

DONATION OF ORGANS AND TISSUES FOR TRANSPLANTATION: ORGANIZATION OF THE SERVICE AND PARTICIPATION OF THE NURSE

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ABSTRACT

Objective: the objective of this study was to report the participation of nurses from an Organ Procurement Organization (OPO) in the unification of the service with an Intra-Hospital Organ Donation and Transplant Tissue Commission (CIHDOTT).

Method: the report includes the experience of a hospital complex, a reference in health, in the southern region of Brazil, from August 2016 to December 2018, with the reformulation of activities in three stages: a) Administrative and assistance processes; b) Nurse assignments; and c) Permanent education.

Results: organ transplants have evolved significantly over the years, with an increase of 2.4% in the effective donor rate per million population (pmp) in 2018. The nurses of the Organ Procurement Organization (OPO) and the Intra- Hospital Organ Donation and Tissue Transplantation (CIHDOTT) should be trained to act at each stage of this process, being responsible for planning, organizing, coordinating and executing the care of these patients. The participation of nurses is fundamental in the development of the activities of the OPO and CIHDOTT, providing care to patients and their families, developing management, assistance and education activities, becoming a reference for the health team in the process of donation and transplants.

Conclusion: The performance of these professionals in the unification of the two services was essential, allowing improvement in the routines and good results, evidenced by the increase of the notifications of possible donors and consequently in the increase in the number of donations allowing the best organization of the service and interaction with the assistance teams.

Key words: Transplants; nursing care; procurement of tissues and organs; critical care; continuing education.

Descritores: Transplantes; Cuidados de enfermagem; Obtenção de tecidos e órgãos; Cuidados críticos; Educação continuada.

Abstract: Trasplantes; cuidados de enfermería; obtención de tejidos y órganos; atención crítica; educación continúa.

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O manuscrito se destina a seção de relato de experiência.

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INTRODUCTION

Organ transplants have evolved significantly over the years, contributing as an increasingly effective therapy for patients with chronic terminal diseases[1-4]. Progressive success has encouraged the entry of patients on the waiting list by an organ, making it one of the only alternatives for previously incurable diseases[4-5].

World data show shortage of organs for transplants(6-8). Each year the number of people on the waiting list is even greater than the number of donors and transplants performed[9-11].

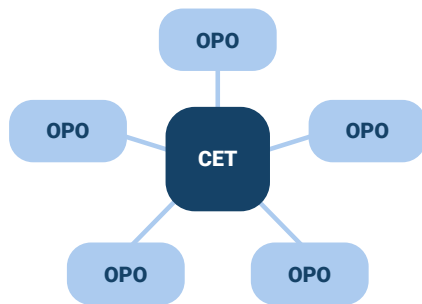
In Brazil, in the year 2018, there was an increase of 2.4% in the effective donor rate per million population (pmp), going from 16.6 pmp in 2017 to 17.0 pmp in 2018, below the expected rate which was 18.0 pmp donors. With this, it becomes even more noticeable this great disproportion between the number of patients in the lists and the number of transplants performed[12]. In 2018, 3,415 organ transplants were performed while approximately 33,000 patients were on the waiting list[5].

In order to expand the Organ Procurement and Transplantation Policy, as well as

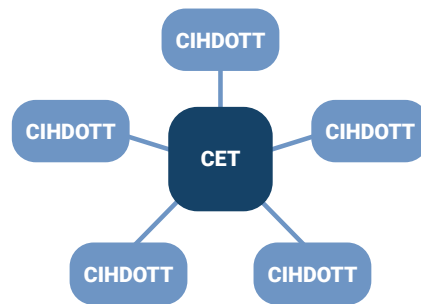
improve the search and identification of potential donors, and promote the articulation of hospitals with Transplant State Centers (CET), the Brazilian Ministry of Health (MS) through Ordinance No. 1,752 established in 2005, the constitution of the Intra-Hospital Commissions for Organ Donation and Transplant Tissue (CIHDOTT) in the country, being the responsibility of public, private and philanthropic hospitals with more than 80 beds, having a Commission[13].

In order to increase the number of donors, in 2009, the State of Rio Grande do Sul (RS) adhered to the American Model Organ Procurement Organization (OPO), through Ordinance 2.600, which establishes the composition of human resources, a coordinating physician, nurses and administrative staff, seeking to develop a supra-hospital role of acting together with CIHDOTTs of its scope[14-15]. Thus, the state of RS adhered to a mixed model composed of OPO and CIHDOTT, distinguishing it from the other states (Figure 1).

