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EXPANDED SCOPE OF NURSING PRACTICE IN PRIMARY CARE: CONSULTATION RECORDS AND INTERVENTIONS*

ESCOPO AMPLIADO DE ATUAÇÃO DO ENFERMEIRO NA ATENÇÃO PRIMÁRIA: REGISTROS DE CONSULTAS E INTERVENÇÕES

ALCANCE AMPLIADO DE LA PRÁCTICA ENFERMERA EN LA ATENCIÓN PRIMARIA: REGISTROS DE CONSULTAS E INTERVENCIONES

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RESUMO

Objetivo: Analisar a distribuição de registros de consultas e intervenções realizadas por enfermeiros que atuam na atenção primária à saúde no Brasil, considerando sua relação com dimensões de escopo ampliado da prática. **Método:** Estudo ecológico nacional, com unidade de análise agregada por macrorregiões brasileiras, referente a 2023. Utilizaram-se dados públicos do Sistema de Informação em Saúde para a Atenção Básica e do Cadastro Nacional de Estabelecimentos de Saúde. As ações foram agrupadas em consultas de enfermagem e intervenções clínicas e terapêuticas. Calcularam-se frequências absolutas, proporções ajustadas pelo número de enfermeiros e indicadores padronizados por população, com georreferenciamento. **Resultados:** Os registros incluíram consultas relacionadas a condições crônicas, agravos transmissíveis, saúde sexual e reprodutiva, ciclo gravídico-puerperal, puericultura, saúde mental, reabilitação e rastreamentos, além de diferentes intervenções clínicas. As proporções ajustadas desses indicadores foram maiores no Sudeste (42,9; 43,7) e Nordeste (26,1; 26,5). Nos indicadores padronizados, Nordeste e Sudeste apresentaram valor semelhante para consultas (16,0), enquanto as intervenções predominaram no Sudeste (22,2). **Conclusão:** Os registros evidenciam atuação ampliada do enfermeiro, com distribuição regional desigual, sem confirmar formalmente a prática avançada de enfermagem.

Descritores: Prática Avançada de Enfermagem; Atenção Primária à Saúde; Enfermagem de Atenção Primária; Estudos Ecológicos; Sistemas de Informação em Saúde.

ABSTRACT

Objective: To analyze the distribution of consultation records and interventions performed by nurses in primary health care in Brazil, considering their relationship with the dimensions of expanded scope of practice. **Method:** A national ecological study with the unit of analysis aggregated by Brazilian macroregions, referring to the year 2023. Public data from the Health Information System for Primary Care and the National Registry of Health Facilities were used. Actions were grouped into nursing consultations and clinical and therapeutic interventions. Absolute frequencies, proportions adjusted by the number of nurses, and population-standardized indicators with georeferencing were calculated. **Results:** Records encompassed consultations related to chronic conditions, communicable diseases, sexual and reproductive health, the pregnancy-puerperal cycle, childcare, mental health, rehabilitation, and screenings, in addition to various clinical interventions. The adjusted proportions of these indicators were higher in the Southeast (42.9; 43.7) and Northeast (26.1; 26.5) regions. Regarding standardized indicators, the Northeast and Southeast presented similar values for consultations (16.0), whereas interventions predominated in the Southeast (22.2). **Conclusion:** The records highlight the expanded scope of nursing practice, characterized by uneven regional distribution, although it does not formally constitute advanced practice nursing.

Descriptors: Advanced Practice Nursing; Primary Health Care; Primary Care Nursing; Ecological Studies; Health Information Systems.

RESUMEN

Objetivo: Analizar la distribución de los registros de consultas e intervenciones realizadas por enfermeros en la atención primaria de salud en Brasil durante 2023, considerando su relación con las dimensiones del alcance ampliado de la práctica. **Método:** Estudio ecológico nacional con unidad de análisis agregada por macrorregiones. Se utilizaron datos públicos del Sistema de Información en Salud para la Atención Primaria y del Registro Nacional de Establecimientos de Salud. Las acciones se agruparon en consultas de enfermería e intervenciones clínicas y terapéuticas. Se calcularon frecuencias absolutas, proporciones ajustadas por el número de enfermeros e indicadores estandarizados por población, con su respectiva georreferenciación. **Resultados:** Se registraron consultas sobre enfermedades crónicas y transmisibles, salud sexual y reproductiva, ciclo gravídico-puerperal, atención infantil, salud mental, rehabilitación y cribados, además de diversas intervenciones clínicas. Las proporciones ajustadas de estos indicadores fueron más elevadas en las regiones Sudeste (42,9; 43,7) y Nordeste (26,1; 26,5). En los indicadores estandarizados, Nordeste y Sudeste presentaron valores similares para las consultas (16,0), mientras que las intervenciones predominaron en la región Sudeste (22,2). **Conclusión:** Se demostró un alcance ampliado de la práctica enfermera, caracterizado por una distribución regional desigual, aunque sin constituir formalmente una práctica avanzada de enfermería.

Descriptores: Práctica Avanzada de Enfermería; Atención Primaria de Salud; Enfermería de Atención Primaria; Estudios Ecológicos; Sistemas de Información en Salud.

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What is already known:

- In Brazil, nurses' expanded clinical practice predates the formal regulation of Advanced Practice Nursing.
- Professional legislation and the National Primary Health Care Policy (PNAB) support consultations, medication prescription, test ordering, referrals, and clinical procedures in Primary Health Care (PHC).
- The lack of specific professional master's degree training and dedicated regulation limits the formal recognition and consolidation of this role.

