


## VASCULAR ACCESSES AND INFUSION THERAPY: AN EXPERIENCE REPORT

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**ABSTRACT**

**Introduction:** The practice of intravenous infusion is necessary worldwide, benefiting millions of individuals daily in interventions for health recovery at all levels of care (GORSKI et al, 2021). The opportunity to perform the supervised practices of vascular access and infusion therapy, in a hospital environment that has an exclusive and specialized service for the evaluation of venous catheters and conditions for performing infusion therapy, with trained professionals and state-of-the-art material resources, adds value in the formation of knowledge, enabling the student to know a specific service for this purpose, contributing directly to the training of a differentiated professional. **Objective:** To report the experience and activities developed in the Vascular Access and Infusion Therapy Team of a Hospital Complex. **Methodology:** This is a Qualitative Research, with a descriptive approach, of the experience report type. The study was developed during supervised graduate internship practices, in a Vascular Access and Infusion Therapy Team, in a hospital complex in southern Brazil, carried out from February to June 2022. The Team has clinical nurses and a supervising nurse, these trained professionals are responsible for care practices related to vascular catheters and infusion therapy throughout the institution. **Results:** During the period of supervised practice, several activities studied in the theoretical contents were transposed into practice, dialoguing with multiprofessional knowledge, allowing the construction of unified theoretical/practical knowledge, such as: Inspection of puncture sites, verification and correction of catheter stabilization, care such as evaluation of dressing conditions, signs of complications in puncture sites and catheters, identification of dressings and validity of devices, among others. **Final Considerations:** When performing our nursing actions, we naturally draw parallels between the realities of the known environments, referring to questions and the search for information that improves our care, that elevates nursing care, making it possible to level or seek to replicate positive experiences, searching for more appropriate resources, even though the realities of some services often provoke feelings of utopia. The understanding of the functioning of a Venous Access Team, of the possibilities of implementing this specialized service, motivates the search for improvements in our daily care, considering that it is possible to build a team capable of meeting this need, conquering its professional space through statistical data and daily samples of productivity and relevance to health.

**Contributions/Implications for Nursing/Health:** The experience in the Vascular and Infusion Therapy Team allowed me to observe and reflect on issues such as possibilities for improvement in some nursing processes in my own work environment, from the availability of materials that can be better managed between nursing services and

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pharmacy/warehouse, reducing waste of inputs and generating financial savings for the institution, as well as perspectives for planning the time spent on the processes.

**Keywords:** Intravenous infusions. Vascular Access Devices. Patient Safety. Central Venous Catheters.

## INTRODUCTION

The practice of intravenous infusion is necessary worldwide, benefiting millions of individuals daily in interventions for health recovery at all levels of care (GORSKI et al, 2021). The opportunity to perform the supervised practices of vascular access and infusion therapy, in a hospital environment that has an exclusive and specialized service for the evaluation of venous catheters and conditions for performing infusion therapy, with trained professionals and state-of-the-art material resources, adds value in the formation of knowledge, enabling the student to know a specific service for this purpose, contributing directly to the training of a differentiated professional.

By experiencing this reality, it is possible to draw a parallel between the concepts learned in the classroom and the experiences in the field of action. Based on this assumption, the objective is to report the experience and activities developed in a Vascular Access and Infusion Therapy Team of a Hospital Complex in Southern Brazil, inherent to the Supervised Practices internship of the Vascular Access and Infusion Therapy Specialization course, held from 02/19 to 06/17, 2022.

## METHODOLOGY

This is a Qualitative Research, with a descriptive approach, of the experience report type. The study was developed during supervised graduate internship practices, in a Vascular Access and Infusion Therapy Team, in a hospital complex in southern Brazil, carried out from February to June 2022. The Team has clinical nurses and a supervising nurse, these trained professionals are responsible for care practices related to vascular catheters and infusion therapy throughout the institution.

## PLACE OF STUDY

The hospital complex has 9 hospitals of various specialties such as: medical, surgical and maternal-child clinic; reference in cardiology; in neurology and neurosurgery; in clinical pulmonology, thoracic surgery and chest radiology; in oncology; in Pediatrics; it has an exclusive center for transplants; maternity and women's center.

The Vascular Access and Infusion Therapy Team has its physical structure located in a room on the 3rd floor of the Hospital of one of the hospitals in the hospital complex, with a team of 14 clinical nurses and 1 supervising nurse. These trained professionals are responsible for care practices related to vascular catheters and infusion therapy throughout the institution.

The institution's Vascular Access and Infusion Therapy Team project began on 08/03/2015, and became a Basic Management Unit (UGB) in the entity on 05/01/2016.

