

Perspectives for Advanced Practice Nursing in Intensive Care Units: a reflection

Perspectivas para a Prática Avançada de Enfermagem em Unidades de Terapia Intensiva: uma reflexão

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ABSTRACT

Objective: To reflect on the actions of advanced practice nursing in the context of intensive care units. **Method:** This is a theoretical-reflective study based on international literature whose articles refer to the actions of advanced practice nurses in the intensive care environment. It is also based on the International Council of Nurses' Advanced Practice Nursing Guideline. **Results:** The union of information about the actions of advanced practice nursing in the intensive care environment allowed a reflection that generated nine categories of actions: continuing education, patient education, being a specialized reference in intensive care, research activity, care management, team leadership, family care, multidisciplinary teamwork, and direct patient care. **Conclusion:** The reflection showed that education, management, and care are the axes of competencies in advanced practice nursing in intensive care.

Descriptors: Critical Care; Nursing; Advanced Practice Nursing; Intensive Care Units.

RESUMO

Objetivo: Refletir sobre as ações de práticas avançadas de enfermagem no contexto das Unidades de Terapia Intensiva. **Método:** Trata-se de um estudo teórico-reflexivo embasado em literatura internacional, cujos artigos apontem ações do enfermeiro de prática avançada no ambiente de terapia intensiva, além do guideline de Prática Avançada de Enfermagem do International Council of Nurses. **Resultados:** A união de informações acerca das ações de práticas avançadas de enfermagem no ambiente de terapia intensiva permitiu a reflexão que gerou nove categorias de ações: educação continuada, educação em saúde, ser referência especializada em terapia intensiva, atividade de pesquisa, gerenciamento do cuidado, liderança de equipe, cuidado com a família, atuação em equipe multidisciplinar e assistência direta ao paciente. **Conclusão:** A reflexão evidenciou que educação, gestão e assistência são eixos de competências encontradas nas práticas avançadas de enfermagem na terapia intensiva.

Descritores: Cuidados Críticos; Enfermagem; Prática Avançada de Enfermagem; Unidades de Terapia Intensiva.

INTRODUCTION

The fluctuations in the socio-demographic profiles of Brazil and the world over the years, combined with economic issues, highlight the need for improvements in healthcare systems to handle the demands of diverse populations⁽¹⁾. In the 1970s and 1990s, the United States of America and Canada recognized, respectively, that nursing involves multidisciplinary; therefore, they have a well-established professional regulatory structure. Consequently, nurses were found to be able to focus their attention on a specific formative area in order to have complete autonomy in the course of patient treatment, providing excellent care⁽²⁾.

The term "advanced practice nursing" emerges in this context of autonomy. The advanced practice nurse develops complex clinical competencies and skills by studying a specific area, with a master's degree as a

minimum⁽³⁾. From this point of view, advanced practice nursing seems to be an issue with significant growth potential in Brazil. Indeed, compared to other countries in Latin America, Brazil has better conditions for implementing graduate programs related to advanced practice nursing, thanks to the large number of academic and professional master's programs as well as doctoral programs in nursing⁽¹⁾. Importantly, discussions on the qualification of advanced practice nurses in Brazil tend to favor a training process that includes a professional master's program in parallel with a nursing residency⁽³⁾.

Countries that prioritize multiprofessionality in their healthcare models find it easier to implement the profile of an advanced practice nurse. In Brazil, the foundations for the construction, adoption, and formal regulation of advanced practice nursing⁽⁴⁾ have already been established, especially in primary health care. This is evident in Resolution No. 2,488 of October 21, 2011, which approves the National Primary Health Care Policy and outlines specific duties for nurses, granting them autonomy to perform nursing consultations, procedures, group activities, request complementary exams, prescribe medications, and make referrals⁽⁵⁾. These practices can be considered progressive. With the implementation of these activities, studies in this area highlight improvements in service delivery, including reduced wait times, quality consultations with concise information, and a positive impact on treatment adherence⁽⁴⁾.

