MLM, Lucia CCB, Beatriz SSL, Loise GD. The role of nurses in the intra-hospital organ and tissue donation commission. *Rev enferm UERJ* [Internet]. 2018 [Acesso em 2019 29 jun]; 26. DOI: <http://dx.doi.org/10.12957/reuerj.2018.27385>.
- Delgado SSM., Carlos LG., Chagas TA., Christiane EMD., Pellegrino VT., 2012. Why potential donors do not become actual donors: an exploratory-descriptive study. *Rev enferm UFPE on line* [Internet]. Mar [Acesso em 2019 27 jun]; 6 (3): 613-18. DOI: 10.5205/reuol.2163-16218-1-LE.0603201216.
- Fagherazzi V., Priscila SCT., Muniz RO., Edlourdes JSS., Sauer MN. Passoni RS. 2018. Permanent education on organ/tissue donation with community health agents. *Rev enferm UFPE on line* [Internet]. [Acesso em 2019 29 jun]; 12 (4): 1133-8. <https://doi.org/10.5205/1981-8963-v12i4a231367p1133-1138-2018>.
- Fátima MSC., Lacerda RPR., Pereira LF., Anderson PTS., Silva RPO., Lourdes MC. 2018. Conhecimento e atitude dos enfermeiros frente ao processo de doação de órgãos. *Rev Med Minas Gerais* [Internet]. [Acesso em 2019 29 jun]; 28: 43-51. Disponível em: < rmmg.org/exportar-pdf/2436/v28s5a09.pdf>.
- Fernanda ESSL., Cristiane MAP., Dora YEM., Dal KSM., Angela MR. 2017. Protótipo de escala informatizada para busca ativa de potenciais doadores de órgãos. *Rev. Latino-Am. Enfermagem* [Internet]. [Acesso em 2019 29 jun]; 25: 1-9. DOI: 10.1590/1518-8345.1936.2930.
- França DR., Reis RN., Rodrigues SS., Carolyn PO. 2015. Evaluation of the time of diagnosis of brain deaths notified

- to the Center for Transplants of Rio Grande do Sul, Brazil. *Sci Med [Internet]*. [Acesso em 2019 27 jun]; 25(3): 2-5. DOI: <http://dx.doi.org/10.15448/1980-6108.2015.3.21328>.
- Leal EM., Ferreira FN., José MS., Aparecida MBM., Cristina MKBM. 2015. Experiências e expectativas de enfermeiros no cuidado ao doador de órgãos e à sua família. *Rev Esc Enferm USP [Internet]*. [Acesso em 2019 29 jun]; 49 (2): 129-135. DOI: 10.1590/S0080-623420150000800018.
- Lei nº 9.434, de 4 de fevereiro de 1997 (BR). Dispõe sobre a remoção de órgãos, tecidos e partes do corpo humano para fins de transplante e tratamento e dá outras providências. *Diário Oficial da União [Internet]*. 1997 Feb 04 [cited 2017 May 18]. Disponível em: http://www.planalto.gov.br/ccivil_03/leis/L9434.htm.
- Lima APM., Lorenzini AE., Georgina FMS., Marcellino GML., Lima ES., Lúcia ASFM. 2019. Meaning of nursing care to brain dead potential organ donors. *Rev Gaúcha Enferm [Internet]*. 2018 [Acesso em 29 jun]; 39: 01-09. DOI: <https://doi.org/10.1590/1983-1447.2018.2017-0274>.
- Lima NV., Silva CN., Ferreira RL., Nascimento VS., Michelle BBLB., Daniele MRV. 2016. Conhecimento do enfermeiro na manutenção do potencial doador de órgãos e tecidos para transplante. *Rev enferm UFPE on line [Internet]*. [Acesso em 2019 27 jun]; 10 (5):1615-24. DOI: 10.5205/reuol.9003-78704-1-SM.1005201607.
- Luzia ISF, Lúcia QDAQV, Vasconcelos GT, Cavalcante EA, Katherinne IFC, Sousa GMM. 2015. Structure, process and outcomes of organ and tissue donation for transplantation. *Rev Bras Enferm [Internet]*. set-out [Acesso em 2019 27 jun]; 68(5):837-45. DOI: <http://dx.doi.org/10.1590/0034-7167.2015680511i>.
