







## MANAGEMENT OF NURSE CARE IN THE ORGAN AND TISSUE DONATION PROCESS

Neide da Silva Knihs<sup>1</sup>   
Ana Carolina Barbosa dos Santos<sup>2</sup>   
Aline Lima Pestana Magalhães<sup>1</sup>   
Sayonara de Fatima Faria Barbosa<sup>1</sup>   
Sibele Maria Schuantes Paim<sup>3</sup>   
Juliana Santos<sup>1</sup> 

<sup>1</sup>Universidade Federal de Santa Catarina Departamento de Enfermagem. Florianópolis, Santa Catarina, Brasil.

<sup>2</sup>Centro Universitário para o Desenvolvimento do Alto Vale do Itajaí. Rio do Sul, Santa Catarina, Brasil.

<sup>3</sup>Universidade Federal de São Paulo, Escola Paulista de Enfermagem. São Paulo, São Paulo, Brasil.

### ABSTRACT

**Objective:** to identify the activities developed by nurses in care management in the organ and tissue donation process.

**Method:** this is a quantitative, retrospective, exploratory and descriptive study, carried out in two hospital institutions in southern Brazil, between June 2013 and June 2016. The sample consisted of 104 records of patients notified to the State Transplant Center. For data analysis, descriptive statistics were used.

**Results:** at Institution A, 70.2% (73) of medical records were analyzed and at Institution B, 29.8% (31). As for activities developed by nurses, it is noteworthy that in the first, they carried out 1,299 management activities (93.7%) and in the second, 317 (53.9%). As for assistance activities, in the first, 507 (83.1%) and in the second, 217 (63.1%) activities. With regard to nursing care, care should be taken to maintain temperature, water balance and glycemic control.

**Conclusion:** it was possible to identify that nurses develop a greater number of actions aimed at management issues in the donation process. As for assistance, there was a greater concern with maintaining the temperature.

**DESCRIPTORS:** Nursing Care. Transplantation. Health management. Tissue and organ procurement. Nursing.

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# GERENCIAMENTO DO CUIDADO DO ENFERMEIRO NO PROCESSO DE DOAÇÃO DE ÓRGÃOS E TECIDOS

## RESUMO

**Objetivo:** identificar as atividades desenvolvidas pelos enfermeiros no gerenciamento do cuidado no processo de doação de órgãos e tecidos.

**Método:** estudo quantitativo, retrospectivo, exploratório e descritivo, realizado em duas instituições hospitalares do sul do país, no período entre junho de 2013 e junho de 2016. A amostra foi composta por 104 prontuários de pacientes notificados à Central Estadual de Transplantes. Para análise dos dados se utilizou estatística descritiva.

**Resultados:** na Instituição A foram analisados 70,2% (73) dos prontuários e na Instituição B, 29,8% (31). Quanto às atividades desenvolvidas pelos enfermeiros, destaca-se que na primeira realizaram 1.299 atividades gerenciais (93,7%) e na segunda, 317 (53,9%). Quanto às atividades assistenciais, na primeira, 507 (83,1%) e na segunda, 217 (63,1%) atividades. Com relação aos cuidados de enfermagem, destacam-se os cuidados para manutenção da temperatura, balanço hídrico e controle glicêmico.

**Conclusão:** foi possível identificar que o enfermeiro desenvolve maior número de ações voltadas às questões de gerenciamento no processo de doação. Quanto aos cuidados assistenciais, houve uma maior preocupação com a manutenção da temperatura.

**DESCRITORES:** Cuidados de enfermagem. Transplante. Gestão em saúde. Obtenção de tecidos e órgãos. Enfermagem.

# GESTIÓN DE LA ATENCIÓN DE ENFERMERÍA EN EL PROCESO DE DONACIÓN DE ÓRGANOS Y TEJIDOS

## RESUMEN

**Objetivo:** identificar las actividades que desarrollan las enfermeras en la gestión del cuidado en el proceso de donación de órganos y tejidos.