What this article adds:

- Nurses recorded consultations and interventions compatible with the clinical dimensions of Advanced Practice Nursing across all macroregions.
- Such actions include the management of chronic conditions, screenings, intrauterine device (IUD) insertion and removal, suturing, abscess drainage, specialized wound care, care for stoma patients, performance of electrocardiograms, and diabetic foot examinations.
- The regional inequalities identified point to priority areas for training, regulation, and workforce planning aimed at structuring Advanced Practice Nursing in Brazil.

INTRODUCTION

The recent growth of the global nursing workforce has not eliminated persistent shortages and the uneven distribution of these professionals across countries and territories. In this scenario, the incorporation of advanced practice roles emerges as a strategic priority to expand access, quality, and effectiveness of services, particularly where professional supply is insufficient or poorly distributed[1-2].

In the Region of the Americas, primary health care remains a central reference for organizing effective health systems, although its consolidation has been challenged by economic crises, sectoral reforms, and persistent inequalities. Furthermore, the expansion of access to postgraduate education in some countries of the Region does not eliminate implementation and regulatory gaps, suggesting that the expansion of these roles requires not only educational capacity, but also more consistent institutional and normative arrangements to fully harness the profession's potential[3-6].

In Latin America and the Caribbean, expanding the role of nurses in primary health care has been highlighted as a relevant alternative to address access gaps, qualify service responsiveness, and sustain new health workforce arrangements, especially in contexts marked by geographical and social barriers and the persistence of care deserts. In this sense, rather than merely proposing new roles, the current debate involves creating political, institutional, and educational conditions capable of integrating these functions into health systems in a consistent, sustainable manner aligned with primary care principles[3,7-8].

This movement is associated not only with the implementation of the advanced practice nurse role, but also with the definition of competencies, the regulation of autonomy, the strengthening of professional training and leadership, and the establishment of sustainable conditions for their effective integration into health systems and the labor market[8].

In Brazilian Primary Health Care, aggregated records from national databases suggest that nurses have been incorporating activities compatible with an expanded scope of practice, with unequal intensity across macroregions[8-14]. Rather than merely expressing care volume, this pattern points to a functional reorganization of nursing work within services, with direct repercussions on care coordination, system responsiveness, and workforce planning. Thus, the concrete expansion of professional attributions may precede their corresponding normative consolidation, demanding articulated responses in the fields of regulation, education, and governance.

Although primary care nurses have been assuming broader clinical, procedural, and organizational attributions, this phenomenon remains underexamined in Brazil, hindering the advancement of debates on regulation and training in Advanced Practice Nursing (APN). Therefore, this study aims to analyze the distribution of records of nurse consultations and interventions in primary health care in Brazil, considering their relationship with the dimensions of the expanded scope of practice.

METHOD

Design and unit of analysis

This is a national ecological study[15] covering the year 2023. The unit of analysis corresponded to the federated units, subsequently grouped according to the five Brazilian macroregions for the presentation of the results.

Data sources

Publicly available secondary data were used, obtained from the Health Information System for Primary Care (SISAB)[16] and the National Registry of Health Facilities, Professionals module (CNES/Profissionais)[17]. Records that met the selection parameters defined for the analyzed period were considered, without the execution of sampling or sample size calculation.

Definition of indicators and variables

Based on these sources, two indicators (designated as 4 and 5) related to APN competencies were classified. The selection, extraction, and organization of data were guided by a previously structured conceptual matrix, derived from a previous study[10], which links the APN competencies proposed by the International Council of Nurses (ICN)[2] to the regulatory provisions of the National Primary Health Care Policy (PNAB)[18].

For analytical purposes, synthetic operational definitions were adopted: clinical autonomy as the nurse's ability to conduct consultations and perform diagnostic evaluation; and clinical authority as the prerogative to prescribe, order diagnostic tests, and refer users, in accordance with current regulatory frameworks. Based on these definitions, indicator 4 corresponded to consultation records, whereas

indicator 5 grouped records of clinical and therapeutic interventions performed by nurses within the scope of Primary Health Care. The composition of the indicators is presented in Table 2, and the parameters applied to data extraction are described in Table 1.

Table 1 – Filters used for data extraction in the Health Information System for Primary Care, Ribeirão Preto, SP, Brazil, 2023

Geographical unit	Brazil
Period	January to December 2023
Column in report	Indicator 4 = Prob./Condition Assessed: Asthma, Malnutrition, Diabetes, COPD, Arterial hypertension, Obesity, Prenatal care, Childcare, Puerperium (up to 42 days), Sexual and reproductive health, Smoking, Alcohol user, Other drug user, Mental health, Rehabilitation, Communicable diseases - Dengue, Communicable diseases - STIs, Communicable diseases - Leprosy, Communicable diseases - Tuberculosis, Breast cancer screening, Cervical cancer screening, Cardiovascular risk screening. Indicator 5 = Chemical cauterization of small lesions, Nail surgery (cantoplasty), Stoma care, Specialized wound dressing, Abscess drainage, Electrocardiogram, Diabetic foot examination, Excision/biopsy/puncture of tumor, Fundoscopy, Synovial cavity infiltration, Removal of subcutaneous foreign body, Cerumen removal, Removal of foreign body in ear/nasal cavity, Simple suture, IUD. SIGTAP: (0301040141) Intrauterine Device (IUD) insertion, (0301040150) Intrauterine Device (IUD) removal.
Type of care	Scheduled appointment prog./cont. care, Scheduled appointment, Demand-driven initial assessment/guidance, Demand-driven same-day consultation, Demand-driven urgent care.
Professional category	Nurse
Care setting	Primary care unit, Mobile unit, Street, Home, School/daycare center, Other, Center (Health Gym), Institution/shelter, Prison unit or similar, Socio-educational unit
Type of health team	Family Health Strategy (FHS) team, Community Health Worker (CHW) team, NASF/eMulti, Primary Care (PC) team, Street Outreach (SO) team, Oral Health (OH) team, Prison Primary Care (PPC) team.