- Luzia ISF., Elza AOM., Bessa MF., Sousa GMM., Katherinne IFC., Vasconcelos GT., 2014. Comprehension the nursing team on brain death and organ donation. *Enfermería global [Internet]*. [Acesso em 2019 27 jun]; 13 (36): 194-207. Disponível em: http://scielo.isciii.es/pdf/eg/v13n36/pt_administracion1.pdf.
- Lúzia ISF., Elza AOM., Oliveira VP., Lúcia QDAQV., Vasconcelos GT. 2012. Morte encefálica e cuidados na manutenção do potencial doador de órgãos e tecidos para transplante. *Rev. Eletr. Enf. [Internet]*. [Acesso em 2019 27 jun];14 (4): 903-12. DOI: <http://www.fen.ufg.br/revista/v14/n4/v14n4a19.htm>
- Martins MS., Affonso CA., Aguiar BR., Schirmer J. 2019. Indicadores de eficiência no processo de doação e transplante de órgãos: Revisão sistemática da literatura. *Rev Panam Salud Publica [Internet]*. 2016 [Acesso em 29 jun]; 40(2): 90-7. Disponível em: < <https://scielosp.org/pdf/rpsp/2016.v40n2/90-97/pt>>.
- Matesanz R., Domínguez BG., Coll E., Rosa G., Marazuela R. 2011. Spanish experience as a leading country: what kind of measures were taken?. *Transplant. Int [Internet]*. [Acesso em 2019 29 jun]; 24: 333-343. DOI: <https://doi.org/10.1111/j.1432-2277.2010.01204.x>.
- Paula LC., Costa IR., Ângelo MMA., Dalva MSA., Augusta VBB. 2014. Cuidados de enfermagem ao paciente em morte encefálica e potencial doador de órgãos. *Acta Paul Enferm [Internet]*. 2014 [Acesso em 29 jun]; 27 (6): 567-72. DOI: <http://dx.doi.org/10.1590/1982-0194201400092>.
- Pereira IF., Gomes TA., Islowa CCP., Lucena EV. 2017. Construction of assistance nursing protocol for potential organ donors in encephalic death. *Rev enferm UFPE on line [Internet]*. [Acesso em 2019 27 jun]; 11 (9): 3492-6. DOI: 10.5205/reuol.11088-99027-5-ED.1109201721.
- Sanchez AV., Gómez JS., Nelida MFM., Fernandéz DG. 2019. Examination of the Brain-Dead Organ Donor Management Process at a Spanish Hospital. *Int. J. Environ. Res. Public Health [Internet]*. 2018 [Acesso em 27 jun]; 15 (10). DOI: <https://doi.org/10.3390/ijerph15102173>.
- Santos AM., Santos AM., Rodrigues LFL., Santos VF. 2019. Epidemiological analysis of candidates for the donation of organs in the states of Ceará, São Paulo and Acre. *J. res.: fundam. care. Online [Internet]*. 2019 jan/mar [Acesso em 27 jun]; 11 (1): 167-172. DOI: 10.9789/2175-5361.2019.v11i1.167-172.
- Silva NK., Shirmer J., Aguiar BR., 2019. Adapting the Spanish transplant management model to reduce family rejection and maintain the potential donor. *Texto contexto – enferm [Internet]*. 2011 [Acesso em 27 jun]; 20. DOI: <http://dx.doi.org/10.1590/S0104-07072011000500007>.
- Silva VS., Carvalho LM., Fabiana RL., Caroliny PO., Schirmer J., Aguiar BR. 2015. Projeto de coordenação intra-hospitalar de doação de órgãos: custo-efetividade e benefícios sociais. *Rev Saúde Pública [Internet]*. [Acesso em 2019 29 jun]; 49: 72-9. DOI:10.1590/S0034-8910.2015049005770.
- Sofia CLE., Inês MTB., Maria APA. 2018. Organ donation: the reality of an intensive care unit in Portugal. *Rev Bras Ter Intensiva [Internet]*. [Acesso em 2019 29 jun]; 30 (2): 201-207. DOI: 10.5935/0103-507X.20180040.