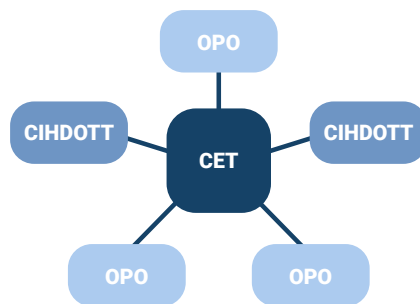
Figure 1 - Model of the Organ Procurement Organization (OPO), Intra-Hospital Organ Donation and Transplant Tissue Commission (CIHDOTT) and mixed model.



1.a: OPO model



1.b: CIHDOTT model



1.c: mixed model of OPO and CIHDOTT

The process of organ and tissue donation can be understood as a set of steps that begins with the identification of the possible donor and notification to the CET, followed by the diagnosis of brain death[16-17]. When there is no contraindication for organ donation, the family interview is performed and, if donated, the remaining steps are followed with maintenance of organ viability, physical and historical evaluation of the patient, labo-

ratory investigation, and organ withdrawal in the surgical center, which culminates in the delivery of the body to relatives[16-19].

The nurse is appointed as the professional responsible for planning, organizing, coordinating and executing the care, as well as supervising and evaluating the nursing procedures to the organ donor, applying the Systematization of Assistance, including pre, trans and post- transplant care[14,20-22].

METHOD

Therefore, the nurses of the OPOs and CIH-DOTTs must be trained to act at each stage of this process, enabling the promotion of qualified care for these patients, as well as caregivers and family members, in order to provide continuity to the care outside the hospital environment[1,6,23].

The performance of the CIHDOTTs is assertive in the articulation between the professionals of the same institution, which provides better multiprofessional interaction and prior knowledge of the hospital routines, which can generate greater security for those who perform the activities. This may not happen in an OPO, when it is not included in comprehensive health institutions.

Considering the importance of nursing care in all stages of transplantation and the need to organize the actions related to the donation process, to report the experience of nurses in the process of unification of an OPO and CIHDOTT, it becomes significant to understand this thematic

In this context, the present study aims to report the participation of the nurses of an OPO in the restructuring and unification with a CIHDOTT.

This is an experience report that occurred in a hospital complex of philanthropic character, a reference in health in the Southern Region of Brazil, which has about 1,300 beds, 90 of Intensive Care Units (ICUs) and 116 emergency rooms, distributed in seven hospitals targeting the specialties of medical clinic, general surgery, pediatrics, pneumology, neurology, cardiology, oncology and transplants.

CIHDOTT's activities in this hospital began in 1999, even before the mandatory legislation, composed of a multiprofessional team, which included a physician, three social workers, a nurse and an administrative officer, and changes in the functional framework over the years. In 2011, an OPO was instituted in the same hospital complex, which had as its attribution the monitoring of 22 external hospitals, conducted by a team composed of two nurses, an administrative officer and a coordinating physician, as determined by the legislation, through Ordinance 2,600/2009[15].

In the second half of 2016, both sectors underwent restructuring requested by the institution, which included expenditure containment through the reduction of the

staff, with the proposal of joining the services of CIHDOTT and OPO. In this way, the team underwent changes in its composition and in 2017 began to work with two physicians (who were already working as one coordinator of OPO and one of CIHDOTT), two exclusive nurses of the service, two nurses who work in the ICU and who assist in night and weekend shifts and an administrative officer.

This team began to carry out the activities related to the capture, donation and transplant in the seven hospitals of the complex and in the 22 external hospitals.

RESULTS

With the unification of the CIHDOTT and OPO, the organization of the activities was done intra and extra hospital, taking into account what had been regulated before the Ordinances that determine each service.

In this way, we present the experience report that occurred in the period from August 2016 to December 2018, in three stages: a) Administrative and assistance processes; b) Nurse assignments in CIHDOTT and OPO and c) Permanent education.