*NASF = Family Health Support Center
Source: Research data.

These indicators correspond to administrative production records and do not allow for detailing the clinical complexity involved in each action. Nevertheless, they express dimensions of the legal and normative scope of nursing practice in PHC, enabling the analysis of the territorial distribution of these activities and their approximation with the competencies described in the international framework.

Data selection and extraction

Data extraction from SISAB was performed between November 3 and 5, 2024, through an automated and parameterized process. The same set of filters was applied to states, team modalities, and care settings, according to the options provided by the system. Records referring to the 12 months of 2023 were selected, restricted to the nurse professional category and the team modalities qualified in PHC. The selection considered the standardized codes and parameters of the System for Managing the Table of Procedures, Medications, and Orthoses, Prostheses, and Special Materials of the Brazilian Unified Health System, as presented in Table 1.

Data processing and validation

After extraction, the database underwent double validation, conducted by a statistician and a second researcher responsible for checking and manipulating the data. The integrity, consistency, and adequacy of the records to the study criteria were verified. Considering the aggregation by care event, date, and procedure, no duplicates were identified according to the established criteria. Incomplete or invalid records, or those incompatible with PHC, were excluded through the applied filters.

Population and geospatial data

Population and geospatial data were obtained from the Brazilian Institute of Geography and Statistics (IBGE)[19]. The populations of the federated units and the total Brazilian population in the adopted census year were considered. For georeferencing, digital files of the national territory and its subdivision into federated units were used, in .shp, .shx, and .prj formats, with the SIRGAS 2000 geographic projection

Data analysis

This stage was divided into two phases.

Phase 1 – Descriptive analysis

The absolute frequencies of the activities associated with the selected indicators were quantified by macroregion. This phase allowed for estimating the volume of actions performed by nurses within the scope of PHC, classified according to the domains of advanced practice. The workforce of nurses linked to PHC registered in the National Registry of Health Facilities (CNES/Profissionais)[17] was also used as a reference. Data extraction was performed based on the data available for the month of July 2023, as described in Table 2.

Table 2 – Composition of Indicators 4 and 5 and distribution of records of consultations and interventions performed by nurses in Primary Health Care, by Brazilian macroregions. Ribeirão Preto, SP, Brazil, 2023.

Indicator 4 = Role designated for activities focused on care (direct or indirect), disease prevention, and treatment in advanced-level health services, including rehabilitation care and chronic disease management. This role falls beyond the scope of practice of a generalist or specialist nurse.	Regulatory basis: 4.2. Specific responsibilities of professionals working in Primary Health Care teams. 4.2.1. Nurse: I – Provide health care to individuals and families assigned to the teams and, when indicated or necessary, throughout all stages of life. II – Conduct nursing consultations.	*Consultations (Problem/Condition Assessed):* Asthma, malnutrition, diabetes, COPD, hypertension, obesity, prenatal care, child health care, postpartum care (up to 42 days), sexual and reproductive health, smoking, alcohol use, other drug use, mental health, rehabilitation, communicable diseases (dengue, sexually transmitted diseases [STDs], leprosy, tuberculosis), breast and cervical cancer screening, and cardiovascular risk screening.	North	6.524.781
			Northeast	29.497.337
			South	15.154.795
			Southeast	29.453.499
			Central-West	5.873.637
Indicator 5 = Ability to manage complete episodes of care and complex health problems, including those involving vulnerable populations with limited access to services and populations at risk.	Regulatory basis: 4.2. Specific responsibilities of professionals working in Primary Health Care teams. 4.2.1. Nurse: II – Conduct nursing consultations and procedures, request complementary tests, and prescribe medications in accordance with protocols, clinical and therapeutic guidelines, or other technical regulations established by the federal, state, or municipal health authority or the Federal District, in compliance with the legal provisions governing the profession. III – Conduct and/or supervise the initial reception process (acolhimento), including qualified listening and risk classification, in accordance with established protocols.	*Interventions:* Chemical cauterization of minor lesions, nail surgery (nail fold surgery), stoma care, specialized wound dressing, abscess drainage, electrocardiography, diabetic foot examination, tumor excision/biopsy/puncture, funduscopy, synovial cavity injection, removal of subcutaneous foreign bodies, cerumen removal, removal of foreign bodies from the ear or nasal cavity, simple suturing, and intrauterine device (IUD) procedures. SIGTAP: (0301040141) Insertion of an Intrauterine Device (IUD); (0301040150) Removal of an Intrauterine Device (IUD).	North	59.257
			Northeast	146.138
			South	154.651
			Southeast	386.980
			Central-West	70.681

Source: Research data (Primary Health Care Information System – SISAB, 2023).

Phase 2 – Calculation of indicators and georeferencing

Based on the aggregated information, two indices were constructed.

1) Adjusted proportion: calculated using linear regression, adjusted for the size of the nurse population. This technique was used to obtain the expected number of actions for each of the evaluated indicators, considering the size of the nurse population (covariate) of each federated unit, with the objective of minimizing the confounding effect resulting from the uneven distribution of these professionals across the national territory. The index was calculated according to the equation:

$$Adjusted\ proportion = \frac{Expected\ number\ for\ the\ item\ in\ Table\ 2}{Overall\ total\ for\ the\ item} * 100$$

The goodness of fit of the linear regression models was evaluated using R^2 and adjusted R^2 (both above 90%) and the homoscedasticity of the residuals (data not shown).

2) Standardized rate: estimated by direct standardization, adopting the total Brazilian population (census year) as the standard population. Based on the totals presented in Table 2, crude proportions were calculated (observed number of the indicator divided by the grand total of the indicator) and the indices were estimated according to the equation:

$$Standardized\ rate = \frac{Item\ raw\ frequency}{Standard\ population} * 10^n$$

This index allows for comparison in two directions: within and between macroregions. For plotting on thematic maps[20], the index was classified into quarters, according to the distribution quartiles.

