

Review

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Advanced practice nurse in intensive care in the Brazilian context: a scoping review

Enfermeiro de prática avançada na terapia intensiva para o contexto brasileiro: revisão de escopo

Enfermero de práctica avanzada en cuidados intensivos en el contexto brasileño: una revisión de alcance

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ABSTRACT

Objective: to map the scope of practice of advanced practice nurses in intensive care and its applicability in the Brazilian context.

Method: a scoping review conducted between September 2024 and February 2025, based on the JBI and PRISMA-ScR guidelines. The search was carried out in PubMed, Virtual Health Library, CINAHL, SCOPUS, BDNF, Web of Science, COCHRANE, and LILACS, in addition to thesis and dissertation repositories. Two independent reviewers selected the studies, and a third resolved disagreements. Data extraction followed a standardized instrument, with descriptive synthesis.

Results: a final sample of 20 publications was selected. The advanced practice nurse in intensive care performs invasive procedures, such as central venous catheter insertion, orotracheal intubation, lumbar puncture, and chest tube insertion. Furthermore, the use of advanced technologies and the high level of clinical autonomy of this professional provide effective diagnostic and therapeutic decision-making for the management of critically ill patients.

Conclusion: the scope of practice of advanced practice nurses in intensive care, although still incipient, presents perspectives for scientific, autonomous, and highly qualified advancement in the nursing field in Brazil, directly contributing to a responsive and effective healthcare approach. However, the scarcity of regulatory legislation and the lack of standardized and specific training for advanced practice nurses still constitute limitations to their implementation in Brazil.

Descriptors: Advanced Practice Nursing; Nurse's Role; Intensive Care Units; Brazil.

RESUMO

Objetivo: mapear o escopo de atuação do enfermeiro de prática avançada na terapia intensiva e sua aplicabilidade no contexto brasileiro.

Método: revisão de escopo realizada entre setembro de 2024 e fevereiro de 2025, baseada no JBI e PRISMA-ScR. A busca foi realizada em PubMed, Biblioteca Virtual em Saúde, CINAHL, SCOPUS, BDENF, Web of Science, COCHRANE e LILACS, além de repositórios de teses e dissertações. Dois revisores independentes selecionaram os estudos e um terceiro resolveu discordâncias. A extração dos dados seguiu um instrumento padronizado, com síntese descritiva.

Resultados: foram selecionadas 20 publicações na amostra final. O enfermeiro de prática avançada na terapia intensiva atua na realização de procedimentos invasivos, como inserção de cateter venoso central, intubação orotraqueal, punção lombar e inserção de dreno torácico. Além disso, o uso de tecnologias avançadas e a elevada autonomia clínica desse profissional proporcionam a tomada de decisões diagnósticas e terapêuticas eficazes para o manejo de pacientes críticos.

Conclusão: o escopo de atuação do enfermeiro de prática avançada na terapia intensiva, embora incipiente, projeta para o país perspectivas no avanço científico, autônomo e qualificado para o cenário da enfermagem, resultando diretamente em uma proposta de saúde resolutiva e eficaz. No entanto, a escassez de legislações regulamentadoras e de uma formação padronizada e específica para o enfermeiro de prática avançada ainda se configura como uma limitação para a sua implementação no Brasil.

Descritores: Prática Avançada de Enfermagem; Papel do Profissional de Enfermagem; Unidades de Terapia Intensiva; Brasil.

RESUMEN

Objetivo: mapear el alcance de la práctica del enfermero de práctica avanzada en cuidados intensivos y su aplicabilidad en el contexto brasileño.

Método: revisión de alcance realizada entre septiembre de 2024 y febrero de 2025, basada en la metodología del JBI y en las directrices PRISMA-ScR. La búsqueda se realizó en PubMed, Biblioteca Virtual en Salud, CINAHL, SCOPUS, BDENF, Web of Science, COCHRANE y LILACS, además de repositorios de tesis y disertaciones. Dos revisores independientes seleccionaron los estudios y un tercero resolvió las discrepancias. La extracción de datos siguió un instrumento estandarizado, con síntesis descriptiva.

Resultados: se seleccionaron 20 publicaciones en la muestra final. El enfermero de práctica avanzada en cuidados intensivos actúa en la realización de procedimientos invasivos, tales como la inserción de catéter venoso central, intubación orotraqueal, punción lumbar e inserción de drenaje torácico. Asimismo, el uso de tecnologías avanzadas y la elevada autonomía clínica de este profesional proporcionan la toma de decisiones diagnósticas y terapéuticas eficaces para el manejo de pacientes críticos.

Conclusión: el alcance de actuación del enfermero de práctica avanzada en cuidados intensivos, aunque todavía incipiente, proyecta para el país perspectivas de avance científico, autónomo y cualificado para el escenario de la enfermería, resultando directamente en una propuesta de salud resolutive y eficaz. Sin embargo, la escasez de legislaciones regulatorias y la falta de una formación estandarizada y específica para el enfermero de práctica avanzada todavía constituyen limitaciones para su implementación en Brasil.

Descriptores: Enfermería de Práctica Avanzada; Rol de la Enfermería; Unidades de Cuidados Intensivos; Brasil.