Another area of nursing that could benefit from the implementation of advanced practice is critical care in intensive care units (ICU). The Brazilian Law on Professional Nursing Practice states that nurses are responsible for directly caring for critically ill, life-threatening patients, which is more complex and requires critical thinking to make decisions⁽⁶⁾. Overall, critical care requires professionals to be able to think and make immediate decisions. In addition, the professional should have the autonomy to act quickly and according to their clinical knowledge, as this can determine the course of the patient's life⁽⁷⁾.

Studies have highlighted the impact of advanced practice nurses on healthcare services by promoting quality care⁽⁸⁻⁹⁾. One publication of 104 patients showed that introducing a palliative care advanced practice nurse in the ICU saved direct costs over six months⁽⁸⁾. Another

article reports improvements in multidisciplinary team communication, learning, care plan integration, and direct-action effectiveness. It points to the importance of further studies to assess the impact on cost reduction after implementation⁽⁹⁾.

Therefore, intensive care nurses can be trained in advanced practice nursing to improve care and contribute to the autonomy and valorization of the category. This study aims to gather information to guide the discussion about the perspective of advanced practice nursing in ICUs and to strengthen the dissemination of knowledge and understanding of this theme in this context. The objective of this study was defined as "to reflect on the actions of advanced practice nursing in the context of ICUs".

METHOD

Study type

This theoretical, reflective study results from completing a specialization course in Intensive Care Nursing at the State University of Rio de Janeiro. An exploratory search was conducted for articles that refer to the actions of advanced practice nurses in the intensive care environment, in addition to reading the International Council of Nurses' Advanced Practice Nursing Guideline⁽³⁾. Reflection was then based on grouping and associating information from the above sources.

To collect data from the primary studies, we followed the structure proposed by Galvão⁽¹⁰⁾, which includes the following methodological steps: 1) defining the research question; 2) searching the literature; 3) categorizing the studies; 4) evaluating the included studies; 5) interpreting the results; 6) presenting the synthesis of knowledge⁽¹⁰⁾.

Sample and inclusion and exclusion criteria

The sample of primary studies consisted of articles that met the inclusion criteria: activities performed (advanced practice), advanced practice nurses, and critical care or ICU. Documents characterized as letters to the editor, review articles, and case/experience reports were excluded. The following filters were also applied: human species, publication type (articles), and language (Portuguese, English, and Spanish). No filter was applied to the time frame to cover as much data as possible.

Data collection

The research question was: "What advanced practice nursing interventions are performed in the intensive care unit? The primary studies were searched in the electronic databases Cumulative Index to Nursing and Allied Health Literature (CINAHL); Latin American Health Sciences Literature (LILACS); Nursing Database (BDENF); Spanish Bibliographic Index of Health Sciences (IBECS); Medical Literature Analysis and Retrieval System Online (Medline) - via PubMed; Scopus; and Web of Science.

The search used Boolean phrases formed by descriptors from the Health Science Descriptors (DeCS) and Medical Subject Headings (MeSH), according to the peculiarities of each database. Figure 1 shows an example of the strategy used in Scopus.

Search strategy	
Database	Boolean sentence
SCOPUS	(TITLE-ABS-KEY (("Advanced practice nursing" OR "Advanced practice nurse")) AND TITLE-ABS-KEY (("Critical Care" OR "Intensive Care Units" OR "ICU"))) AND (LIMIT-TO (LANGUAGE , "English") OR LIMIT-TO (LANGUAGE , "Spanish")) AND (LIMIT-TO (SRCTYPE , "j") OR LIMIT-TO (SRCTYPE , "Undefined"))

Figure 1 - Presentation of the Boolean sentence related to the Scopus database. Rio de Janeiro, RJ, Brazil, 2023

Mendeley software was used to remove duplicates and select articles. Four authors read titles and abstracts after ensuring a consensus understanding of the eligibility criteria. The studies that met these criteria were selected for full reading. At this stage, two authors independently assessed the articles against the same eligibility criteria. Any reviewer disagreements were resolved by discussion or with a third reviewer. An instrument developed by the authors according to the topic was used to extract the actions of the advanced practice.

Analysis of results

The analysis of the instruments generated a summary table of advanced practice nursing actions found in the ICU setting. Based on the table, a thematic analysis⁽¹¹⁾ was performed to categorize and synthesize the actions in the ICU. The grouping of these categories resulted in three main areas for reflection.