All analyses were performed using Stata® software, version 13.2, with the application of the spmap command package[21] for the georeferencing stage of the standardized rates.

Ethical aspects

Because this study was based exclusively on secondary, aggregated, and public-domain data, approval by an ethics committee was not required, in accordance with the waiver provided for in CNS Resolution nº 510/2016.

RESULTS

Selected records encompassed consultations related to chronic conditions, communicable diseases, sexual and reproductive health, the pregnancy-puerperal cycle, childcare, mental health, rehabilitation, and screenings, grouped under Indicator 4. Indicator 5 comprised clinical and therapeutic interventions, among which intrauterine device insertion and removal, simple suture, abscess drainage, specialized wound dressings, stoma care, electrocardiograms, and diabetic foot examinations stand out. Together, these records demonstrate the diversity of actions reported by nurses in SISAB.

The adjusted proportions of Indicators 4 and 5 showed a similar regional distribution. In both indicators, the Southeast macroregion concentrated the highest adjusted values (42.9 and 43.7, respectively), followed by the Northeast (26.1 and 26.5). The lowest proportions were observed in the North (8.0 for both indicators) and Midwest (8.9 for both) regions, whereas the South region presented intermediate values (12.1 and 12.2) (Table 3).

Table 3 – Adjusted proportions by item in Table 2 for the Brazilian macroregions. Ribeirão Preto, SP, Brazil, 2023.

Brazilian macroregion	Adjusted proportions*	
	Indicator 4 – Consultations	Indicator 5 – Interventions
North	8.0	8.0
Northeast	26.1	26.5
Southeast	42.9	43.7
South	12.1	12.2
Central-West	8.9	8.9

* Adjusted for the size of the nursing workforce.
Source: Research data (Primary Health Care Information System – SISAB; National Registry of Health Facilities – CNES, 2023).

The standardized indicators also revealed heterogeneity among the macroregions. For Indicator 4, the highest values were observed in the Northeast and Southeast regions (16.0 in both), followed by the South (8.2), North (3.5), and Midwest (3.2). For Indicator 5, the Southeast region presented the highest standardized value (22.2), followed by the South (8.9), Northeast (8.4), Midwest (4.0), and North (3.4) (Table 4).

Table 4 – Standardized indicators by item in Table 2 for the Brazilian macroregions. Ribeirão Preto, SP, Brazil, 2023.

Brazilian macroregion	Standardized indicators*	
	Indicator 4 – Consultations	Indicator 5 – Interventions
North	3.5	3.4
Northeast	16.0	8.4
Southeast	16.0	22.2
South	8.2	8.9
Central-West	3.2	4.0

* Standardization using the direct method, with the total Brazilian population as the standard population.
Source: Research data (Primary Health Care Information System – SISAB; Brazilian Institute of Geography and Statistics – IBGE, 2023).

Figure 1 presents the operationalization of the indicators analyzed in the study. Indicator 4 (consultations) compiled nursing consultation records related to different conditions and care cycles in primary health care, whereas Indicator 5 (interventions) compiled records of interventions and procedures performed by nurses at the same level of care.

In summary, the results showed an uneven regional distribution of the analyzed records, with a predominance of the Southeast macroregion in the adjusted proportions of both indicators and distinct behavior of the standardized indicators among the macroregions — especially in the contrast between the Northeast and the Southeast for Indicator 4 (consultations) and in the predominance of the Southeast for Indicator 5 (interventions).

DISCUSSION

The analyzed records show that nurses participate in different clinical cores of primary health care through consultations related to chronic conditions, communicable diseases, women's and children's health, mental health, rehabilitation, and screenings, in addition to clinical and therapeutic interventions of varying complexity. This repertoire is compatible with the expanded scope dimensions provided for in the adopted framework, although it does not allow for equating it to formally established advanced practice nursing. SISAB reports the type and volume of recorded actions, but does not identify the professional's specific training, the degree of autonomy effectively exercised, the clinical complexity of the cases, the decision-making process, the continuity of care, or the outcomes achieved.

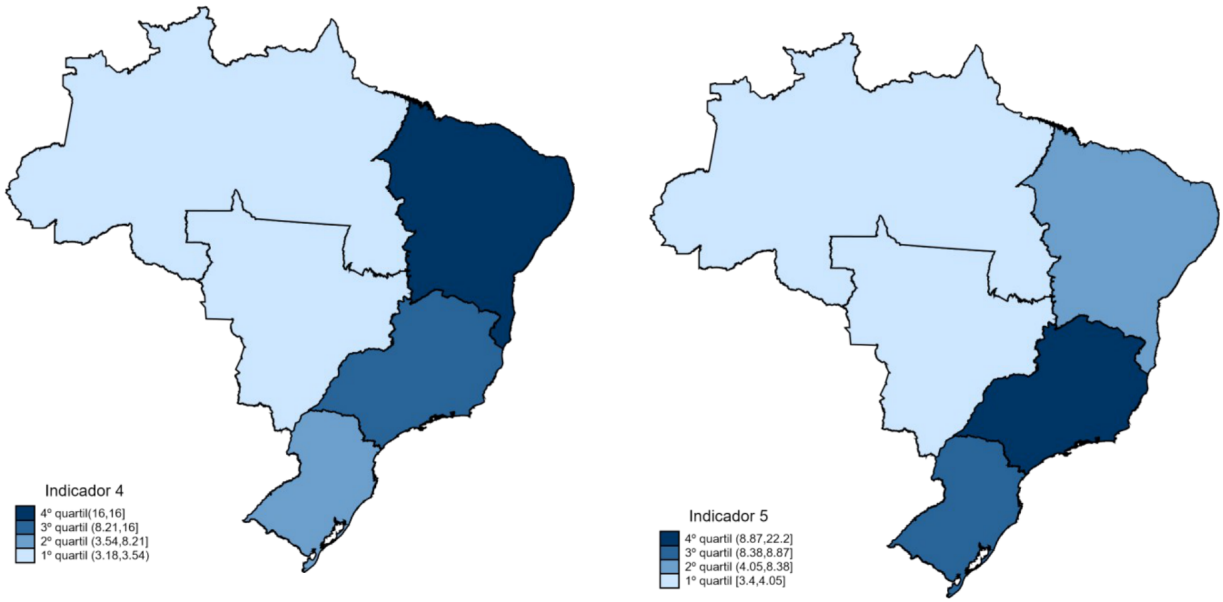
The differences between macroregions also require cautious interpretation. Even after adjusting for the number of nurses, the observed distribution may result from the combination of network organization, availability of professionals and resources, the existence of local protocols, the capacity to provide procedures, and the ways SISAB data are entered. Variations in the completeness, regularity, and coding of records can increase or reduce the presented values without necessarily representing equivalent differences in clinical practice or population access. Thus, the identi-