**Método:** estudio cuantitativo, retrospectivo, exploratorio y descriptivo, realizado en dos instituciones hospitalarias del sur del país, entre junio de 2013 y junio de 2016. La muestra estuvo conformada por 104 registros de pacientes notificados al Centro Central de Trasplantes. Para el análisis de datos se utilizó estadística descriptiva.

**Resultados:** en la Institución A se analizó el 70,2% (73) de las historias clínicas y en la Institución B, el 29,8% (31). En cuanto a las actividades desarrolladas por las enfermeras, se destaca que en la primera realizaron 1.299 actividades gerenciales (93,7%), y en la segunda 317 (53,9%). En cuanto a las actividades asistenciales, en la primera, 507 (83,1%) y en la segunda, 217 (63,1%) actividades. Con respecto a los cuidados de enfermería, se debe tener cuidado de mantener la temperatura, el equilibrio hídrico y el control glucémico.

**Conclusión:** se pudo identificar que la enfermera desarrolla un mayor número de acciones enfocadas a temas de gestión en el proceso de donación. En cuanto a los cuidados asistenciales, hubo una mayor preocupación por mantener la temperatura.

**DESCRIPTORES:** Atención de enfermería. Transplante. Gestión en salud. Obtención de tejidos y órganos. Enfermería.

## INTRODUCTION

Organ donation in Brazil has evolved gradually over the years. Despite great advances, data show that there are still many opportunities for improvement in this setting.<sup>1</sup>

It is estimated that there are 70 potential donors (PD) per million inhabitants per year (pmp/year) in the country. It is worth mentioning that the South region is above the estimated, presenting 74.9 (pmp/year). In 2018, Santa Catarina State notified 581 PD (83 pmp/year) to the State Transplant Center (STC), with only 287 donations (41 pmp/year) made.<sup>1</sup>

The progress in this donation process is attributed to several factors with regard to technology, pharmacology, training and qualified professionals. All of these areas have evolved a lot in the donation setting; however, the engagement of health professionals, especially nurses, is what makes this result more and more effective through care management during the donation process.<sup>2</sup>

Care management is a broad process, covering care and administrative actions, educational actions and research with a focus on patient benefit. Furthermore, it interferes with the critical variables of nursing care such as access, opportunity, humanization, safety, quality and cost reduction. Management centered on and for patients results in the convergence of care/management, aiming to meet the care needs of patients and, at the same time, the nursing staff and the institution.<sup>3</sup>

In the organ and tissue donation process, nurses work directly in the coordination of Hospital Transplantation Commissions (HTC) in all public, private or philanthropic hospital institutions in the country, developing care management actions. This professional has the responsibility and commitment to manage the stages of organ and tissue donation, such as active search, identification, assessment, validation, PD notification, as well as interviewing the family, coordinating operating rooms and sending documents to STC, supported by the legislation in force in the country.<sup>4-5</sup>

As the donation process progresses, HTC nurses are faced with numerous challenges. However, nursing care directed at lifeless patients, encourages this professional to plan care for a dead person, whose hemodynamic changes are severe, mainly due to the absence of hormonal production.<sup>6-7</sup> In this regard, it is necessary that this assistance be aimed at preserving viable organs for transplantation.<sup>7-8</sup>

It is understood that the role of HTC nurses, in the context of organ and tissue donation, has grown and stood out in Brazil over the years. The activities developed by these professionals involve assistance and management in order to offer continuity of care to PD and with the possibility of helping other lives. It is emphasized that there is a gap in the scientific literature regarding the perspective of donation coordinators about the process<sup>9</sup> and even the activities carried out.

Of the few studies that show the real demand for activities of this professional in organ donation, some register the main difficulties and confrontations<sup>7,8</sup>. However, they do not reveal or even describe the steps and activities practiced by these professionals. Nurses are the main actor in managing and assisting PD and family, in addition to this care, they are in direct contact with STC in management and organization of actions that emerge at each stage of the process.<sup>2,3</sup> Even so, their work has been scarcely referenced, shown and exposed in governmental, non-governmental organizations, health institutions and in scientific events. The mention of this professional appears only as another task executor. However, they are at the forefront of all HTC's tasks, as outlined in the legislation in force in the country.<sup>4,5</sup>

Faced with this, the question is: what are the activities developed by nurses in care management in the organ and tissue donation process?