## DISCUSSION

The experience in the Access Team allowed me to observe and reflect on issues such as possibilities for improvement in some nursing processes in my own work environment, from the availability of materials that can be better managed between nursing services and pharmacy/warehouse, reducing waste of inputs and generating financial savings for the institution, as well as perspectives for planning the time spent on the processes. One of the resources used by the Team in Time and Process Management is through the Trello application, which interconnects the work of all nurses in the Team, starting from the requests for care from the nursing teams of the hospitals through the Tasy program used in the institution, and both, app and program, are simultaneously and constantly fed according to the sequence of care priorities evaluated by the Team.

Multiprofessional interaction is intrinsically present in the exercise of the nursing profession and in this internship space it becomes notorious as we develop a work that dialogues with different professionals during their stages of evolution. The request for venous access is an example of a stage in the work process that requires complementarity between medicine and nursing as a prerequisite, from the evaluation of the need for central venous access to its continuity of treatment through this route. The areas of health knowledge are interconnected, and involve from the nurse in the responsible sector, the availability of supplies by the pharmacy, to the release of the device for use, according to the analysis carried out by the radiology service, to verify the positioning of the central catheter, building a dynamic and cyclical care.

During the period of supervised practices, several activities studied in the theoretical contents were transposed into practice, allowing the construction of unified theoretical/practical knowledge, such as: Inspection of puncture sites, investigations and corrections of catheter stabilization, care such as evaluation of dressing conditions, signs of complications in puncture sites and catheters, identification of dressings and validity of devices, among others. Among the practices experienced, I elucidate the analysis of the functioning of the venous devices and ascertainment of the real need for their maintenance, carrying out a clinical case study of the patient and therapeutic plan, as well as the possibility of recovering the access route and defining the use of the clearance protocol as indicated.

These and other actions enrich the work of saving hospital resources and preserving the patients' venous network. Another example of activity observed during the internship period was the execution of the protocol of clearance with Alteplase in central venous catheters in neonates, pediatric and adult patients, which despite the high cost of the medication used, the Team evidenced through scientific articles, results of care statistics, recording the cost-benefit. The experience in the internship field allowed me to participate in venipunctures that were difficult to access with the aid of ultrasound; difficult venipunctures with the use of vein viewer vein viewer; insertion of PICC catheters using US and guided by the Sherlock tool, which indicates whether the catheter is in the correct direction to the heart, requesting an evaluation of the cardiac tracing that shows malpositioning according to the undulation of the P wave.

During the practices, I performed venous access dressings with the use of CHG plate and catheter sealing with Tauloridine, blood collection for laboratory tests in patients with difficult access, observed evaluation and procedure of Hypodermoclysis; Observed and assisted in Prescriptions of materials for puncture procedures and dressings; I participated in the preparation of records such as evolutions, notifications, planning of services; I participated in nursing procedures for the entire population served by the Team (neonate, pediatric, adult and elderly), such as: difficult venous punctures; US-guided PICC; venous accesses.

## EXPERIENCE REPORT

Some experiences stand out from others in our memory, and they can be associated with personal singularities, which touch us in a unique way, leading to questions, reflections on care, on the role of nursing and where we could improve the care process, becoming increasingly qualified professionals without losing our essence. On one of the days of the supervised curricular practice, there was a request to evaluate the conditions of venous access to an elderly patient, who was in the emergency department and was considered to have difficult venous access. We evaluated the patient's record, history, medical and nursing evolution, previous exams and therapeutic plan, and observed that there was a record that the patient had disorientation, mental confusion and aggressiveness.

When we arrived at the sector, in the midst of the scenario of multiple visual information that is already expected from an emergency sector, with its service capacity filled, we talked to the nurse in the sector, identified our patient, who was contained in a stretcher, when we went to him we found that he was in pain, crying, moaning, communicating verbally, complaining about the way he was being restrained and cold. The

elderly man was inadequately restrained, lying on the MSD, twisted backwards, which had an extensive hematoma from his hand, progressing to the shoulder. This arm contained a bandage compressing an injury that would have been caused by the elderly man himself when he pulled out a peripheral venous access of this limb. At that time, this patient needed more attentive care, better bed accommodation, and present supervision. We accommodate the elderly, cover them with a blanket, offering better comfort, explain the procedure, calming them as much as possible.

We evaluated the patient's other MS, noted multiple hematomas and a weakened venous network as a result of the clinical condition and advanced age, we used ultrasound, and peripheral venous access was not indicated for this patient under these conditions. We informed the physician responsible for the patient and she requested jugular puncture, but the nurse of the Vascular Access Team argued that this would not be an adequate access to the planned therapy, and was not a long-lasting and quality access, suggesting a short-term stroke, later evolving the entire service.

