

# Becoming proficient: knowledge and practice of hemodialysis nurses

*Tornando-se proficiente: o saber/fazer do enfermeiro de hemodiálise*  
*Haciéndose competente: el saber/hacer del enfermero de hemodiálisis*

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## ABSTRACT

**Objective:** To describe the attitudes and practices of nurses in hemodialysis in the course of reaching their specialty. **Methods:** Qualitative study using grounded theory conducted in a nephrology service of a public hospital in Rio de Janeiro, RJ, Brazil. A total of nine nurses participated. Semi-structured interviews and participant observation were used. Data analysis was performed considering the basic procedures of grounded theory. **Results:** The phenomenon "Becoming proficient: knowledge and practice of hemodialysis nurses" emerged from the analysis, which was formed based on the categories: "(Re) establishing practice in hemodialysis" and "Mastering technology". **Conclusion:** The deepened and updated knowledge nurses acquire leads to the conscientious practice of nursing considering the complexity involved in practical learning.

**Keywords:** Nursing; Specialization; Renal Dialysis; Nursing Care.

## RESUMO

O objetivo deste estudo foi descrever atitudes e práticas de enfermeiros de hemodiálise na trajetória percorrida na especialidade. **Métodos:** Estudo de abordagem qualitativa do tipo Teoria Fundamentada nos Dados, realizado no serviço de nefrologia de um hospital universitário do Rio de Janeiro. Participaram do estudo nove enfermeiros de hemodiálise. Foi adotada a entrevista semiestruturada e a observação participante. As informações foram analisadas considerando-se os procedimentos básicos pertinentes a Teoria Fundamentada nos Dados: codificação aberta, codificação axial e codificação seletiva. **Resultados:** Da análise emergiu o fenômeno "Tornando-se proficiente: o saber/fazer do enfermeiro de hemodiálise", que se forma a partir da junção das categorias: "(Re) Estabelecendo seu modo de fazer em hemodiálise" e "Dominando o cenário tecnológico". **Conclusão:** O conhecimento adquirido, aprofundado e atualizado, conduz o enfermeiro ao agir consciente, considerando a complexidade envolvida no processo de aprender na prática.

**Palavras-chave:** Enfermagem; Especialização; Diálise renal; Cuidados de Enfermagem.

## RESUMEN

**Objetivo:** Describir las prácticas y actitudes de las enfermeras de hemodiálisis en la trayectoria de la especialidad. **Métodos:** Teoría Basada en los Datos, estudio cualitativo, realizado en un servicio de nefrología de un hospital público de Rio de Janeiro, donde nueve enfermeras aceptaron participar. Se utilizó la entrevista semiestructurada y la observación participante. El análisis de los datos se llevó a cabo teniendo en cuenta los procedimientos básicos de la Teoría Fundamentada. **Resultados:** A través del análisis, surgió el fenómeno de "convertirse en experto: el saber/hacer del enfermero de hemodiálisis" que se construye a partir de la combinación de estas categorías: "(Re) establecimiento de su modo de hacer en hemodiálisis" y "Dominar un paisaje tecnológico". **Conclusión:** El conocimiento adquirido, profundizado y actualizado conduce al enfermero a actuar teniendo en cuenta la complejidad que implica en la práctica el proceso de aprendizaje.

**Palabras-clave:** Enfermería; Especialización; Diálisis Renal; Atención de Enfermería.

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## INTRODUCTION

The interest in studying the trajectory of hemodialysis nurses seeking proficient practice emerged from concerns that are inherent to the process since nurses often arrive in this specialized sector, which is usually a highly technological service, with little or no knowledge<sup>1</sup> and/or ability as required for productive work<sup>2</sup>.

Historically, nursing professionals began to integrate into the dialysis team in the 1970s when governments assumed the costs of renal replacement therapies, promoting the expansion of dialysis centers. At this time, this therapy became a responsibility of nurses and Nephrology became a specialized field in nursing<sup>3</sup>.

Still in the 20<sup>th</sup> century, in the 1990s, the field received an important contribution in terms of technological progress, which made the procedure safer and enabled greater control over the treatment's adverse effects, significantly improving the patients' quality of life. At this time, the procedure became almost exclusively performed by nursing professionals<sup>3,4</sup>.

It is worth noting that such innovations incorporated into the practice of hemodialysis intensified the possibilities of the rationalization of the productive process and make it imperative for professionals to be endowed with extensive theoretical and practical knowledge in order to implement actions without losing sight of the totality<sup>2</sup>. At this point, we ask what the experience of hemodialysis nurses is in terms of attitudes and practices implemented and experienced in the search for expertise.