This study aims to identify the activities developed by nurses in care management in organ and tissue donation.

Care management is believed to establish, continuously and systematically, fundamental elements that contribute to the success of the entire donation process, bringing results to health institutions, society and nursing professionals.

## METHOD

This is a quantitative, retrospective, exploratory and descriptive study, developed in two large hospital institutions in Santa Catarina, called Institution A and Institution B. These organizations assist patients through the Unified Health System (*Sistema Único de Saúde*), are philanthropic, references in polytrauma and neurosurgery. For the definition of the two institutions, the mean number of notifications from PT to STC in 2015 was considered. Moreover, it should be noted that, in both, nurses are exclusive to HTC, and these professionals are coordinators of HTC.

HTC, in both institutions, is formed by nurses and doctors. Of these, five are healthy nurses and a doctor. One of the nurses is responsible for HTC coordination of HTC, for the management of all documents, organization of meetings, quality management, and on-call scale of other co-workers. The other nurses must be alert and, when identifying a PD through active search, all the management and assistance activities mentioned in current legislation are under their responsibility.<sup>4,5</sup>

The sample consisted of medical records of patients who were notified to STC between June 2013 and June 2016, totaling 110 medical records. The definition of this period is related to the fact that, in both institutions, HTC nurses started to implement the systematization of care in organ and tissue donation. These records are exclusive to PD. When there is a patient diagnosed with brain death notified to STC, a new registration is opened and specific forms, according to the legislation, are completed by HTC members. The registration of each activity in these documents is under the responsibility of HTC professionals.<sup>4,5</sup>

The medical records of patients notified as a potential organ donor to STC during the period presented were selected. Medical records that did not present records of nurses' information when conducting the process, or with ineligible information and those of patients under the age of 18 were excluded.

Of the 110 eligible medical records, four were excluded for not having records of information from nurses in conducting the process and two for being patients under the age of 18 years. Thus, the sample consisted of 104 records of patients notified in STC in the aforementioned period.

Data collection was carried out between the months of June and August 2016 by the researchers, using an information collection instrument elaborated based on COFEN (*Conselho Federal de Enfermagem* – Federal Council of Nursing) Resolution 292/20044. COFEN standardizes the role of nurses and describes their duties in organ and tissue donation and the legislation in force in the country on this topic.<sup>10</sup>

The instrument consisted of 28 closed and one open-ended question. The first five involved the profile of patients who were notified to STC. The remainder, 23, were related to care management, 10 for management issues of nurses and 13 involved nursing care.

Regarding management issues/management variables: Record of the clinical conditions of PD; Notification to STC after a diagnosis of brain death (BD) is completed; Forwarding of documents and exams as requested by STC; Certification that all surgery reports have been performed; Management of PD maintenance; Management of hemodynamic conditions periodically, through registration; Management of the operating room coordination; Information registration regarding problems evidenced in the donation process.

With regard to care issues/care variables: Performing physical examination in PD; Assistance to the medical staff in developing brain death; Development of systematization of care for PD; Development of hemodynamic maintenance actions; Development of welcome for PD's families; Participation in reporting death with the health staff; Family interview participation.

To develop data collection and obtain information, the researchers assessed all the development, care plans, records and/or notes made by HTC nurses throughout patients' medical records. Legally, in order to be able to present activities performed by these professionals, they need to be duly registered with the forwarded documents filed for later audits by the competent bodies for inspecting this process.<sup>4,5</sup>