The help of the Vascular Access Team should have been requested at the correct time, as soon as his clinical condition was observed, providing adequate care, since he would adopt a specific conduct, aiming at the patient's safety, accelerating his healing process. This care would inhibit the exhaustion of the elderly person's venous network, avoid the multiple punctures to which he was submitted, alert the care of fixation and management in the accommodation of this patient who experienced unnecessary suffering when removing his venous access. Planning should anticipate actions, and this is a substantial step in caring for the integrity of the patients' venous network.

## CONCLUSION

When performing our nursing actions, we naturally draw parallels between the realities of the known environments, referring to questions and the search for information that improves our care, that elevates nursing care, making it possible to level or seek to replicate positive experiences, searching for more appropriate resources, even though the realities of some services often provoke feelings of utopia.

The entire period of theoretical classes, and essentially the practical classes, was fundamental for the construction of knowledge, meaning the experience built, providing concern for the improvement and adequacy of my nursing care in the care to preserve the patients' venous network, which are essential ways for most of the prescribed drug treatments.



The understanding of the functioning of a Venous Access Team, of the possibilities of implementing this specialized service, motivates the search for improvements in our daily care, considering that it is possible to build a team capable of meeting this need, conquering its professional space through statistical data and daily samples of productivity and relevance to health.

## REFERENCES

1. Brasil. Agência Nacional de Vigilância Sanitária. (2017). Medidas de prevenção de infecção relacionada à assistência à saúde. Anvisa.
2. Buetti, N., Marschall, J., Wenzel, R. P., & Schreiber, P. W. (2021). Comparison of routine replacement with clinically indicated replacement of peripheral intravenous catheters. *JAMA Internal Medicine*, 181(11), 1471–1478. <https://doi.org/10.1001/jamainternmed.2021.4792>
3. Cooke, M., Ullman, A. J., Ray-Barruel, G., Wallis, M., Corley, A., Rickard, C. M., & The PIVC Worldwide Prevalence Study Investigators. (2018). Not "just" an intravenous line: Consumer perspectives on peripheral intravenous cannulation (PIVC). An international cross-sectional survey of 25 countries. *PLOS ONE*, 13(2), e0193436. <https://doi.org/10.1371/journal.pone.0193436>
4. Di Santo, M. K., Grochocki, M. H. P., Ferreira, M. A. M., & Souza, C. (2017). Cateteres venosos centrais de inserção periférica: Alternativa ou primeira escolha em acesso vascular? *Jornal Vascular Brasileiro*, 16, 104–112. <https://doi.org/10.1590/1677-5449.007717>
5. Elli, S., Rognoni, C., Forni, F., Ferrari, M., & Pittiruti, M. (2020). Ultrasound-guided tip location of midline catheters. *The Journal of Vascular Access*, 21(5), 764–768. <https://doi.org/10.1177/1129729820909807>
6. Gorski, L. A., Hadaway, L., Hagle, M. E., Broadhurst, D., Clare, S., Kleidon, T., Meyer, B., & Nickel, B. (2021). Infusion therapy standards of practice. *Journal of Infusion Nursing*, 44(1S), S1–S224. <https://doi.org/10.1097/NAN.0000000000000396>
7. Brasil. Agência Nacional de Vigilância Sanitária. (2022, julho 26). Nota técnica GVIMS/GGTES/ANVISA nº 04/2022: Práticas seguras para a prevenção de incidentes envolvendo cateter intravenoso periférico em serviços de saúde. <https://www.gov.br/anvisa/>
8. Pittiruti, M., Scoppettuolo, G., Emoli, A., & La Greca, A. (2019). Clinical use of Sherlock-3CG® for positioning peripherally inserted central catheters. *The Journal of Vascular Access*, 20(4), 356–361. <https://doi.org/10.1177/1129729818821824>
9. Rabelo-Silva, E. R., Beccaria, L. M., Pedreira, M. L. G., Apolinário, P. P., Silva, R. S. P., Lima, M. L. M., & Peterlini, M. A. S. (2022). Patterns, appropriateness and outcomes of peripherally inserted central catheter use in Brazil: A multicentre study of 12 725 catheters. *BMJ Quality & Safety*, 31(9), 652–661. <https://doi.org/10.1136/bmjqs-2021-013694>
10. Santos-Costa, P., Alves, A. M., Costa, F. C. M., & Parreira, P. (2020). Translation and validation of the Modified A-DIVA Scale to European Portuguese: Difficult intravenous access scale for adult patients. *International Journal of Environmental Research and Public Health*, 17(20), 7552. <https://doi.org/10.3390/ijerph17207552>
11. Tomazoni, A., Erdmann, A. L., Andrade, S. R., Higashi, G. D., Neves, E. T., & Monticelli, M. (2021). Métodos de mensuração dos cateteres venosos centrais de inserção periférica em recém-nascidos. *Revista Brasileira de Enfermagem*, 75. <https://doi.org/10.1590/0034-7167-2021-0059>