INTRODUCTION

Advanced Practice Nursing (APN) refers to the practice of nurses with advanced knowledge, specific clinical skills, and competencies for making complex decisions within a care context that, in addition to technical expertise, also integrates theory, teaching, research, management, and autonomy. These factors distinguish advanced practice nurses from specialist nurses. It is a concept widely discussed internationally that has recently gained prominence in Brazil, aimed to expand the scope of practice and professional independence and promote the resolution of population health problems^(1,2).

In the United States, the United Kingdom, and Canada, APN was initially adopted in Primary Health Care (PHC) during the 1960s and 1970s to expand vulnerable populations' access to healthcare services. Subsequently, it was successfully implemented in other countries, such as Germany, China, and Australia, as well as in other care contexts, including maternal and child health and gerontological care^(3,4).

In APN, nurses have legal authority to diagnose, prescribe, and order diagnostic tests, acting as active and trusted healthcare professionals in the community to address health needs and make the necessary referrals for health promotion and interventions. Furthermore, they are qualified to address complex problems, including determining evidence-based pharmacological treatments when necessary^(5,6).

Advanced practice nurses (APN) improve patient survival and contribute to greater access to healthcare, with efficiency and high quality. Moreover, scientific evidence demonstrates that nurses with this training enhance both patient and health system safety,

provide a high standard of care, and, consequently, can reduce healthcare costs through the professional's attentive and qualified approach to management^(5,6).

APN has demonstrated positive results in expanding access to healthcare and has prompted reflection on the benefits of its implementation in other healthcare settings, particularly hospital care. In this context, APN working in critical care and emergency settings can improve outcomes for patients with complex conditions, including shorter hospital stays, reduced complications, and greater patient satisfaction, through logical reasoning for complex decision-making and resolving issues quickly and effectively^(7,8).

The intensive care unit (ICU) is considered a suitable setting for APN practice, as critically ill patients require intensive care provided by qualified and autonomous professionals with advanced skills to effectively address their needs. Invasive procedures, treatment planning, medication prescribing, and comprehensive functional assessment of patients are some practical examples of beneficial interventions. Moreover, intensive care requires competencies that are aligned with the core components of APN, including critical thinking, rapid reasoning, leadership, effective team communication, and the delivery of effective advanced care^(8,9).

Recently, a Brazilian study highlighted the importance of APN in the ICU. It demonstrated that care, education, and management in this setting are strongly supported by nursing, highlighting the role of APN, whose presence is associated with improvements in team leadership and communication, effective implementation of care plans for patients and their families, quality management, continuing education, and, consequently, cost reduction⁽⁹⁾.

Although this reality has been established internationally since the 1970s, in Brazil it gained greater prominence in 2016, when the Federal Nursing Council initiated discussions on the feasibility of incorporating APN into the country and established the Advanced Nursing Practice Commission to guide and support demands related to the topic⁽³⁾.

The discussion surrounding the incorporation of APN has advanced in Brazil, however, challenges persist, such as a lack of clarity regarding its scope of practice, education, and regulation⁽³⁾. Furthermore, although legislation exists regulating the performance of advanced procedures by nurses, such as the use of laryngeal masks and insertion of deep catheters, these apply to intensive care nurses (ICN), rather than advanced practice nurses^(3,8).

In this context, there is a need to set the scope of APN practice, define its role within the healthcare team, and establish practice settings⁽³⁾. This review is justified by the need to

gather and organize the available knowledge to understand APN practice in the ICU and support discussions on its implementation in Brazil based on evidence from the international literature and appropriately contextualized to the Brazilian nursing reality.

Therefore, this study aimed to map the scope of practice of advanced practice nurses in intensive care and its applicability in the Brazilian context.

METHOD

Study Design

This is a scoping review conducted based on JBI recommendations⁽¹⁰⁾ and the international guideline entitled PRISMA Extension for Scoping Reviews (PRISMA-ScR)⁽¹¹⁾ between August 2024 and February 2025 and registered with the Open Science Framework (OSF), DOI 10.17605/OSF.IO/TJ9ZC.

In accordance with JBI recommendations, this review was structured into eight stages: defining a question aligned with the objective; establishing inclusion criteria aligned with the objective and question; describing the approach to evidence searching, selection, extraction, and mapping; searching for evidence; selecting evidence; extracting evidence; mapping evidence; and summarizing evidence in relation to the objective and question⁽¹⁰⁾.

Research Question

The search was defined based on the formulation of the research question, which was developed based on the PCC mnemonic, in which the population (P) corresponded to advanced practice nurses, the concept (C) to scope of practice, and the context (C) to the intensive care unit in Brazil. Therefore, the following research question was formulated: “How is the role of advanced practice nurses in the intensive care unit characterized, and how applicable is it to the Brazilian context?”.

Primary and secondary studies were included, with no restrictions on language or publication date, and that addressed the scope of practice of advanced practice nurses in the intensive care unit. Studies focused exclusively on organizational, financial, or administrative aspects of ICUs, without addressing the clinical practice of APN, were excluded.

Search Strategies

The search was conducted in three stages. The first took place in September 2024 and consisted of a preliminary search in PubMed, the Virtual Health Library (VHL), which

also encompasses databases such as SciELO, MEDLINE, and LILACS, and Web of Science, with the aim of investigating whether studies similar to the present review already existed. Additionally, a search was conducted in OSF, a platform for managing research projects, which assisted in identifying review protocols like that of the present study. However, no relevant results were found in any of these sources. Therefore, the need for and originality of this research were established, enabling progression to the second stage: database searching.