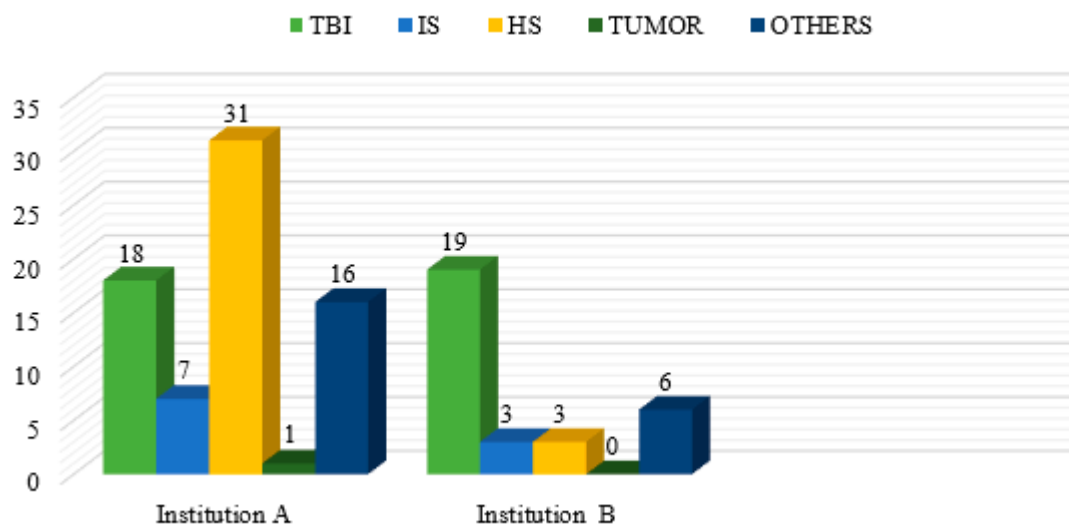
To carry out an analysis of the information obtained, these were inserted in a Microsoft Excel® spreadsheet. Afterwards, an analysis was performed using the relative frequencies (percentages), absolute frequency (n) and mean. Data were presented in the form of tables and graphs.

Ethical aspects follow Resolution 466 of December 12, 2012, which were respected during the development of the research. Anonymity of medical records was maintained at all times.

## RESULTS

One hundred four medical records were analyzed, 73 (70%) from Institution A and 31 (30%) from Institution B.

Regarding cause of death (Figure 1), at Institution A, hemorrhagic stroke stood out, 31 (42.5%), followed by traumatic brain injury, 18 (24.6%), while at institution B, traumatic brain injury stood out, 19 (61%).



**Figure 1** – Distribution of the absolute number of causes of death by institution, Florianópolis, SC, Brazil, 2016. (n=104)

In both institutions, the activities most developed by nurses related to care management were management activities, corresponding to 93.7% (1,299) at Institution A and 53.9% (317), at Institution B (Table 1).

**Table 1** – Types of activities developed by nurses at the institutions studied. Florianópolis, SC, Brazil, 2016. (n=104)

Variable	Category	Institution A				Institution B			
		n	%	Mean	Standard deviation	n	%	Mean	Standard deviation
Assistance activities according to COFEN resolution	Performed	421	83.1	5.81	2.1	137	63.1	4.4	1.4
	No Performed	86	16.9	1.2	0.4	80	36.9	2.7	1.1
	Total	507	100	–	–	217	100	–	–
Management activities according to COFEN resolution	Performed	1,299	93.7	17.8	5.8	317	53.9	10.67	3.6
	No Performed	87	6.3	1.2	0.4	271	46.1	9.0	2.8
	Total	1,386	100	–	–	588	100	–	–

Regarding the most performed management activities by nurses (Table 2), at Institution A, the following stand out: information registration about the condition of PD (100%); notification of PD to STC after completion of A diagnosis of BD (100%); forwarding of documents and exams as requested by STC (100%); maintenance management of PD (100%). At Institution B, the most developed activity was: notification of PD to STC, after diagnosing BD (96.8%); followed by forwarding documents and exams as requested by STC (87.1%); management of hemodynamic conditions through registration (87.1%).