ADMINISTRATIVE AND SUPPORT PROCESSES

In the intrahospital area, the professionals that perform the activities as CIHDOTT according to the Administrative Rule no.1,752 of 2005[13], have the following attributions: 1) to detect possible donors of organs and tissues in the hospital where it is inserted; 2) to enable the diagnosis of brain death, according to Resolution No. 2,173 of 2017 of the Federal Medical Council(24); 3) create and improve routines to offer relatives of deceased patients in the hospital the possibility of donating corneas and other tissues up to six hours after CPR; 4) articulate with the State Transplant Center (TSC), of the respective state to organize the process of donation and capture of organs and tissues; 5) be responsible for permanent education of the institution's employees on the aspects of organ and tissue donation and transplants; 6) articulate with all the units that have important resources to attend cases of possible donation; and 7) train together with the CET and National Transplantation System (NTS), hospital staff to act in the donation process, as well as to host bereaved families and to perform a family interview of request and donation of organs and tissues.

A schedule of weekly meetings was established, involving the coordinating physicians and the nurses of CIHDOTT/OPO. The meetings were held to address issues related to: brain death protocol (BDP), establishment of new targets for notification and organ donation, planning of staff competency activities, updating of Standard Operating Procedures (SOPs) for search active donors and a family interview for donation of organs, following the model standardized by the institution that was developed together with the quality sector, with the aim of systematizing and computerizing the processes.

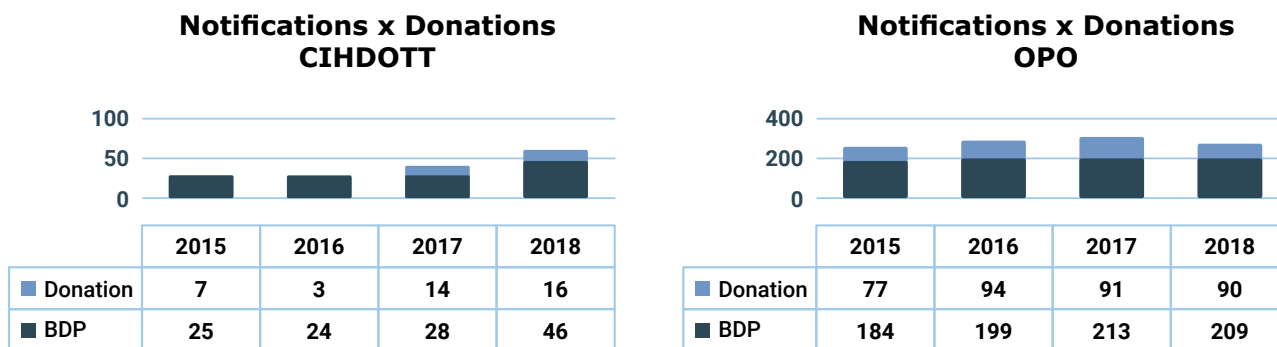
One of the strategies to increase the number of notifications of BDP was to know the profile of the patients attended in hospitals of coverage of the OPO and CIHDOTT,

through the implementation of active search. Thus, the team proceeded to visit the ICUs and emergencies four times a week, alternating shifts, in order to identify patients with criteria for the BD protocol.

Another important strategy to increase the number of notifications was the implementation of active intrahospital search by the nurse in the computerized system of the hospital. The electronic medical record of all patients in mechanical ventilation, hospitalized in the ICUs and emergencies, is monitored daily, monitoring and observing the evolution of the clinical state, mainly evaluated by the Glasgow coma scale.

At the institution where this report is written, they were notified to the CET (Figure 2):

Figure 2 - Comparison of the number of notifications and donations made in the Organ Procurement Organization (OPO) and the Intra-Hospital Organ Donation and Transplant Tissue Commission (CIHDOTT).