Next, descriptors were searched in the Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH). Additional keywords were also used to broaden the search.

Thus, the Boolean operators AND and OR were employed, as described in the following search strategy applied in the VHL: (“Advanced Practice Nursing” OR “Advanced Nursing Practice”) AND (“Nurse’s Role” OR “Nurse's Role”) AND (“Intensive Care Unit” OR “Intensive Care Center”). Since each database has specific search features, as presented in Chart 1, the search strategy was adapted accordingly while maintaining similarities in the descriptor combinations.

The second stage of the search was conducted in December 2025 in the following databases, portals, and libraries: National Library of Medicine (PubMed/MEDLINE), BDENF via the Virtual Health Library (VHL), Cumulative Index to Nursing & Allied Health Literature (CINAHL), SCOPUS, Web of Science, COCHRANE, and Latin American and Caribbean Literature in Health Sciences (LILACS).

Chart 1 – Search strategy combinations according to data sources, Campina Grande, PB, Brazil, 2025.

Database	Search Strategy
PubMed/MEDLINE	((Advanced Practice Nursing) AND (Nurse's Role)) AND (Intensive Care Units)
BDENF via VHL	(advanced practice nursing) AND (nurse's role) AND (intensive care units) AND instance:"regional" (<i>prática avançada de enfermagem</i>) OR (<i>enfermagem de prática avançada</i>) AND (<i>papel do profissional de enfermagem</i>) OR (<i>escopo de prática de enfermagem</i>) OR (<i>perfil de competências de enfermeiros</i>) AND (<i>unidade de terapia intensiva</i>) OR (<i>centro de terapia intensiva</i>) AND instance:"regional"
CINAHL	(<i>Prática Avançada de Enfermagem</i>) OR (<i>Enfermagem de Prática Avançada</i>) AND (<i>Papel do profissional de Enfermagem</i>) OR (<i>Escopo de prática de</i>

	<i>enfermagem</i>) OR (<i>Perfil de competências dos enfermeiros</i>) AND (<i>unidade de terapia intensiva</i>) OR (<i>centro de terapia intensiva</i>)
SCOPUS	"Advanced Practice Nursing" AND "Nurse's Role" AND "Intensive Care Units"
Web of Science	(TS=(Advanced Practice Nursing)) AND TS=(Intensive Care Units)
COCHRANE	Cochrane Review matching Advanced Practice Nursing in Title Abstract Keyword AND Nurse's Role in Title Abstract Keyword AND Intensive Care Units in Title Abstract Keyword - (Word variations have been searched) Trials matching Advanced Practice Nursing in Title Abstract Keyword AND Nurse's Role in Title Abstract Keyword AND Intensive Care Units in Title Abstract Keyword - (Word variations have been searched) Editorial matching Advanced Practice Nursing in Title Abstract Keyword AND Nurse's Role in Title Abstract Keyword AND Intensive Care Units in Title Abstract Keyword - (Word variations have been searched)
LILACS	(advanced practice nursing) AND (nurse's role) AND (intensive care units) AND instance:"lilacsplus" (<i>prática avançada de enfermagem</i>) OR (<i>enfermagem de prática avançada</i>) AND (<i>papel do profissional de enfermagem</i>) OR (<i>escopo de prática de enfermagem</i>) OR (<i>perfil de competências de enfermeiros</i>) AND (<i>unidade de terapia intensiva</i>) OR (<i>centro de terapia intensiva</i>) AND instance:"lilacsplus"

Source: prepared by the authors.

It should be noted that the database searches were conducted through the CAPES Journals Portal, using identification via the Federated Academic Community (*Comunidade Acadêmica Federada* - CAFE), thereby ensuring standardization.

Subsequently, the third stage was conducted in January 2025 and involved a search of gray literature in national and international repositories of theses and dissertations, in order to identify publications that addressed the research question. The following repositories were consulted: the CAPES Theses and Dissertations Portal, TROVE – The National Library of Australia, and the Open Access Scientific Repository of Portugal (RCAAP).

Finally, additional backward citation searching was conducted by analyzing the references of the selected studies, as well as an external search of institutional websites, with the aim of expanding the retrieval of materials such as resolutions, protocols, manuals, and guidelines.

Study Selection

Searches conducted in the scientific literature were exported to Rayyan® Intelligent Systematic Review software, while searches in the gray literature were exported to Excel® 2013. Study selection was performed by screening titles and abstracts, followed by full-text assessment by two independent and blinded reviewers, who were responsible for determining the inclusion of studies in the final sample. Disagreements were resolved by a third reviewer, and the reasons for excluding studies were quantified and documented. Finally, the reference lists of articles retrieved during the search and included in the final selection were screened for potential inclusion in the study sample.

Data Extraction

Data collection was performed using a standardized instrument adapted from JBI⁽¹⁰⁾, according to the following categories: publication year; country; methodological design; study objective(s); setting; conclusions; advanced practice nurse education and training; activities performed by the nurse; and limitations to the nurse's practice.