**Table 2** – Management activities developed by nurses in each institution. Florianópolis, SC, Brazil, 2016. (n=104)

Atividades Gerenciais	Institution A (n=73)				Institution B (n=31)				Total (n=104)			
	Yes		No		Yes		No		Yes		No	
	n	%	n	%	n	%	n	%	n	%	n	%
Record information about possible donor conditions	73	100	00	00	26	83.9	05	16.1	99	95.2	05	4.8
Notify STC after diagnosis of BD is completed	73	100	00	00	30	96.8	01	3.2	103	99.4	01	0.96
Forward documents and exams as requested by STC	73	100	00	00	27	87.1	04	12.9	100	95.15	04	3.85
Make sure that all surgery reports have been performed	66	90.4	07	9.6	6	19.4	25	80.6	72	69.23	32	30.77
Manage PD maintenance	73	100	00	00	26	83.9	05	16.1	99	95.2	05	4.8
Manage hemodynamic conditions	70	95.9	03	4.1	27	87.1	04	12.9	97	93.3	07	6.7
Manage the operating room coordination	66	90.4	07	9.6	06	19.4	25	80.6	72	69.23	32	30.77
There is a record of information regarding problems evidenced in the process	67	91.8	06	19.4	06	8.2	25	80.6	73	70.2	31	29.8

With regard to the variable “operating room management”, there is a great difference in the recording of this activity between the two institutions. At Institution A, there were 66 (90.4%) records, while at Institution B, there were only 6 (19.4%) of cases. As for these activities, the least developed was operating room management and coordination at institution B and the most developed was notification to STC after completing A diagnosis of BD by institution B.

It is observed that the assistance activities (Table 3) most performed by nurses at Institution A were to assist the medical staff in developing a diagnosis of BD, 72 (98.6%), to participate in reporting death with the health staff, 71 (97.3%) and participating in the family interview, 71 (97.3%). Institution B nurses performed a physical examination in PD, 22 (71%), assisted the medical staff in developing a diagnosis of BD, 25 (80.6%) and developed actions to maintain the PD hemodynamics, 22 (71%).

It is noteworthy that in both institutions welcoming PD’s families was not so expressive. At institution A, welcoming was performed in 43 (58.9%) of the cases and at institution B in 5 (16.1%). Thus, it is pointed out that the least developed activity was welcoming PD’s families at institution B and the most developed was to assist the medical staff in BD development diagnosis at institution B.

**Table 3** – Assistance activities developed by nurses in each institution. Florianópolis, SC, Brazil, 2016. (n=104)

Assistance Activities	Institution A (n=73)				Institution B (n=31)				Total (n=104)			
	Yes		No		Yes		No		Yes		No	
	n	%	n	%	n	%	n	%	n	%	n	%
Perform physical examination in PD	48	65.8	25	34.2	22	71.0	09	29.0	70	67.3	34	32.7
Assist the medical staff in developing a diagnosis of BD	72	98.6	1	1.4	25	80.6	06	19.4	97	93.3	07	6.7
Develop systematization of care for PD	46	63.0	27	37.0	21	67.7	10	32.3	67	64.5	37	35.5
Develop actions for hemodynamic maintenance	48	65.8	25	34.2	22	71.0	09	29.0	70	67.3	34	32.7
Develop welcoming of PD’s families	43	58.9	30	41.4	05	16.1	26	83.9	48	46.1	56	53.9
Participate in reporting death with the health staff	71	97.3	02	2.7	18	58.1	13	41.9	89	85.6	15	14.4
Participate in the family interview	71	97.3	02	2.7	20	64.5	11	35.5	91	87.5	13	12.5

As for actions/care for maintaining the PD hemodynamics (Table 4), it is observed that warming up of patients at Institution A was carried out in 48 (65.8%) of the cases and at institution B, in 22 (71 %). Verifying water balance every six hours at Institution A was developed in 48 (65.8%) of the cases, and at Institution B, in 22 (71%). Regarding vital sign assessment every six hours, Institution A performed in 48 (58.9%) and Institution B performed in 26 (83.9%). With regard to infection prevention actions, Institution A predominated in 71 (97.3%) of cases. Blood glucose verification according to AMIB protocol at institution B was the least developed action. The most developed was infection prevention at institution A.