RESULTS

Nursing actions of the advanced practice nurse in the ICU

A total of 21 primary articles were included from an initial identification of 726 articles in the databases. Thematic analysis was performed by grouping the advanced practice nursing, which resulted in the following categories: 1) continuing education, 2) Patient education, 3) critical care expert, 4) research activity, 5) care management, 6) working as part of a multidisciplinary team, 7) team leadership, 8) family care, and 9) direct patient care. The authors then began to reflect on three axes: education, management, and care.

Figure 2 shows a table summarizing the three axes in relation to the categories formed by the thematic analysis grouping the actions of advanced practice nursing in critical care.

DISCUSSION/ REFLECTION

Regarding competencies, the International Council of Nurses guideline identifies four pillars for nursing practice in the United Kingdom: clinical practice, leadership, education, and research^(1,28). Similarly, the reflective thematic analysis identified competencies in education, management, and caring, which will be discussed below.

Education

The education axis includes continuing education, patient education, specialized reference in intensive care, and research activity. Continuing education carried out by advanced practice nurses focuses on training with more detailed and realistic objectives and outcomes⁽¹²⁾, with the capacity to involve the nursing team⁽¹⁷⁾ and other health professionals⁽¹³⁾. This allows human and financial resources to be used more effectively⁽¹²⁾. As a result, there are improvements in patient care^(12,17-18), improvements in the safety of care⁽¹⁷⁾, and higher quality outcomes over time⁽¹⁸⁾.

Patient education activities in the ICU focus primarily on preparing patients and their families for life in this setting⁽²⁰⁾. In addition, these individuals often need information about treatment and justification for specific interventions⁽²⁰⁾. These explanations should be provided regularly by the team.

However, the advanced practice nurse considers the patient's and family's suffering when assessing learning needs⁽²⁰⁾, thus collecting,

Education	
Continuing Education:	Educate the nursing or multidisciplinary team ⁽¹²⁻¹⁷⁾ ; Educate and facilitate team communication ⁽¹⁸⁾ ;
Patient education:	Educating patients and their families ^(15,19-20) ;
To be a specialist reference in Critical Care:	To be an expert reference in care ^(13,17,21) ; to work with patients, families, and health care professionals using evidence and best standards of care ⁽¹³⁾ ; to act in consultation and collaboration with the team ⁽¹³⁾ ; to provide consultation, facilitate ongoing implementation of the care plan, and identify outcomes ⁽²⁰⁾ ;
Research activity:	Acting as a researcher ^(13,21) ; providing systems support, research, and inpatient responsibilities ⁽¹⁴⁾ ;
Management	
Care management:	Managing patient care and treatment ^(13-14,21-23) ; developing, implementing, and maintaining evidence-based practices and protocols ^(13,18) ; minimizing costs and improving quality of care ⁽²⁴⁾ ; optimizing patient care through standards of practice that encompass a broad range of competencies and responsibilities ⁽¹⁹⁾ ; controlling admission, transfer, and discharge documentation and routine testing ^(14,25) ; evaluating patients and managing follow-up care plans ⁽²⁵⁾ .
Team leadership:	Identifying the need for practice change, assessing team competencies ⁽¹³⁾ ; meeting and discussing cases with critical care nurses ⁽¹²⁾ ; participating in the development of public health policy, holding regular meetings with physicians and advanced practice nurses, and participating in public relations activities to promote critical care nursing ⁽¹³⁾ ; directing clinical care ⁽¹⁷⁾ .
Care	
Take care of the family:	Provide therapeutic listening and family support regarding the satisfaction, well-being, and psychological distress of family members ^(19,26-27) ; mediate the treatment of the patient and family ⁽²⁷⁾ ; educate the family member ^(13,15,20) ;
Acting in a multidisciplinary team:	Intervene to prevent complications and help patients recover and rehabilitate ⁽²³⁾ ; facilitate interdisciplinary and collaborative team efforts and support cost-effective improvement processes throughout the organization ⁽¹⁹⁾ ; discuss and determine the best patient care with the team ⁽¹²⁾ ; help team members deal with ethical dilemmas and conflicts ⁽²⁰⁾ ;
Direct patient care:	Provide direct and comprehensive care ^(13-14,18,20,28) ; assess biological, psychological, and social needs ⁽²⁰⁾ ; assess clinical functions ⁽²¹⁻²²⁾ ; make diagnoses ^(22,29) ; prescribe medications ^(22,30) ; prescribe and authorize intravenous fluids and infusion of blood products ⁽²⁵⁾ ; evaluate patients after discharge from the ICU ⁽¹⁶⁾ ; identify and analyze patients for palliative care ⁽²⁴⁾ ; manage airways ^(13,29) ; perform lumbar punctures ^(13,29) ; evaluate and plan treatment ⁽³⁰⁾ ; provide nursing care ⁽¹⁹⁾ ; review laboratory tests, initiate, and adjust nutrition, interpret electrocardiograms, and evaluate the patient's progress ⁽¹⁴⁾ ; assess and plan treatment ⁽³⁰⁾ ; provide nursing care ⁽¹⁹⁾ ; review laboratory tests, initiate and adjust nutrition, interpret electrocardiograms, and evaluate patient progress ⁽¹⁴⁾ ; intervene to wean patients from mechanical ventilation and report the results ⁽²⁸⁾ ; insert a central venous catheter after training and accreditation ⁽³¹⁾ ; puncture central venous ^(13,29-30,32) and arterial catheters ^(25,29-30) ;