Data Analysis and Presentation

After extraction, the final data were analyzed and appropriately grouped into categories. These results were presented descriptively using the PRISMA flowchart and a table to facilitate the visualization of the summarized findings. Additionally, a complementary interpretive analysis was conducted to highlight distinctions between the scope of APN practice and activities already performed by ICNs in accordance with current Brazilian legislation. Finally, this interpretive analysis was illustrated in a summary figure created using the Canva®, platform, depicting the competencies and skills that comprise the scope of APN practice in the ICU in contrast to elements already performed by ICNs.

Ethical Aspects

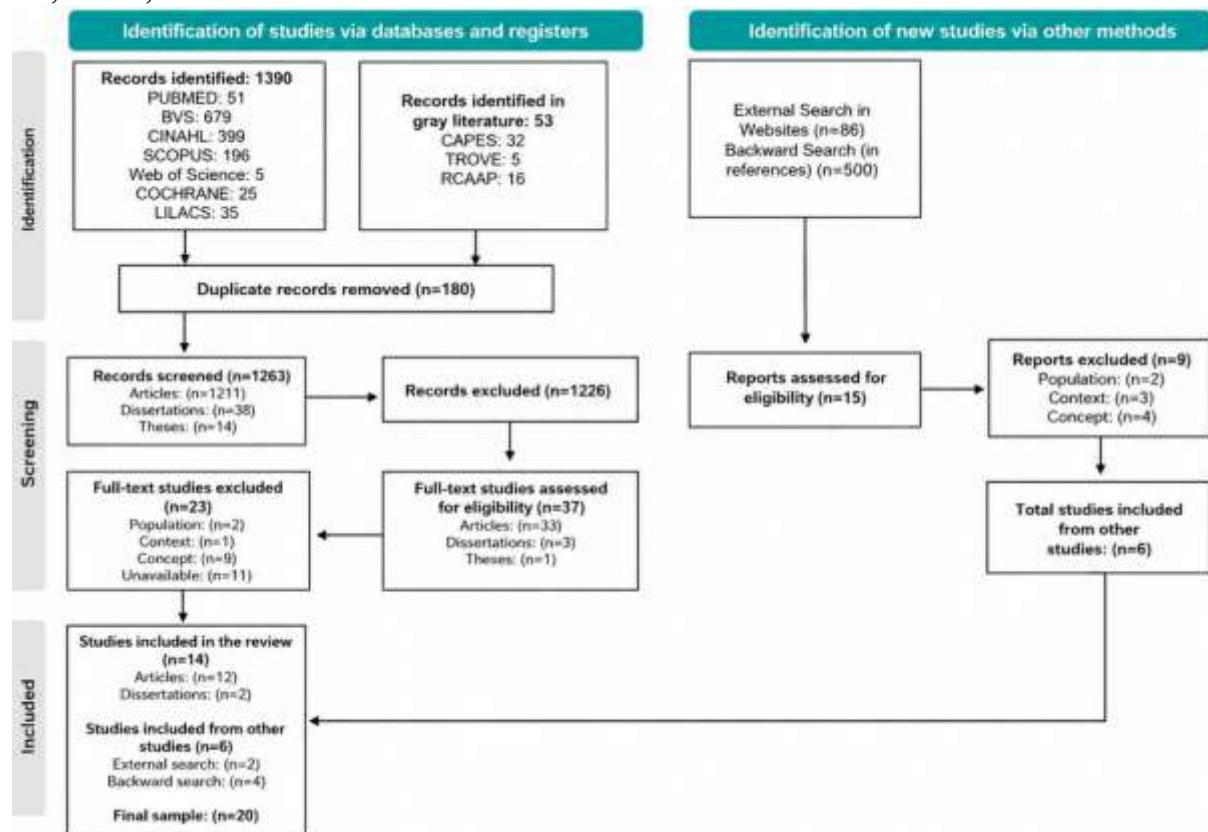
As this research involved secondary data that are in the public domain and available in the literature, ethical review was not required. It should be noted that copyright was respected through the proper citation and referencing of the studies used.

RESULTS

Initially, 1,443 publications were identified. After removing 180 duplicates, 1,263 publications remained for the screening process, which involved reviewing titles and abstracts. At this stage, 1,226 studies were excluded because they did not meet the established eligibility criteria regarding the population (advanced practice nurses) and context (intensive care unit), resulting in 37 studies for full-text assessment. Of these, 23 studies were excluded because they did not address the central research question, resulting in a sample of 14 studies from the database search. Among these, 12 were articles and two were dissertations.

Subsequently, as a complementary strategy, 586 additional publications were identified through backward citation searching and external web searches. Of these, 15 were assessed for eligibility, and after full-text reading, six met the inclusion criteria. Thus, a total of 20 studies comprised the final sample, as illustrated in Figure 1.

Figure 1 - Flowchart of publication selection stages for the scoping review, Campina Grande, PB, Brazil, 2025.



Source: adapted from the PRISMA-ScR model.

The 20 studies were published between 2005 and 2024. The main countries represented were the United States (n=7), Brazil (n=3), and Australia (n=2), followed by Denmark, Switzerland, Germany, Canada, London, Portugal, South Korea, and the United Kingdom, with one study from each. The predominant methodological designs were systematic literature reviews (n=4), cross-sectional studies (n=3), scoping reviews (n=2), and editorials (n=2), while the remaining studies comprised reflective, prospective, retrospective, and experimental studies, as well as a technical note.