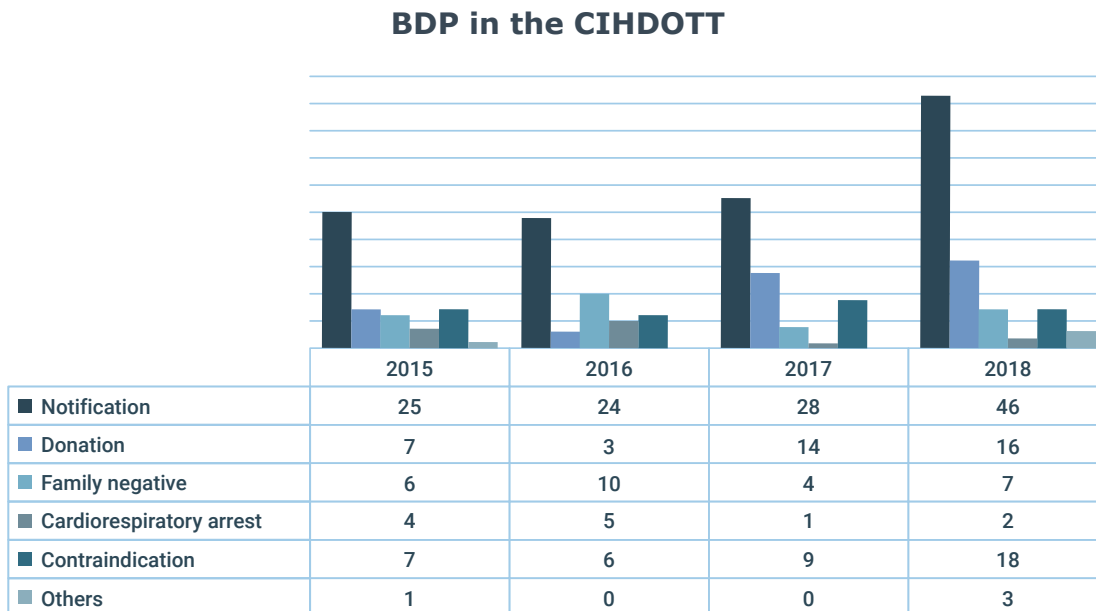


In Figure 1a and 1b the reports of brain death correspond to that determined in the legislation, recommending a minimum of 30% of effectiveness of organ donation on the total number of cases notified to CET(13).

Regarding the outcomes of the BD protocols carried out by CIHDOTT in the year 2015 to 2018, it is possible to verify an increase in the number of notifications in the year 2018, never reached previously, consequently the donation also increased, but not

in the same proportion of the notifications, which may be related to the high number of medical contraindications, which totaled 18 cases in the last year. The institution is a reference in specialized care in the State, receiving patients with the most diverse pathologies that are often contraindications for donation of organs such as tumors, HIV positive serology, uncontrolled infections, rare diseases among others (Figure 3).

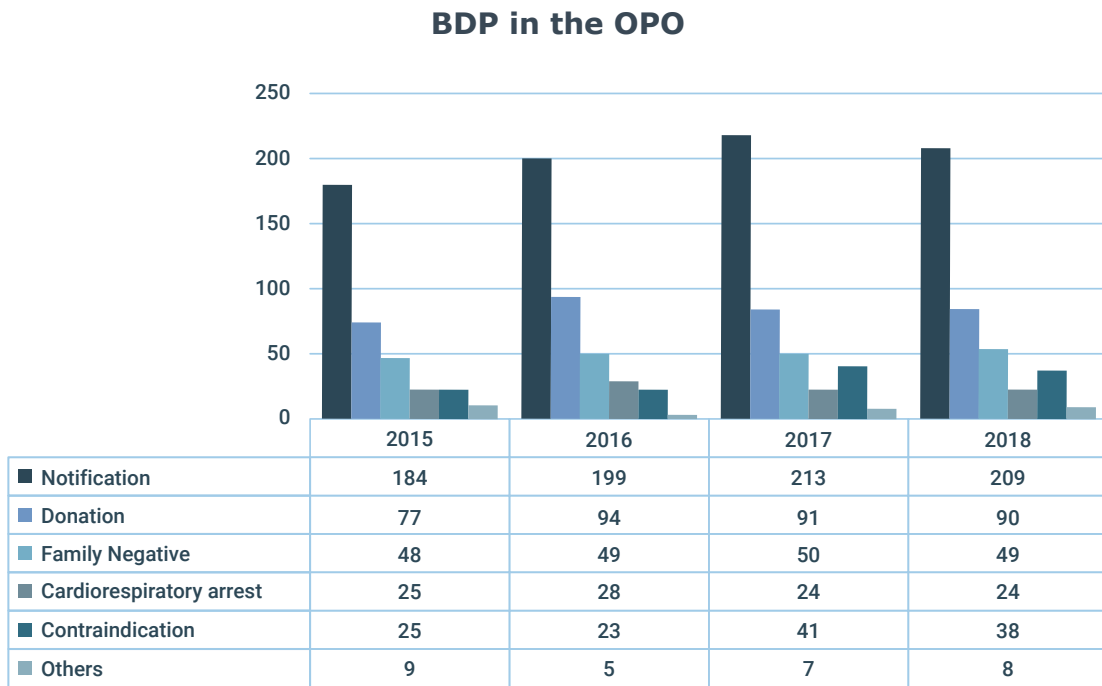
Figure 3 - Brain Death protocols in the Intra-Hospital Organ and Transplant Tissue Donation Commission (CIHDOTT).