fied asymmetry is, above all, an asymmetry of the analyzed records, which demands further investigation through state and municipal studies that incorporate territorial needs, service structure, and information quality.

Figure 1 – Georeferenced standardized indicators across the Brazilian macroregions. Ribeirão Preto, SP, Brazil, 2023.

Indicator 4 (Consultations): Role designated for activities focused on care (direct or indirect), disease prevention, and treatment in advanced-level health services, including rehabilitation care and chronic disease management. This role falls beyond the scope of practice of a generalist or specialist nurse.

Indicator 5 (Interventions): Ability to manage complete episodes of care and complex health problems, including those involving vulnerable populations with limited access to services and populations at risk.



Consultations (Problem/Condition Assessed): Asthma, malnutrition, diabetes, chronic obstructive pulmonary disease (COPD), hypertension, obesity, prenatal care, child health care, postpartum care (up to 42 days), sexual and reproductive health, smoking, alcohol use, other drug use, mental health, rehabilitation, communicable diseases (dengue, sexually transmitted diseases [STDs], leprosy, tuberculosis), breast and cervical cancer screening, and cardiovascular risk screening.

Interventions: Chemical cauterization of minor lesions, nail surgery (nail fold surgery), stoma care, specialized wound dressing, abscess drainage, electrocardiography, diabetic foot examination, tumor excision/biopsy/puncture, funduscopy, injection into the synovial cavity, removal of subcutaneous foreign bodies, cerumen removal, removal of foreign bodies from the ear or nasal cavity, simple suturing, and insertion and removal of an intrauterine device (IUD – SIGTAP: 0301040141 and 0301040150).

Source: Research data (Primary Health Care Information System – SISAB; Brazilian Institute of Geography and Statistics – IBGE, 2023).

The expansion of nursing work in PHC in Brazil occurs in a context where legal and normative bases for the exercise of clinical attributions already exist, such as autonomy in nursing consultations, medication prescription, and test ordering, in terms of professional legislation[22], the PNAB[18], and normative acts from the Federal Council of Nursing (Cofen)[22]. At the same time, although the country has a consolidated structure of stricto sensu postgraduate nursing education at master's and doctoral levels—both in academic and professional modalities—training oriented specifically toward advanced practice is not yet established in a manner corresponding to the expansion observed in the daily routine of services[23-25].

The Pan American Health Organization (PAHO) proposes three training pathways for implementing advanced practice nursing in Latin American and Caribbean primary health care. The first model involves graduate nurses entering professional master's programs offered by accredited universities, with a specific focus on primary care. The second is aimed at nurses with prior experience in PHC services, providing complementary clinical training and theoretical-practical updating underpinned by APN core competencies. The third model targets recently graduated nurses through entry into a primary care residency linked to a master's program, culminating in certification as an advanced practice nurse. Together, these models highlight that implementing APN requires differentiated training pathways capable of recognizing both the experience accumulated in services and the need for academic qualification, clinical supervision, and regulatory alignment to ensure

safety, quality, and professional recognition[3].

In this regard, the findings reinforce the urgency of deepening the debate regarding APN implementation in the country, including regulatory and educational strategies such as the development of professional master's programs focused on PHC. However, transitioning from an expanded scope of activities to the consolidation of advanced practice nursing depends neither solely on normative authorization nor on the expansion of procedures recorded in information systems. This movement requires ethical, organizational, and educational conditions that support clinical autonomy, responsible decision-making, interprofessional collaboration, and the social commitment of care. Along these lines, a Brazilian study on ethical climate in PHC showed that principles and rules such as benevolence, independence/individualism, and a sense of community/social responsibility constitute relevant dimensions for understanding how work environments foster or limit professional practices guided by collective responsibility, moral judgment, and commitment to public service[26].

Complementarily, research on nursing ethical competencies in PHC, from the perspective of APN, indicated that although such competencies are recognized as part of the expected profile of an advanced practice nurse, their application remains limited in the national context, reinforcing the need to incorporate ethics more explicitly into APN educational, regulatory, and institutional processes[13,26]. Thus, the records analyzed in this study should be interpreted not only as evidence of the functional expansion of nursing work, but as the expression of a process that demands the development of clinical, ethical, and political competencies for its consolidation as advanced practice in the Brazilian health system.

This interpretation converges with PAHO regional recommendations, according to which the implementation of advanced practice nursing in primary care demands a clear definition of roles, competence development, regulation, the drafting of care protocols, appropriate integration into the labor market, and the participation of various institutional stakeholders, including governments, services, educational institutions, professional associations, and policymakers. PAHO also highlights that expanding the nurse's role must be accompanied by leadership strategies, participation in decision-making spaces, and the construction of collaborative networks, so that APN is not restricted to the execution of clinical activities, but constitutes a workforce policy oriented toward universal access, equity, and the qualification of primary care[3].