A summary of the studies is presented in Chart 2.

Chart 2 - Summary of publications included in the review, Campina Grande, PB, Brazil, 2025.

Studies	Country/ Year	Methodological design	Type of Intensive Care Unit	APN training	Activities performed by the Advanced Practice Nurse in the Intensive Care Unit
Leslie ⁽¹²⁾	London 2005	Mixed-methods study	Neonatal Intensive Care Unit.	Clinical master's degree	Clinical case management and leadership in neonatal transport; clinical assessment and examination; management plan; immediate treatment, respiratory management, and temperature management; management and adjustment of prescribed medications, including selection of the medication, dose, route, and administration time; quality of record keeping.
Sung ⁽¹³⁾	Korea 2006	Cross-sectional study	General Intensive Care Units.	Bachelor's degree in critical care or master's degree	Assessment, diagnosis, and planning of care for critically ill patients; treatment planning based on diagnoses; participation in a cardiac life support team and continuous monitoring of critically ill patients' conditions; insertion of PICC (peripherally inserted central catheter); lumbar puncture; identification and elimination of factors that threaten safety; insertion of central venous catheters; insertion of umbilical catheters; and endotracheal intubation.
Frank ⁽¹⁴⁾	United States 2006	Editorial	Critical care and emergency department.	Does not address this variable.	Chest tube insertion, central catheter insertion, lumbar puncture, thoracentesis, cricothyrotomy, and tracheostomy; advanced physical assessment, triage and prioritization skills, emergency preparedness, stabilization and resuscitation, crisis intervention, and consistency throughout the continuum of care.
Weber ⁽¹⁵⁾	United States 2007	Literature review	Intensive Care Unit.	Does not address this variable.	Making critical decisions (e.g., cardiopulmonary resuscitation, mechanical ventilation, and artificial nutrition) and clinical case management; communicating and interacting with the family in decision-making; deciding on patient disposition at the end of hospitalization, including discharge home or to a long-term care facility.
Endacott ⁽¹⁶⁾	Australia 2007	Editorial	General Intensive Care Unit.	Does not address this variable.	Ensuring that the family can be with the patient; providing the family with information and support; encouraging their involvement in care activities; astute clinical judgment, wisdom, and skill.
Kilpatrick ⁽¹⁷⁾	Canada 2010	Scoping review	Intensive Care Unit.	Master's degree.	Coordinating care, research, education, consultation, and leadership activities; identifying and managing complications related to a primary diagnosis made by a physician; ordering laboratory tests and prescribing treatments; prescribing medications according to protocols.
Mauricio ⁽¹⁸⁾	United States 2010	Not identified	Pediatric Intensive Care Unit	Does not address this variable.	Leading and developing educational programs for staff; developing communication skills to promote a family-centered environment that improves patient, parent, and staff satisfaction.
Weiland ⁽¹⁹⁾	United States 2010	Not identified	Intensive Care Unit	Does not address this variable.	Case management; communicating health information directly to the patient; promoting safe education; establishing a calm and open environment for expressing feelings; understanding the impact of critical illness on the patient and family.
Fry ⁽²⁰⁾	Australia 2011	Systematic review	Adult and Neonatal	Does not address this	Chest tube insertion; replacement of central catheters; arterial catheter insertion; endotracheal intubation; and physician-assisted insertion of pulmonary artery catheters; initiating diagnostic