When considering the CIHDOTT numbers, between the years 2015 and 2018, the

BD notifications and donation is positive, given the fall in national numbers (Figure 3).

Figure 4 - BDP in the Organ Procurement Organization (OPO).



It is important to mention that the notification of the BD is compulsory, and should be performed even in cases of medical contraindication, in accordance with Resolution No. 2,173, dated November 23, 2017.

DUTIES OF THE NURSE OF THE OPO AND CIHDOTT

The nurse is a reference for the health team and patients, acting in the process of donation and transplantation in an integrated way with the multiprofessional team. In order to organize the nurses' assistance du-

ring the organ and tissue donation process, the activities carried out were summarized as shown in box 1.

**Box 1 - Nursing activities in the monitoring of the Brain
Death Protocol and Organ Donation**

NOTIFICATION OF BRAIN DEATH

- Receive contact from the ICU or Emergency professional where the potential donor is reporting the case.
- Go to the hospital with all the necessary forms.
- Report to the physician and nurse on call.
- Check in the medical record: cause of coma, possible contraindication for opening the BD protocol, hypothermia, hypotension, or use of drugs that depress the central nervous system.
- Ask the unit's physician to inform the family of the severity of the case and the possibility of progression to BD.

DIAGNOSIS OF BRAIN DEATH

- Monitor the completion of the first clinical examination and completion of the BD term.
- Notify the TSC informing the patient's health history and forwarding the documentation.
- Ask the attending physician to tell the family about the outcome of the clinical examination.
- Organize the logistics to carry out the complementary image examination.
- Accompany the image examination, checking the correct completion of the report, patient's name, date and time of accomplishment.

DIAGNOSIS OF BRAIN DEATH

- Make sure the physician talked to family members about the death.
- To support and assist the bereaved family in the understanding of death and examinations performed for the diagnosis of BD.

FAMILY ORGAN DONATION INTERVIEW

- Carry out the family interview for the donation of organs and tissues, when they are in good condition.
- Fill in the Authorization Term for Organ Donation and Tissue for those who agree to the donation, request the signature of the family, checking with the identity document. Forward a copy of the documents of the potential organ donor to the CET, which must validate the documentation and follow up.
- Orient the family on the next stages of the process, assisting with legal documentation, death certificate or referral to the IML.
- Inform the telephone number of the CIHDOTT on-call for any questions or clarifications.
- Make it available to the family in case of doubts about the donation process, combining with it the communication at the end.
- Collect and send tests to the laboratory and monitor the results to refer to the CET.
- Assist, guide and supervise the maintenance of the donor until the moment of the capture.

ORGAN AND TISSUE COLLECTION

- Organize together with CET the time to start the collection of organs and schedule the room of the surgical center.
- Check all original documents proving brain death and family authorization for organ donation.
- Monitor the transportation of the donor to the surgical center, along with the physician and nursing technician, paying attention to the maintenance and viability of the organs.
- Assist the family in the release of the body after the end of the organ harvesting.
- Inform the CET of the end of organ harvesting.

POST-DONATION MONITORING OF ORGANS AND TISSUES

- Inform the family about donated organs and tissues.
- Monitor the results of post-capture examinations and report to CET.
- Perform the evolution of the entire process and file in the CIHDOTT room along with a copy of the brain death protocol and laboratory tests.
- Request the CET document informing about the organs and tissues that were used or discarded and attach to the process.

The follow-up of nurses in this process favors the possibility of donation, guaranteeing both the right to the diagnosis of BD to the patient and the right of decision of the families of the deceased. The nurse must provide the independent host of organ donation[1-3].

PERMANENT EDUCATION

As determined by Ordinance No. 2,600 of 2009(14), the teams that work in favor of organ donation for transplants, being these OPOs and CIHDOTTs, are responsible for the permanent education of the assistance and support teams, promoting the continuing education of all professionals to understand the process of donation of organs and tissues .

Due to the importance of permanent education, in 2017, different teaching activities were carried out for health professionals within health institutions. Initiated with training aimed at nurses of Intensive Care Units (ICU), Emergencies and resident physicians of neurology and intensive medicine. The training took place in the realistic simulation center of the institution, being possible to simulate the attendance at an ICU or emergency, equipped with simulating manikins that enabled the accomplishment of brain

death tests, as well as multimedia room for the theoretical presentation. In addition to those carried out at the institution, the nurses also organized and promoted extra-hospital training courses, meeting the needs of the hospitals in question.