In Mexico, advanced practice nursing is not yet implemented in a consolidated manner, and its development remains conditioned on a clearer definition of the professional role, recognition of the function, and the advancement of regulatory and legislative frameworks. At the same time, the opening of advanced practice nursing master's programs by some universities in the country shows that training has begun to take shape, even though studies themselves indicate that this movement alone is not enough to ensure the incorporation of the role without broader legal, organizational, and institutional changes. Thus, the Mexican case illustrates a process in which educational capacity advances before regulatory consolidation, leaving open the challenges of integrating these professionals into the health system[27-29].

In contrast, the Chilean experience indicates that the implementation of advanced practice nursing is a gradual process, dependent on the articulation between training, regulation, labor market insertion, and the construction of political and institutional legitimacy. On one hand, analyses of the country's context indicate that, despite the centrality attributed to primary care since the health reform and the recognition of APN's potential to reduce access barriers, improve care continuity, and address territorial inequities, challenges persist related to the still unclearly defined role, the need for legislative changes, and the insufficiency of incentives for professional training and consolidation[30].

Chile has advanced through a systematic process guided by the Participatory, Evidence-Based, Patient-Focused Process for Advanced Practice Nursing (PEPPA) framework, with the creation of professional master's programs, collaboration among universities, professional associations, patients, managers, and political actors, alongside the development of protocols, labor market insertion mechanisms, and practice settings with autonomy supported by regulations and collaborative supervision, although the consolidation of APN in PHC is still ongoing[31-33]. Together, these data make Chile a relevant regional case, as they demonstrate that expanding the nurse's role does not stem solely from the existence of specialized training, but from a broader arrangement of leadership, political decision-making, intersectoral pacts, and progressive adaptation of care models.

Finally, in the Latin American scenario, the consolidation of advanced practice nursing still encounters obstacles related to insufficient conceptual, training, and regulatory standardization[34]. Although Chile is presented as a regional benchmark of progress in implementation, with more visible advances in structuring this role, Colombia and Brazil are among the countries that have sustained this debate on more recent bases, with Brazil exhibiting favorable conditions to advance in this process due to its robust infrastructure of stricto sensu postgraduate nursing programs[34].

In Brazil, the discussion has been driven by joint articulations among the Brazilian Nursing Association (ABEn), Cofen, PAHO, and the Ministry of Health (MoH), focusing on expanding universal health access and implementing APN in primary care, especially in fields such as family health, maternal and child health, and chronic condition management. This movement included, in 2022, lecture cycles featuring experiences from Chile, Mexico, the United States, Spain, the United Kingdom, and Canada, as well as the submission of training course proposals to the Coordination for the Improvement of Higher Education Personnel (Capes)[35].

However, the rejection of these proposals, justified by the lack of APN regulation in the country, highlighted the tension between the advancement of the institutional debate and the fragility of the training axis. In contrast, the creation of a working group by the MoH in 2023 suggests that the regulatory pillar has begun to be built, although training remains a critical point for the consolidation of APN in Brazil[35].

This scenario reinforces that consolidating APN in Brazil requires more than recognizing practices already performed in the daily routine of PHC. It is necessary to expand spaces for academic, professional, and interinstitutional discussion that allow for mapping national demands, guiding educational changes, and bringing research, teaching, management, and nursing practice closer together. Furthermore, leadership must be understood as a strategic competence in this process, as it enables nurses to coordinate teams, lead improvement projects, and produce measurable changes in care indicators, bridging the expansion of professional scope with concrete outcomes for health services[36-38].

The results of the present study add an essential dimension to this debate: APN in Brazil should not be planned solely based on installed national capacity, but also on the concrete disparities that cut across PHC in the territories. The country possesses significant formative potential, supported by the existence of postgraduate nursing programs, and relies on international references, such as the models proposed by PAHO to train graduate nurses, professionals with prior experience in primary care, and recent graduates through pathways articulated with residency and master's programs[3,23-25].

International evidence has examined population outcomes associated with the performance of nurse practitioners in specific regulatory contexts. In a randomized controlled trial conducted in the United States, in which these professionals and physicians assumed equal authority and responsibility in primary care, no significant differences were found in self-rated health status, service utilization, and most evaluated clinical measures[39]. In an observational study of Medicare beneficiaries diagnosed with diabetes, exclusive follow-up by nurse practitioners was associated with lower odds of potentially preventable hospitalization, although the authors acknowledge the possibility of residual confounding[40].

Regarding geographic access, a North American study compared, through geocoding, three levels of nurse practitioner regulation. In states with independent practice, the adjusted probability of the population living more than a 30-minute drive from the nearest primary care professional was lower than in more restrictive states, pointing to professional autonomy as a potential strategy to expand access[41]. In an analysis between border counties in Maryland and Pennsylvania, full practice authority was associated with a higher density of nurse practitioners and better self-rated general and mental health outcomes, with no significant difference in preventable hospitalizations[42].

The challenge, therefore, lies not only in recognizing this capacity, but in transforming it into training trajectories sensitive to regional needs. The analyzed consultations and interventions show nurses acting as protagonists in care organization, present both in clinical follow-up and in procedural actions of greater technical density; however, the uneven distribution of records — with lower expression in the North and Midwest and higher concentration in other regions — indicates that the expansion of professional scope does not advance uniformly. Thus, training for APN implies reaching out to territories where this performance appears with lower intensity, strengthening clinical competencies, leadership, and decision-making, and creating mechanisms so that professional qualification reduces asymmetries, expands the resolution capacity of PHC, and values existing practices in the daily routine of services.