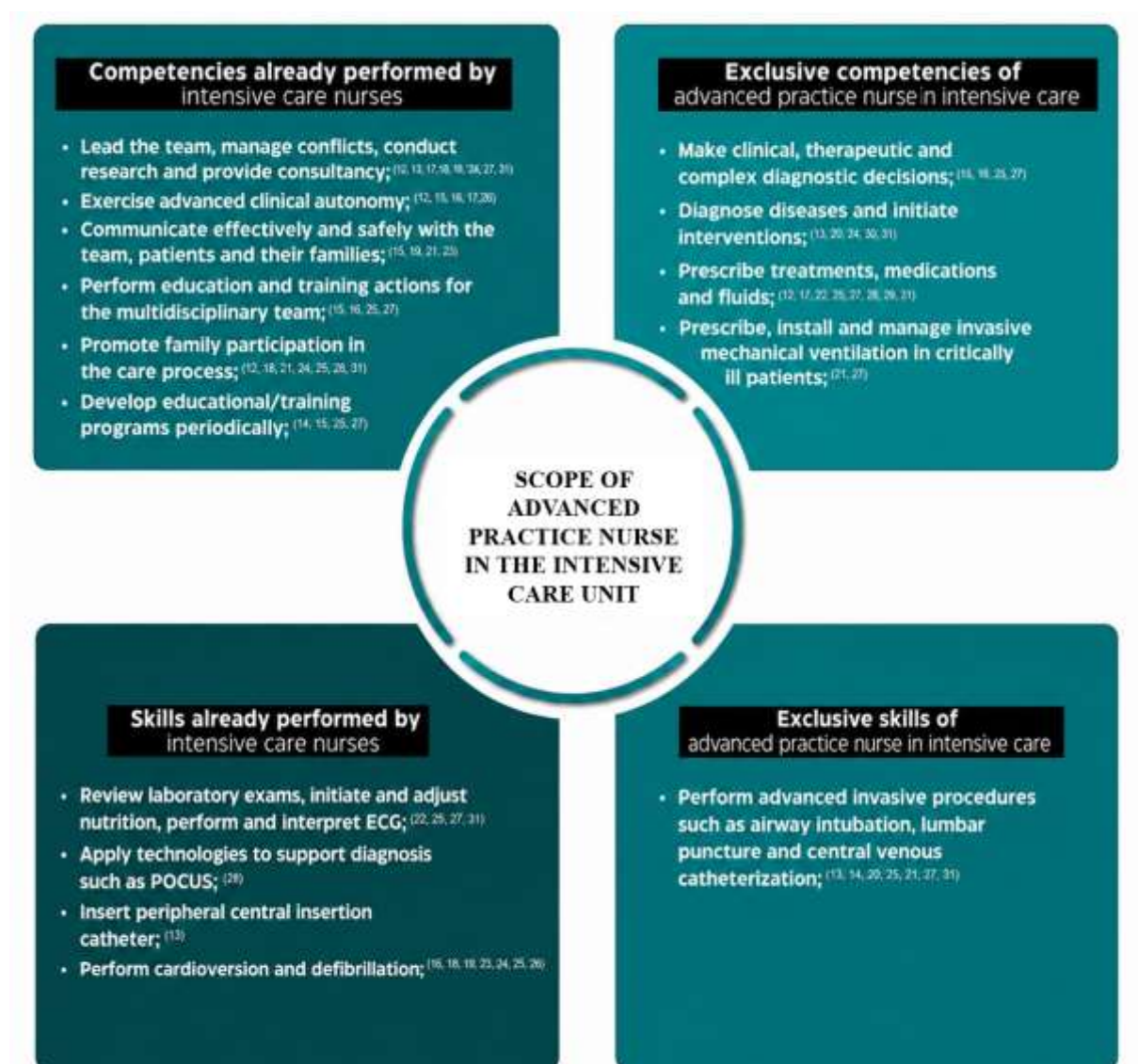
			Intensive Care Units.	variable.	interventions, medications, and care assessment; sedation administration and weaning from mechanical ventilation; support and education for parents; follow-up care; professional education; and research.
Costa ⁽²¹⁾	Portugal 2014	Dissertation – Systematic review	Intensive Care Unit, Chronic Pain Unit, and Emergency Department.	Does not address this variable.	Master communication techniques, providing space for the expression of feelings and respecting the client's right to information; identify family needs and provide support; implement holistic care plans; initial reception – SPIKES protocol; promote ventilatory adaptation by adjusting sedation and/or neuromuscular blockade and collaborating in the adjustment of ventilatory parameters; interpret arterial blood gases and assess airway patency, performing secretion aspiration; prevent or identify electrical and/or hemodynamic changes early.
Carberry ⁽²²⁾	United Kingdom 2014	Cross-sectional study	Establish the specific tasks undertaken and the scope of the workload of these newly created positions.	Does not address this variable.	Assess patients and manage subsequent care plans; admission, transfer, and discharge documentation; documentation of routine investigations, namely laboratory tests; clinical assessments and examinations; prescribe antimicrobials, blood products, fluids, electrolytes, analgesics and sedatives, laxatives, and aspirin (prescribe any medication, including unlicensed medications, within the scope of their competence); order X-rays.
Hollyday ⁽²³⁾	United States 2015	Not identified	Intensive Care Unit.	Does not address this variable.	Provide qualified communication, such as the use of the SPIKES tool; gather and understand the family's understanding of the situation, their knowledge, expectations, and participation in the discussion; provide information desired by the patient and family; support the patient and family; develop a strategy for the next steps.
Kalowes ⁽²⁴⁾	United States 2015	Not identified	Advanced practice registered nurses in the Intensive Care Unit.	Does not address this variable.	Clinically manage the treatment of patients with acute exacerbations of chronic and advanced diseases, diagnosing and prescribing treatments and medications, together with coordinating patient discharge to a subsequent level of care; manage patients' social/spiritual distress and provide consistent and compassionate care to families.
Brown ⁽²⁵⁾	United States 2018	Book chapter	Pediatric Cardiac Intensive Care Unit.	Certification through the pediatric critical care nursing board exam.	Obtain comprehensive histories and perform complete physical examinations; order and interpret appropriate laboratory and imaging studies; prescribe and titrate medications; perform invasive procedures, including tracheal intubation, central and arterial line placement, and chest tube insertion; educator; perform cardioversion/defibrillation; perform open thoracotomy; insert pacemakers; assist patients using ventricular assist devices.
Naef ⁽²⁶⁾	Switzerland 2020	Quasi-experimental study	Surgical and Transplant ICU.	Does not address this variable.	Become familiar with the family and learn about its structure and functioning through family assessment; assist in family disease management; support transition to follow-up care; establish a link between the family and the healthcare team, particularly during the first 72 hours, to promote communication and care coordination.
Ingrid	Denmark	Scoping	Intensive Care	Master's	Professional leadership, research, and teaching; initiate ICU admission and discharge and