Therefore, discussing the trajectory, as well as the qualification, of nursing experts in the field reflects the advancement and consolidation of the profession's science and technology and contributes to the improvement of healthcare<sup>5</sup>. Hence, this study's objective was to describe the attitudes and practice of nurses providing care in the field of hemodialysis.

Nurses' care practices in the field of hemodialysis "require- sone to consider that each person presents a response to the same stressful situation. For this reason, nursing planning should be based on the acknowledgment of manifestations of coping with the situation patients experience"<sup>6</sup>.

Nephrology is a complex field in nursing practice considering the specificity of its patients, the different renal replacement therapies, the technological apparatus required in the process, and the increasing incidence of Chronic Kidney Disease as a public health problem<sup>7-10</sup>.

## THEORETICAL-METHODOLOGICAL APPROACH

Symbolic Interactionism (SI) was adopted as the theoretical framework in this study. SI attributes great importance to the meanings of things for human behavior, while human behavior is considered to be a result of the interactive process individuals have with themselves and with others<sup>11</sup>, and is used to deal with situations individuals have to face<sup>2,10</sup>.

This is a descriptive study with a qualitative approach using Grounded Theory, which is a systematic method of interpretative research designed to generate theoretical constructs that explain a phenomenon present in reality<sup>2,10,12,13</sup>.

The study's setting was the nephrology service of a large university hospital located in Rio de Janeiro, RJ, Brazil. Data were collected through semi-structured interviews and participant observation using an instrument with open questions with the objective to establish close interaction with the participants -nurses working in the facility's hemodialysis unit. Generalist and/or specialist nurses working in the hemodialysis unit and 2<sup>nd</sup> year residents were included in the study. Each interview was digitally recorded, transcribed and coded up to the point of data saturation.

Then we proceeded to the analysis, as recommended by grounded theory with open code, axial coding and selective coding<sup>12,13</sup>. The sample was composed of nine individuals: six women and four men. Five were 2<sup>nd</sup> year residents, three were nurse specialists in nephrology and one was a generalist nurse. Saturation of data was achieved when no new codes emerged during analysis<sup>12</sup>.

The study was submitted to and approved by the Institutional Review Board (process nº 2817/2010). All the participants consented to the study's objectives and signed free and informed consent forms. The participants' confidentiality was preserved by using the following pseudonyms<sup>12</sup>: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Neptune, Uranus, and Moon.

## RESULTS AND DISCUSSION

The trajectory to proficient practice for nurses as they start their practice in hemodialysis includes: coping with new knowledge when entering the service; acknowledging actions that are inherent to the field of hemodialysis; becoming familiar with the patients and perceiving their specificities; and identifying the technology involved in the entire process. Therefore, we consider "nurses experiencing a field of practice in which they have no previous experience with patients and have not mastered the tools used to provide care, to be beginners even if they have experience in another field"<sup>12</sup>.

This movement leads nurses to acknowledge the therapeutic- technological context of hemodialysis and enables them to devise strategies of action/interaction for their development. Hence, the phenomenon Becoming proficient: knowledge and practice of hemodialysis nurses, which emerged from the analysis according to grounded theory, represents the consequence of movements of nurses from the time they are inserted into the hemodialysis service (beginner) up to the acquisition of skills moving toward a fruitful and specialist (proficient) practice and describes the effects of action/interaction strategies that are adopted in the process. The phenomenon was revealed based on the grouping of the categories (Re) establishing practice in hemodialysis and Mastering technology.

### (Re) Establishing practice in hemodialysis

The social scene, each individual's view of the world, as well as factors such as principles, values and beliefs, enables each person to confer a different definition onto healthcare, since the meaning attributed to it is a result of the way individuals

perceive the sign, interact with it and assign meaning based on this interaction. As a result, after the beginner nurse has contact with and establishes her/his first interactions within the service, s/he starts to suggest new practices in hemodialysis, as the following excerpt shows:

*For instance, I already think that there should be interest groups to discuss with patients those themes that interest them. I also think that guidance is not sufficient; it should be more comprehensive, you know?* EARTH

*I always say there should be a nursing consultation for hemodialysis patients, too. A lot of things could be clarified to patients and it would certainly be beneficial.* MERCURY

Critical thinking is based on interaction with the context, professionals and patients. In this sense, the context in which nurses are inserted is permeated by factors that can change care practice, since its meaning is changed within and through defining activities of people when interacting<sup>11</sup>.

The interactive process between nurse-context encourages reflection upon practice, suggesting new elements that enable redefining it to confer greater quality. In regard to this process, we highlight nursing consultations. These enable nurses to monitor changes in lifestyle and reinforce self-care guidance based on the Nursing Process<sup>14,15</sup>. We also stress the need to change hemodialysis nurses' practices in order to reinforce professional identity in the specialist practice.