It should be noted that there is a weakness in care registration and description and management actions of nurses in patients' medical records, sometimes with incomplete information, leaving doubts about their effective performance.

**Table 4** – Actions to maintain the hemodynamics of potential donors. Florianópolis, SC, Brazil, 2016. (n=104)

Hemodynamic Maintenance Actions	Institution A (n=73)				Institution B (n=31)				Total (n=104)			
	Yes		No		Yes		No		Yes		No	
	n	%	n	%	n	%	n	%	n	%	n	%
Warmed up patients	48	65.8	25	34.2	22	71.0	09	29.0	70	67.3	34	32.7
Performed blood glucose according to AMIB protocol	45	64.2	25	34.2	15	48.3	16	51.7	60	66	41	34
Infused heated fluids	46	63.0	27	37.0	21	67.7	10	32.3	67	64.5	37	35.5
Performed water balance every six hours	48	65.8	25	34.2	22	71.0	09	29.0	70.0	67.3	34	32.7
Assessed vital signs every six hours	43	58.9	30	41.4	26	83.9	05	16.1	69	57.6	35	42.4
Developed actions to prevent infections	71	97.3	02	2.7	18	58.1	13	41.9	89	85.6	15	14.4

## DISCUSSION

During information analysis, it was possible to perceive weakness in developing activities related to care management recommended by the legislation in force in the country. They must be performed by HTC nurses who work in organ and tissue donation.<sup>4,5</sup>

The largest number of medical records analyzed predominated at Institution A, with the highest number of PD notifications to STC in this period. It is worth mentioning that both organizations are a reference in neurosurgery. Institutions with this profile are more likely to report more PD of organs and tissues.<sup>11</sup> Concerning causes of death, it is observed that the hemorrhagic stroke and traumatic brain injury figured prominently at Institution A and B, respectively. This information corroborates data from other studies about the profile of causes of BD.<sup>12,13</sup>

In the course of the progression of severe neurosurgical patients, they can evolve to BD and become a PD, starting to present major hemodynamic changes that demand specific care from the multidisciplinary staff professionals, especially the nursing staff directly involved in assisting this patient.<sup>14-16</sup> When a PD is identified by one of the HTC members, nurses on call from this committee start to articulate management and assistance activities to minimize such changes and avoid the loss of this PD due to cardiac arrest. Effective management of PD prevents patient loss and minimizes the risk of injuries in transplantation.<sup>6,11</sup>

Data show that management activities were the most developed in both institutions. This situation may be related to the fact that nurses take over many responsibilities in organ and tissue donation. As a result, they end up sharing assistance activities with fellow nurses from the critical units, considering that they are qualified to care for critically ill patients and end up taking on management activities, which are exclusive to HTC member nurses, in addition to being specific activities of this process.<sup>4,5</sup>

It is noteworthy that management actions are important, being essential for process excellence, execution and conduct, as well as for the success and satisfactory results in transplantation. In order to act effectively in the management activities in the donation process, it is necessary that nurses



have knowledge, skills, specific attitudes and quick decision making, in addition to being constantly updated.<sup>8-9,17</sup> Nurses' knowledge and skills in managing these actions streamline bureaucratic steps, as well as contribute to donation effectiveness.<sup>9,15-17</sup>

Due to the complexity of patients in BD, during stage management, nurses are in constant involvement with a multidisciplinary staff, aiming at agility in diagnosis, hemodynamics maintenance and welcoming the family. In this regard, nurses' knowledge and experience enable all care to be managed, providing a safe and quality process. A greater involvement of nurses from institution A was identified in terms of management activities. There are times when important tasks like making sure that all surgery reports have been completed; operating room coordination; notes related to facts that occurred in organ harvesting are no longer registered and or executed at institution B. It is noted that in such institution there was the lowest index of management action regarding the operating room coordination.

Such activities are fundamental, necessary and legal and must be developed and registered by HTC members, especially the operating room coordination, being of fundamental importance for the explant to occur safely and effectively.<sup>4,5</sup> The difference between the performance of such activity in the two institutions may be related to the composition of HTC, or even to the fact that professionals from institution B have not received training in management and step by step registration of this activity.