Figure 2 – Presentation of advanced practice nursing actions in intensive care related to the axes of reflection. Rio de Janeiro, RJ, Brazil, 2023

managing, and collaborating in developing materials and communication strategies with the target audience⁽²⁰⁾. This facilitates interaction between the patient/family binomial and the entire team. An essential counterpoint to education and counseling activities is the need for more billing for these services. If they were included in the list of benefits and reimbursement, more time and resources could be invested in these activities⁽¹⁵⁾, which may even impact population adherence and comfort⁽²⁰⁾.

The advanced practice nurse is also a critical care nursing team expert. With critical thinking, they perform a variety of clinical skills, identify the problems of the case, and guide the team in decision-making^(13,21). The frequent presence of this professional in the ICU encourages the whole team to promote evidence-based practice⁽¹⁷⁾ and provides reassurance to intensivists and generalists at the bedside who can request support⁽¹⁷⁾. In addition, they complement the educator role by being an experienced resource

person for the entire multidisciplinary team and families⁽¹⁷⁾.

Another role of advanced practice nurses is their involvement in research activities⁽²¹⁾. A study conducted in South Korea in 2019 investigates the need for this professional as a researcher in the ICU from the perspective of other nurses. The article highlights that research is the main function of advanced practice nurses, followed by educating and counseling, consultation and collaboration, leadership and agent of change, and direct practice⁽¹³⁾.

The evolution of this theme can also be seen when compared to a 2005 study that found that advanced practice nurses spent only 2% of their time on research activities⁽¹⁴⁾. Importantly, countries with economic and social profiles similar to Brazil are using research to raise their profile and stimulate the education of advanced practice nurses in all areas of nursing⁽¹⁶⁾.

Management

Care management and team leadership are the categories assigned to the management axis. The figure of the advanced practice nurse in the ICU is a facilitator in the recovery of critically ill patients due to several factors, including involvement in care management^(13,19,21). A 2005 study indicated that management was the second most time-consuming task for advanced practice nurses in the ICU, surpassed only by direct patient care⁽¹⁴⁾.

The results of two studies in 2017 and 2020 highlighted a significant reduction in mortality among patients in intensive care units where advanced practice nurses were active^(18,21). Managing involves developing and applying protocols based on scientific evidence^(13,18) to optimize care with a high level of competence⁽¹⁹⁾; managing the care plan outlined through daily assessments and action planning^(19,25); and controlling medical records with a focus on the admission, transfer, and eventual discharge of patients^(14,25).