(27)	2021	review	Unit.	degree.	independently manage episodes of care; patient assessment and prescription of medications, antimicrobials, blood products, fluids, electrolytes, analgesics, and sedatives; mechanical ventilation: intubation, initiation, management, and weaning; cardioversion, defibrillation, chest tube insertion, endotracheal intubation, initial management of postoperative complications, and patient transfer; use advanced techniques, such as endoscopy, X-ray, and electrocardiography (ECG).
Von ⁽²⁸⁾	Germany 2023	Cross-sectional study	General Intensive Care Unit	Master's degree.	Functional, psychological, social, and physical assessments; non-pharmacological therapies and ordering of laboratory tests; imaging procedures and medication prescription; wound treatment or gastric tube insertion; training courses; Guide the team and family members in complex situations and decisions; leadership; investigation and research support.
Barbeiro ⁽²⁹⁾	Brazil 2023	Dissertation – Prospective study of diagnostic test accuracy	General Intensive Care Unit.	Master's degree.	Use Point-of-Care Ultrasound (POCUS) as an extension of the physical examination at the bedside for diagnosis and screening in the assessment of pleural effusion, detection of pneumothorax, and identification of pneumonia.
COFEN ⁽³⁰⁾	Brazil 2023	Technical note	Not applicable.	Professional master's degree.	Prescribe and order examinations, tests, and devices; perform advanced diagnostic or health assessments and indicate treatment; serve as the patient's primary reference professional; refer and counter-refer patients; demonstrate leadership, clinical autonomy, education, and research skills.
Hudson ⁽³¹⁾	Brazil 2024	Theoretical-reflective study resulting from a postgraduate course completion paper	General Intensive Care Unit.	Professional master's degree alongside a Nursing Residency.	Act as an educator; consultant and researcher; manage patient care and treatment; develop and implement evidence-based protocols; minimize costs and improve quality of care; manage admission, transfer, and discharge documentation; assess patients and manage care plans; lead; provide active listening to the family; assess clinical functions; diagnose; prescribe medications; authorize intravenous fluids and blood product infusions; assess patients after ICU discharge; analyze patients receiving palliative care; manage airways; perform lumbar puncture; review laboratory tests, initiate and adjust nutrition, perform and interpret electrocardiograms; intervene in mechanical ventilation weaning and report the results; insert central venous catheters after training and credentialing; perform central and arterial catheterization.

Source: prepared by the authors.

Analysis of the articles enabled the identification of competencies and skills attributed to the APN in the ICU context. Considering the study objective of mapping this scope and adapt its applicability to the Brazilian context, it was deemed essential to clarify the distinction between the APN scope and the practices of the ICN in Brazil⁽³²⁾. This complementary approach sought to highlight the differences between the two professionals and the proposal presented in Figure 2.

Figure 2 - Scope of practice of the Advanced Practice Nurse in the Intensive Care Unit, Campina Grande, PB, Brazil, 2025.



Source: prepared by the authors.

DISCUSSION

Most studies were conducted internationally, particularly in the United States, a pioneer in APN development. Brazil had the second-highest number of publications, which were the most recent, published between 2023 and 2024, representing the efforts initiated in 2015 to develop scenarios and strategies for the implementation, education, and regulation of APN⁽³⁾. Among European countries, although few studies were identified, the relevance of APN and investments in legitimizing this professional practice also stand out, as it contributes to patient safety, improved health outcomes, and quality of care. However, most countries face limitations to the full practice of these professionals due to the lack of supportive policies, an aspect that is consistent with the Brazilian reality⁽¹⁶⁾.

APN practice in intensive care is associated with benefits such as reduced length of hospital stay and a lower incidence of clinical complications. In addition, these professionals play a crucial role in effective communication with patients, families, and the multidisciplinary team, facilitating care coordination and the implementation of care protocols^(7,8).

The types of ICUs in which APN practice varied across the studies, ranging from general ICUs⁽¹³⁻¹⁶⁻²⁰⁻²²⁻²⁶⁻²⁷⁻³¹⁾, surgical ICUs⁽²⁴⁻²⁵⁾, and units specifically designed for organ transplant, neonatal, and pediatric patients. This reality underscores the various possibilities for integrating APN into intensive care, where, in addition to serving as a reference for other members of the multidisciplinary team through advanced clinical reasoning and evidence-based guidance, APN also act as a bridge between the healthcare team, family, and patient⁽⁹⁾.

Leadership emerged as a predominant factor in defining the APN profile in critical care. The need to manage critical demands requires these professionals to have the ability to guide, prepare, and train the team for proactive care, whether during admission, care implementation, patient transfer, or discharge. Qualified clinical reasoning contributes significantly to the successful outcomes identified in the studies. These actions result from professional training, the development of programs and training initiatives, consultation, research, and periodic meetings, which APN use as tools in their practice^(17, 26).

The independent ordering and performance of diagnostic tests stands out as an important and frequent characteristic of APN, who rapidly assess and identify problems that critically ill patients may present. In addition to providing a sophisticated clinical assessment, this activity promotes more accurate treatment planning, enabling pharmacological and therapeutic interventions to be performed promptly and effectively. Furthermore, APN should also be able to balance complex practical skills, effectively managing care with the multidisciplinary team and assuming responsibilities within established boundaries^(27,33).