Nurses who are part of the organ removal staff and HTC member nurses are co-responsible for this step and must be integrated in the operating room coordination. Moreover, they must pay attention to all procedures performed, such as participation in the verification of operating room assembly, organ perfusion, organ conditioning, forwarding of removed organs and recording of all information in operating rooms.<sup>4,5,18-20</sup> Failure to carry out these activities implies ethical and legal issues, at the same time that it may compromise the use of organs and transplantation, as there is no record of such management of facts and events in operating rooms.<sup>4,5</sup>

Recording information is essential, and the absence of them can directly interfere in the management of organs by the staff and in the result of transplantation, as well as in the agility of the body's release to the family. It should be noted that nurses must monitor and supervise this stage of the process according to current legislation.<sup>15,16</sup>

Management activities developed by nurses were considered to be those registered in the documents required by competent bodies that oversee the donation process, STC and Brazil Organ Donation System. It is believed that such tasks are being performed by nurses; however, without registration there is no way to show facts and information to professionals who will receive these organs and perform transplantation in other institutions of the State or even in other states. The staff that will perform transplantation needs records of each step of the process.<sup>5</sup>

Thus, nurses as a member of HTC, when coordinating, managing and recording information about this process, bring security to the steps, greater visibility to the profession, minimize the risk of legal infractions, in addition to allowing the planning of assistance, statistics of care, support to consult for audits and present staff productivity.

With regard to assistance actions in this process, as the professional who monitors and spends a longer period with these patients, nurses exercise all their efforts to maintain constant hemodynamic stability due to neurological damage and the release of catecholamines.<sup>14,17</sup> Assistance activities are relevant, as well as management ones, since they contribute to the hemodynamic stability of PD and quality in the organs offered.<sup>14-17</sup>

In the present study, there is an oscillation of assistance activities performed by nurses in the two institutions with regard to physical examination and systematization of care. In assistance to the family, which involves reporting the critical situation, welcoming and the family interview for donation, there was a greater involvement of nurses from institution A. However, it is noted that there was less

adherence to welcoming PD's families at Institution B According to current legislation, such activities must be carried out by the HTC staff, especially by nurses, since this professional who is directly involved in assisting PD.<sup>4,5</sup>

In nursing care, especially for PD, physical examination is fundamental and necessary to assess, verify and validate PD. Through physical examination, important findings of patients' clinical conditions, injuries, previous surgeries, among other characteristics are revealed. PD assessment must be carried out carefully, including the performance of a detailed and detailed physical examination.<sup>4,6-7,16</sup>

The COFEN Resolution of 2004 points out that nurses must develop physical examination and systematize care to PD.<sup>4</sup> Certainly, these activities are performed by these professionals; however, without registration there is no way to scientifically, statistically and legally prove such assistance actions. It is highlighted that the systematization of care supports nurses in carrying out their activities in such a way that care management in organ and tissue donation is directed to priority care, offering individualized and planned care and comprehensive care. Applying the Systematization of Nursing Care (SNC) is a requirement contained in current legislation and which supports the work of nurses, in order to reorganize the work performed by this professional<sup>4,19,21-24</sup>

With regard to assistance actions with the family, the legislation informs the need to promote welcoming, support with an exclusive place to welcome these people. Nurses as a member of HTC have the opportunity to be with these people giving support, attention, developing empathy and active listening in the grieving process. Family care is a complex step that requires qualified and trained professionals, who can offer elements that transparently guide PD's families. Nurses must be prepared to clear all family members' doubts clearly and objectively, ensuring an understanding of the real situation of their loved one, thus respecting ethical and legal principles.<sup>4,5</sup>

Through welcoming the families, nurses have the opportunity to get to know the family structure, possible conflicts, in addition to promoting the approach of these people to their support network. By being with these people, nurses start to interact and bring them closer to the multidisciplinary staff, establishing a relationship of trust and credibility with professionals who will conduct the interview for donation. Family interview is seen as decisive in organ and tissue donation for transplantation, and in Brazil, this stage is considered the main cause of refusal in the donation process.<sup>23-27</sup>