STUDY LIMITATIONS

This study presents limitations inherent to the ecological design and the use of aggregated secondary data. The analyzed records reflect the production reported in official systems, but do not allow for the evaluation of the clinical complexity of each consultation, the quality of the decisions made, the degree of autonomy effectively exercised by the nurse, or the outcomes produced for users and services. Furthermore, regional differences may reflect both actual variations in work organization and disparities in system data entry, professional availability, service infrastructure, and local recording processes.

From a population perspective, the presence of these records across all macroregions documents the participation of nurses in the provision of care directed at frequent primary care needs. The recorded volume, however, is not equivalent to effective access nor does it demonstrate health improvement. The study did not evaluate care coverage, waiting times, continuity of follow-up, timeliness of care, control of chronic conditions, reach of screenings, hospitalizations for primary care-sensitive conditions, or user experience. The findings therefore delineate where and with what intensity the actions were recorded, without allowing for the attribution of direct changes in service resolutiveness or territorial health indicators.

CONCLUSION

This study analyzed the distribution of consultation and intervention records performed by nurses in Brazilian primary health care and demonstrated that these professionals participate in different clinical, preventive, therapeutic, and procedural lines of care to meet the population's demands and needs. The repertoire of actions identified highlights the leadership of nursing in care organization and shows that dimensions compatible with an expanded scope are already expressed in the daily routine of services. However, the uneven regional distribution of indicators reveals that this expansion does not occur homogeneously across the country, with a higher concentration in some macroregions and lower expression in others, especially when observing clinical and therapeutic interventions.

These results do not allow for affirming the formal existence of advanced practice nursing in Brazil, nor for inferring individual competencies from aggregated data. Indeed, the country possesses significant academic potential, expressed in the trajectory of postgraduate nursing education, but this heritage needs to be converted into training pathways oriented toward the needs of PHC, especially through the creation and strengthening of professional master's programs focused on advanced practice at this level of care.

The implementation of APN in Brazil must, therefore, go beyond the recognition of already existing practices and advance toward the construction of institutional pathways

capable of qualifying nurses, reducing regional asymmetries, and expanding the responsiveness of services. This requires urgent articulation among educational institutions, regulatory bodies, managers, and nursing representative entities, with special attention to the territories where the analyzed records showed lower expression. By guiding training and regulation based on the identified inequalities, the country will be able to transform the leadership already exercised by nurses in PHC into a structured, safe, and socially committed advanced practice policy aimed at access, equity, and the resolutiveness of the health system.

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CONFLICT OF INTEREST

The authors declare no conflict of interests.

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USE OF ARTIFICIAL INTELLIGENCE

The ChatGPT tool, developed by OpenAI, was used to support reference organization and grammatical review. All suggestions were analyzed, verified, and validated by the authors, who assume full responsibility for the content presented.

REFERENCES

1. World Health Organization. State of the world's nursing 2025: investing in education, jobs, leadership and service delivery [Internet]. Geneva: World Health Organization; 2025 [cited 2026 Sep 24]. Available from: https://www.who.int/publications/i/item/9789240110236
2. Schober M, Lehwaldt D, Rogers M, Steinke M, Turale S, Pulcini J, et al. Guidelines on advanced practice nursing 2020 [Internet]. Geneva: International Council of Nurses; 2020 [cited 2026 Sep 24]. Available from: https://www.icn.ch/system/files/documents/2020-04/ICN_APN%20Report_EN_WEB.pdf
3. Pan American Health Organization. Expanding the roles of nurses in primary health care [Internet]. Washington, D.C.: PAHO; 2018 [cited 2026 Sep 24]. Available from: https://www.paho.org/en/documents/expanding-roles-nurses-primary-health-care
4. Almeida EWS, Godoy S, Silva IR, Dias OV, Marchi-Alves LM, Mendes IAC. Mapping of advanced practice nursing actions in the Family Health Strategy. Rev Bras Enferm. 2021;74(Suppl 6):e20210228. https://doi.org/10.1590/0034-7167-2021-0228. PMID: 34431931.
5. Mendes IAC, Silva ÍR, Ventura CAA, Almeida EWS, Silva MCN da. Nursing Now Brazil Campaign: alignments with global evidence for the development of national nursing. Rev Gaúcha Enferm. 2021;42(spe):e20200406. https://doi.org/10.1590/1983-1447.2021.20200406. PMID: 34787234.
6. Moreno-Dias B, Angeli-Silva L, Prada-Sanabria CA, Silva TPC, Cassiani SHB, Puertas-Donoso EB. Expanding the scope of practice for nurses: possibilities in five Latin American countries. Rev. Latino-Am. Enfermagem. 2026;34:e4819. https://doi.org/10.1590/1518-8345.8037.4819. PMID: 42307346.
7. Cassiani SHB, Silva FAM. Expanding the role of nurses in primary health care: the case of Brazil. Rev Latino-Am Enfermagem. 2019;27:e3245. https://doi.org/10.1590/1518-8345.0000.3245. PMID: 31826172.
8. Moreno-Dias B, Bolastig EVC, Puertas-Donoso EB. Scope of nursing practice in primary health care: defining a way forward. Rev Latino-Am Enfermagem. 2025;33:e4840. https://doi.org/10.1590/1518-8345.0000.4840. PMID: 41259554.
9. Mendes IAC, Almeida EWS, Silva ÍR, Andrade EMLR, Bernardes RM, Almeida RGS, et al. Nursing consultations in primary health care in Brazil: distribution and productivity in the management of chronic non-communicable diseases. Rev Panam Salud Publica. 2025;49:e115. https://doi.org/10.26633/RPSP.2025.115. PMID: 41383271.
10. Almeida EWS, Silva IR, Godoy S, Toso BRGO, Siqueira EF, Peres EM et al. Advanced Nursing Practice in the context of Primary Health Care in Brazil: documentary research. Rev Bras Enferm. 2025;78(Suppl 4):e20250155. https://doi.org/10.1590/0034-7167-2025-0155. PMID: 41370544.
11. Almeida EWS, Godoy S, Almeida RGS, Bernardes RM, Galisteu MEV, Scassiotti JCS et al. Enfermagem na atenção primária: saúde escolar e visita domiciliar como estratégia de inclusão e equidade. Enferm Foco. 2025;16(Suppl 1):e-202512SUPL1. https://doi.org/10.21675/2357-707X.2025.v16.e-202512SUPL1
12. Almeida EWS, Silva IR, Godoy S, Santos SS, Peres EM, Dias O V et al. Autonomia do enfermeiro na realização de consultas na atenção básica: evidências de práticas avançadas de enfermagem. Acta Paul Enferm. 2025;38(nspe1):e-SPE13p. https://doi.org/10.37689/acta-ape/2025SPE13p
13. Siqueira EF, Gonçalves MSM, Brandão JL, Palha PF, Almeida EWS, Carrer MO et al. Competências éticas da enfermagem na APS: perspectivas da prática avançada. Acta Paul Enferm. 2025;38(nspe1):e-SPE25p. https://doi.org/10.37689/acta-ape/2025SPE25p
14. Almeida EWS, Peres EM, Gonçalves MSM, Siqueira EF, Souza Neto CM, Costa RC et al. Atividades de práticas avançadas de enfermagem na Atenção Primária