The performance of invasive procedures by APN is a noteworthy aspect of the scope of APN practice in the ICU. In North America⁽²⁵⁾, tracheal intubation is performed by APN in the context of pediatric critical care, which may contribute to the optimization of care, particularly through greater problem-solving capacity, timely decision-making, and integration of the interdisciplinary team.

It is necessary to understand that learning directly contributes to the development of a qualified healthcare professional. In this regard, evidence indicates that although the first intubation performed by an APN had a lower probability of success compared with other professionals, this difference is reduced through continuous training and the accumulation of clinical experience. This reality reinforces the need for progressive investments in training to consolidate this practice in intensive care, as occurs in other healthcare professions⁽³⁴⁾.

The management of Invasive Mechanical Ventilation (IMV) is also an extremely careful procedure and requires APN to maintain continuous technical and theoretical knowledge for its management. This practice has already been implemented in countries such as the United States and Australia. Although initially supervised and monitored by physicians, this activity has demonstrated beneficial results for safe and effective care provided by the entire team^(19,35).

Central venous catheter insertion performed by APN also yields positive outcomes, showing low rates of adverse events such as bloodstream infections and pneumothorax. In addition to central catheters, the primary catheters inserted are peripherally inserted catheters and dialysis catheters. The quality of professional practice regarding the insertion, care, and management of these catheters results in fewer clinical complications, potentially improved patient safety, and greater service organization⁽³⁶⁾.

Some procedures, such as PICC insertion and the use of POCUS, although internationally considered within the scope of APN practice, are already performed in Brazil by trained and qualified nurses specializing in intensive care^(35,37,38). This raises questions about the boundaries of APN practice, how it could be integrated into the Brazilian healthcare system, and possible overlaps in competencies within the nursing team. Therefore, to contribute to this discussion, the scope synthesized in Figure 2 also highlights activities that are already performed by intensive care specialists and those considered advanced practices.

Differences and convergences between APN and intensive care nurses (ICN) are evident, prompting reflections on their applicability in the Brazilian context. In this regard, the possibility of implementing APN role in the national healthcare system is debated, or

alternatively, expanding the scope of practice of ICNs to provide greater clinical autonomy and bring their competencies closer to those attributed to APN internationally⁽³⁹⁾.

Therefore, while studies are underway in Brazil to chart pathways for regulating and formalizing this practice, questions regarding APN education suggest, in the short term, a more robust incorporation of existing educational structures, combining residency training with a master's degree, with a view to developing a Brazilian education model aligned with international training standards. This proposal seeks to promote convergence and enable comprehensive training focused on expanded clinical practice and academic advancement, with professional autonomy, communication, and care aimed at improving service responsiveness and patient safety^(3, 40).

Added to these discussions is the issue of regulating APN practice, suggesting that it should guarantee the principle of professional autonomy without implying the creation of new categories or the fragmentation of the nursing profession. This is a crucial point, considering the broad scope of practice already undertaken by nurses and the multifaceted nature of the profession across different regions of the country^(29, 35, 41).

Thus, regulation is understood to be essential for guiding the development of discussions and legal instruments governing APN practice in the Brazilian context. Accordingly, the articulation among the Brazilian Nursing Association (*Associação Brasileira de Enfermagem* - ABEn), the Federal Nursing Council (*Conselho Federal de Enfermagem* - COFEN), the Brazilian Association of Adult, Pediatric, and Neonatal Intensive Care Nursing (*Associação Brasileira de Enfermagem em Terapia Intensiva Adulto, Pediátrica e Neonatal* - ABENTI), and the Brazilian Ministry of Health plays a fundamental role in building the political and institutional framework necessary to enable the education of these professionals and the implementation of APN in Brazil⁽³⁾.

Beyond identifying practices that are or are not already performed in Brazil, it is necessary to translate these scientific findings into public policies that formally structure and legitimize APN, reinforcing nursing as a protagonist in care and a fundamental pillar in strengthening the Unified Health System (*Sistema Único de Saúde* - SUS). The positive impacts on healthcare indicators reaffirm the importance of expanding the authority and autonomy of these professionals, as APN fully exercising their competencies and skills represent a strategic possibility for improving the healthcare system and effectively address current demands^(42, 43).

The limitations of this study center on the predominance of literature from English-speaking countries, which restricts the global representativeness of the findings regarding

various realities. Additionally, the extended interval between database searches may have limited the identification of eligible materials published during this period.

CONCLUSION

The scope of practice of the Advanced Practice Nurse in intensive care is characterized by the performance of invasive procedures, the use of advanced technologies, leadership in complex clinical decision-making, and involvement in interprofessional communication. Their role in the management of critically ill patients stands out, marked by a high degree of clinical autonomy, including procedures such as central venous catheter insertion, orotracheal intubation, lumbar puncture, and chest drainage, as well as high-complexity diagnostic and therapeutic decision-making. The debates and initiatives aimed at implementing the Advanced Practice Nurse role make the Brazilian context promising for the practice of these professionals in intensive care. However, their integration into the healthcare system still faces challenges stemming from the absence of specific regulations and standardized guidelines for professional education.

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DATA AND MATERIAL AVAILABILITY

Access to the dataset is available upon request from the corresponding author.

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