The role of advanced practice nurses as leaders of nursing and multidisciplinary teams must be based on evidence-based knowledge. A study has shown that they are responsible for identifying and changing team practices after assessing their competencies⁽¹³⁾. Advanced practice nurses act as clinical treatment leaders and facilitate discussions with the critical care team and the multidisciplinary team to improve practice for the patient^(12,17). One study shows that the presence of advanced practice nurses can

stimulate the implementation of care protocols that may reduce mortality⁽²⁰⁾. As a leader, the advanced practice nurse is responsible for maintaining effective communication between those involved in care planning and the integrated care of a multidisciplinary team^(12,19).

Care

The care axis has three categories: family care, working as part of a multidisciplinary team, and direct patient care. The role of advanced practice nurses in family care, in addition to the interaction and education already discussed in the education axis, includes emotional support interventions and therapeutic listening^(19,26-27). A quasi-experimental study, whose intervention supported families of patients admitted to hospital with life-threatening conditions, showed a potential benefit regarding family satisfaction and well-being, especially in decision-making in end-of-life care⁽¹²⁾. Families felt cared for, well-informed, supported, and empowered to experience the moment of having a family member in intensive care and their bereavement^(12,27).

A multidisciplinary team is composed of a group of professionals with different skills and a variety of knowledge to share experiences with the same common goal: to improve the patient's clinical condition. In intensive care, because of the complexity of the cases, the participation and synergy of the team are necessary to reduce hospitalization and intubation times, prevent health problems, and strengthen the patient's recovery and rehabilitation. The interaction of physicians and nurses in the ICU is essential to improve the quality of patient care⁽¹²⁾. The positive contribution of the advanced practice nurse to the multidisciplinary team is based on care management, team leadership, and direct action in the practice of clinical protocols, with the advanced practice nurse being responsible for unit management and the physician for treatment⁽²³⁾. Communication is the key to improving care, and the advanced practice nurse should work with the team as a facilitator of this dialogue, maintaining unity and mediating conflict⁽²⁰⁾.

The work of advanced practice nurses in the ICU is also based on direct patient care, providing high-quality care^(13-14,18,20,28). The activities are related to increasing the quality of care and patient satisfaction, reducing costs related to length of stay and readmissions⁽¹³⁾, and reducing indicators of falls and surgical site infec-

tions⁽³¹⁾. Studies have shown that advanced practices include prescribing medications; diagnosing, ordering, and interpreting laboratory tests^(13-14,22,30); and performing more complex procedures such as deep vein catheterization, airway management interventions^(13,29-30), and lumbar puncture^(13,29).

When considering these procedures, the progress made by advanced practice nurses abroad is striking. In Brazil, lumbar punctures and central line punctures are still mainly performed by physicians. However, nursing has gained ground in recent years, given the possibility for nurses to insert the peripherally inserted central catheter (PICC), legislated by the Brazilian Federal Nursing Council (COFEN) on Resolution No. 258 of 2001⁽³³⁾. This progress must be considered in advanced practice nursing, especially in intensive care.

Limitations of the study

The study was limited to reflecting on the actions of advanced practice nursing in the ICU based on the literature without considering the level of evidence of the primary studies, although case and experience reports were excluded. Including only international studies is also a limitation since there are different categories and specificities of advanced practice nurses in each country, in addition to the legislative specificities of the countries.

CONCLUSION

Our reflection points out that advanced practice nursing in intensive care is based on competencies related to education, management, and care. Advanced practice actions in ICU include continuing education, patient education, being

a specialized reference in ICU, research activity, care management, team leadership, family care, multidisciplinary teamwork, and direct patient care.

This article aligns with the growing discussion about advanced practice nursing in Brazil, a country beginning to implement advanced practice nursing, mainly in primary care. We hope the reflections generated in this article contribute to the debate on expanding advanced practice nursing to other levels of health care, especially in critical care, an area with great potential for growth and development.

The competencies and skills highlighted by the categories guide the advanced practice towards a perspective of differentiated and qualified care based on fundamentals such as patient-centered practice, evidence-based practice, clinical reasoning and judgment, health team leadership, autonomy, and the ability to make complex decisions. Thus, the conclusions drawn in this study may favor the development of future work aimed at implementing and valuing advanced nursing in Brazil.

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CONFLICT OF INTERESTS

The authors have declared that there is no conflict of interests.

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