The training lasted two hours between theory and practice, contemplating the diagnosis of ME and the importance of professionals in this process. Classes with a maximum of 10 participants were organized for better team interaction. In total, 90 nurses and 40 medical residents were trained.

In November 2017, with the new resolution that determined the diagnosis of BD, some important changes were scored, such as the time for the diagnosis of BD and the qualification of the physicians to perform the diagnosis(24). So, it was necessary to perform new training to enable physicians to perform the diagnosis, and the nurse is responsible for organizing the activities in conjunction with the coordinating physicians of OPO and CIHDOTT.

The training, as established by the Federal Council of Medicine (CFM) must have a total 8 hours, divided into 4 hours theoretical and 4 practical hours. Approximately 200 physicians were trained by the end of 2018,

and it is possible to believe that in this way the number of notifications in the same year has increased due to the number of physicians trained to perform the diagnosis of BD, which may have provided a greater involvement of the teams after training.

Following up on educational activities, this commission participated along with the marketing of the institution, the launch of the "Life – The Show Must Continue" campaign, which aimed to motivate and encourage the population to think about organ donation for transplants. T-shirts and buttons were made, in addition to the distribution of educational materials, containing information and clarifying the community on the subject. The campaign took place at the institution's premises, reaching radio and television stations nationwide, as well as billboards distributed throughout the city.

This committee also promoted lectures in secondary and elementary schools in the region, as well as classes at partner universities, and it was possible to disseminate the subject and clarify the students about its importance to society as a multiplier of correct information. Activities were also held during seminars and events held by other institutions, with the aim of bringing even more information to those interested in the subject.

DISCUSSION

In this study it was possible to report the important experience of nurses, in the unification of an OPO and CIHDOTT, describing the stages of reformulation of administrative and assistance processes, acting in permanent education, as well as distinguishing the role of nurses in CIHDOTT and OPO[13-14].

The standardization of the processes allows to guide the actions among the professionals in a safe way, promoting standards of nursing care for the assistance in the process of donation and transplantation of organs and tissues[3].

As indicators for monitoring the team's actions were defined: number of ICU and emergency deaths, number of BD notifications, number of contraindications, number of interviews performed, number of family denials and number of donations. These are indicators used worldwide by services that work with organ donation, being important the monthly monitoring by the nursing team[4,7].

This junction becomes positive, since it is possible to design similar activities, but in different scopes, to the same professionals, making them more experienced before the

processes, since they participate more frequently in the diagnostic stages and organ donation.

It is believed that the work performed after the unification of the two services was relevant and distinct, reflected in the annual results, since notifications and donations of organs in the last year increased compared to previous years.

The unification of services allows nursing and medical professionals, constructive discussion of actions and decision making in the face of difficulties encountered in the process of donation and transplants, providing critical thinking and professional and personal development[17-18].

The nurses prepare a monthly report for the support areas, with the numbers of transplants performed in the institution, directed to the laboratory, immunology, blood bank, ICU, transplant unit, management and general direction, as well as for CET, which carries out statistical surveys for the state[13].

Nurses work on the front line with care for patient and family teams, publicizing, guiding and encouraging the donation of organs in the health institutions they serve,

actively working together with the ICUs and emergencies to identify potential donors organs. The training of the medical and nursing professionals who work in the ICUs and Emergencies was fundamental for the increase in the number of notifications and greater involvement of the teams in this donation process[1,18].

Permanent education is an efficient tool that enables improvements in the work process, allowing the expansion and updating of knowledge, favoring dialogue and the exchange of experience in a participatory way between professionals and the population[25].

CONCLUSION

The team continues to seek new strategies to encourage and stimulate care teams in relation to organ donation, since they are who initiate the notification process for the OPO and CIHDOTT, and they are also fundamental in the maintenance of the possible donor.

The unification of these two services allowed the important exchange of knowledge of the professionals involved, who during the discussions of cases gave better prepa-

ration and security for similar situations in posterity.

Nurses play an important role in caring for the patients and families they serve, developing management, assistance and educational activities, respecting ethical and legal precepts, becoming a reference for the

health team in the process of donation and transplants.

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