With regard to activities aimed at maintaining PD, in both institutions, nurses developed such actions. The greatest predominance of this care was regarding the heating of fluids and water balance, with a greater emphasis on preventing infection at institution A. The least predominance of activities was related to blood glucose care at institution B. Studies indicate that nursing care performed effectively to PD reduces cardiac arrest occurrence before organ removal, as they pre-establish the relevant actions and goals to enable organs for donation.<sup>7,8,17</sup> Maintenance assistance actions, in addition to minimizing the risk of PD loss, prevent organ ischemia and favor time for professionals who will conduct the interview for donation, since a well-maintained PD allows the staff to give more time to the family in the grieving process.

Basic care such as heated infusion, strict water balance, as well as glycemic control, hypovolemia, arrhythmias, basic acid disorder and other complications that can lead to loss of PD even before the family is interviewed for organ donation.<sup>6,7,17,20</sup> Nurses, as they are professionals who work in assistance at the bedside of PD in critical units, make assistance safe and effective when performing such care. They have unique moments regarding this care, since this patient has constant changes in hemodynamics. Thus, these professionals will be able to act quickly and effectively by developing simple, yet effective care for this situation of PD care.

## CONCLUSION

The study identified the activities developed by nurses in care management in the organ and tissue donation process for transplantation, according to the legislation in force in the country. In relation to management activities, the highlight was in both institutions, the recording of information about the PD's condition; notification of PD to STC after completion of diagnosis of BD; forwarding of documents and exams, as requested by STC; managing PD maintenance.

The predominant assistance activities were: assisting the medical staff in developing a diagnosis of BD; participate in reporting death with the health staff; participate in the family interview; perform physical examination in PD; develop actions to maintain the PD hemodynamics. However, SNC, physical examination and welcoming the family were not such expressive activities.

As for the study's contributions, the opportunity to know, present and give greater visibility to the activities performed by nurses in the donation process stands out, as they are the ones directly involved in this setting. The opportunity for professionals to perceive opportunities for improvement to be developed in the process steps stands out, especially regarding information registration, systematization of care and assistance actions directed to PD maintenance. Along with this, the study contributes to give visibility to the actions of nurses within this setting, in addition to allowing the development of improvement strategies in each stage of the process, considering their space of action.

As for limitations, access to medical records at one of the institutions and a deficit in registration in patients' records of all activities developed by nurses at HTC are scored. During data collection, there were moments when it was only possible to identify which activity had been performed by nurses, when another professional recorded this information in his or her notes.

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## NOTES

### CONTRIBUTION OF AUTHORITY

Study design: Knihs NS, Santos ACB, Magalhães AP.

Data collection: Knihs NS, Santos ACB, Magalhães AP.

Data analysis and interpretation: Knihs NS, Santos ACB, Magalhães AP, Barbosa SFF, Schuantes-Paim SM, Santos J.

Discussion of results: Knihs NS, Santos ACB, Magalhães AP, Barbosa SFF, Schuantes-Paim SM, Santos J.

Writing and/or critical review of content: Knihs NS, Santos ACB, Magalhães AP, Barbosa SFF, Schuantes-Paim SM, Santos J.

Final review and approval of the final version: Knihs NS, Santos ACB, Magalhães AP, Barbosa SFF, Schuantes-Paim SM, Santos J.

### APPROVAL OF ETHICS COMMITTEE IN RESEARCH

This study was approved by the Research Ethics Committee of *Centro Universitário do Alto Vale do Itajaí*, under Opinion 1,352,347 and CAAE (*Certificado de Apresentação para Apreciação Ética - Certificate of Presentation for Ethical Consideration*) 46582415.7.0000.5676.

### CONFLICT OF INTEREST

There is no conflict of interest.

### HISTORY

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### CORRESPONDING AUTHOR

Neide da Silva Knihs.

neide.knihs@ufsc.br