*[...] you also need to re-think the role of nursing in the multidisciplinary team. It seems, sometimes, that we're only doing what is prescribed and this fragmented care shows it. We know very clearly what the role of the nutritionist is, of the physician [...] and even the role of the psychologist, but nurses are seen as 'machine operators'. This has to change.* NEPTUNE

Therefore, new practices emerge and already existing actions can be adapted. Nurses continue analyzing their own care practices in an interactive exercise, in which technique can be re-signified.

*[...] we become critical, want to change one or another action. Start rethinking and assessing our way of doing things to see what is ideal.* SATURN

It is worth noting that practical learning has a singular complexity and comprehends multiple aspects of reality, and that an enlarged view about things is necessary in terms of seeking emotional balance and valuing human co-existence<sup>16</sup>.

*We don't know nephrology when we graduate. We got here without knowing much and learned day-by-day, hands-on.* VENUS

*The process of learning and working with hemodialysis is not easy. It's not only because of its complexity per se, but there's a lot of things involved. We start working with it without knowing exactly, if you're not humble and don't know how to behave, things get more complicated, because you depend on others to teach you everything.* MARS

*We got here without knowing much and learned day-by-day, putting our hands on, really.* VENUS

In this sense, the movement of nurses toward specialization is highlighted, since it is important to ally technical and scientific knowledge, necessary to work in this field, with the sensitivity that is inherent to the "nursing being" focused on the patient as a systemic being<sup>15</sup>, as shown in this excerpt:

*I went sought theoretical knowledge, which I needed, I thought that I had a gap to fill in, a specialization program in nephrology. It helped a lot.* EARTH

*[...] I was learning to do but I needed more. I needed theory. So, I started a specialization program.* SATURN

*I started a specialization as soon as I got here. I thought that it was important to ally theoretical knowledge acquired in a specialization program with the practice I had here.* MOON

Advancement in theoretical and practice knowledge, especially with scientific development, adds quality to the work and provides important support to specialized practice since the professionals involved in the research process contribute to more qualified care and research can be a great strategy in strengthening nursing in both generalist and specialist terms<sup>5</sup>. Such is strategy is indicated in what follows:

*I'm getting a specialization and don't want to stop. I guess that patient nurse, have to improve practice, more than in other fields, and for this reason, should do research and implement findings in their routines.* JUPITER

In this sense, practical knowledge that permits nurses to implement care actions in a fruitful manner, allied with experience, and based on this experience, interactions that guide meanings attributed to practice, collaborate with nurses' self-assured practice to master the demands of the service and of hemodialysis patients.

### Mastering technology

This category proposes that nurses adapt to the technological context and be ready to meet the requirements it presents. Once the nurse is familiar with the equipment, s/he can dedicate activities to providing care that resolve more problems, heeding the needs of the patients under his/her care. This is based on the premise that knowledge is collectively constructed and reconstructed. People make a difference, considering the fact they can either cooperate or do not for a healthy environment since

their attitudes are essential to the institutional environment<sup>17</sup>, as shown in the following:

*Now, it's much easier for me. I know the machines well and I know how to solve the problems they may present during (hemo)dialysis. I'm more self-assured and the patients feel safer.* URANUS

*[...] we no longer are afraid of all those machines. Now, it's normal. Especially with external dialysis when we have to take the machine and the osmosis. It's paraphernalia, but now it's natural. I don't feel afraid anymore and I can dedicate myself to the patients.* MOON

*As soon as we get to the sector we think we won't be able to deal with all that technology. Learn how to program, adjust and turn off alarms that go off during sessions. But over time, we perceive that we're becoming familiar with it [...] learning to solve it all [...] become more self-assured when we master [the machine].* NEPTUNE

At this point, nurses have knowledge and understanding and feel more self-assured to implement actions in the hemodialysis service, allowing themselves to reflect upon their practice, adopting new actions or reaffirming other ways of implementing their own actions, in which attitudes intended to establish an effective interaction with other professionals from the multidisciplinary team promote good outcomes.

Collaborating, interacting and congregating are interesting practices through which to achieve good performance in the field. In this line of reasoning, teamwork can be a strategy to redefine work processes aggregating new values and gaining greater quality service<sup>18</sup>.

## FINAL CONSIDERATIONS

Being familiar with the technological context enables nurses to establish new ways to work with hemodialysis. This movement occurs based on the professional's adaptation to the technological apparatus involved in the work process. When professionals are comfortable with the technology, they can focus their effort on improving their practice, assessing and reassessing their own attitudes.

Hence, the knowledge acquired, deepened and updated leads to conscientious practice in light of the complexity involved in the process of learning while doing. Interaction with the context and the team produces a beneficial effect on the meaning attributed by nurses to hemodialysis, serving as a basis for the strategies adopted.

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