à Saúde. Acta Paul Enferm. 2025;38(nspe1):e-SPE21p. https://doi.org/10.37689/acta-ape/2025SPE21p

15. Bonita R, Beaglehole R, Kjellström T. Basic epidemiology. 2nd ed. Geneva: World Health Organization [Internet]. 2006 [cited 2025 Sep 16]. Available from: https://apps.who.int/iris/handle/10665/43541
16. Ministério da Saúde (BR). Sistema de Informação em Saúde para a Atenção Básica – SISAB [Internet]. Brasília (DF): Ministério da Saúde; [cited 2025 Apr 27]. Available from: https://sisab.saude.gov.br/paginas/acessoRestrito/relatorio/federal/saude/RelSauProducao.xhtml
17. Ministério da Saúde (BR). Cadastro Nacional de Estabelecimentos de Saúde (CNES) [Internet]. Brasília (DF): Ministério da Saúde; 2021 [cited 2021 Mar 20]. Available from: http://cnes.datasus.gov.br/pages/estabelecimentos/consulta.jsp
18. Ministério da Saúde (BR). Portaria nº 2.436, de 22 de setembro de 2017: aprova a Política Nacional de Atenção Básica (PNAB) [Internet]. Brasília (DF): Ministério da Saúde; 2017 [cited 2025 Apr 27]. Available from: https://atencaoprimaria.rs.gov.br/upload/arquivos/201710/03112610-portaria-gm-2-436-2017-nova-pnab.pdf
19. Instituto Brasileiro de Geografia e Estatística (IBGE). Downloads Geociências: mapas digitais e coordenadas geodésicas [Internet]. Rio de Janeiro: IBGE; 2017 [cited 2025 Apr 27]. Available from: http://downloads.ibge.gov.br/downloads_geociencias.htm
20. Pisati M. Simple thematic mapping. Stata J. 2004;4(4):361-78. https://doi.org/10.1177/1536867X0400400401
21. Pisati M. SPMAP: module to visualize spatial data [software]. Stata; 2008 [cited 2025 Sep 16]. Disponível em: https://ideas.repec.org/c/boc/bocode/s456812.html
22. Brasil. Lei nº 7.498, de 25 de junho de 1986. Dispõe sobre a regulamentação do exercício da enfermagem e dá outras providências [Internet]. Brasília (DF): Presidência da República; 1986 [cited 2025 Sep 16]. Available from: https://www.planalto.gov.br/ccivil_03/leis/l7498.htm
23. Mattos-Pimenta CA, Coca KP, Amorim MHC, Belasco AGS, Gabrielloni MC, Schirmer J. Prática avançada em enfermagem na saúde da mulher: formação em mestrado profissional. Acta Paul Enferm. 2020;33:eAPE20200123. https://doi.org/10.37689/acta-ape/2020AE01235
24. Santos JLG, Rodríguez-López JI, Ortiz-Anaya Y, Franco SMA, Rodríguez-Martín D, Galbany-Estragués P et al. Doctoral education in nursing in Ibero-America: an analysis of its evolution and perspectives for the future. J Adv Nurs. 2026;82(5):4235-44. https://doi.org/10.1111/jan.70422. PMID: 41355198.
25. Mendes IAC, Ventura CAA, Silva IR, Gir E, Almeida EWS, Queiroz AAFLN et al. Alignment and contribution of nursing doctoral programs to achieve the sustainable development goals. Hum Resour Health. 2020;18(86). https://doi.org/10.1186/s12960-020-00530-7. PMID: 33160380.
26. Pereira LEM, Brehmer LCF, Santos JLG, Dalmolin GL, Andrade LLC, Ramos FRS. Ethical climate in the primary health care workplace: a mixed-method study. Rev Latino-Am Enfermagem. 2026;34:e4756. https://doi.org/10.1590/1518-8345.7499.4757
27. Lee G, Nigenda G, Aristizabal P, Zárate-Grajales RA. Identifying the priorities to develop advanced practice nursing in Mexico using a Delphi study. West J Nurs Res. 2025;47(11):1015-24. https://doi.org/10.1177/01939459251364643. PMID: 40936261.
28. Peralta-Peña SL, Escobar-Castellanos B. Master's degree in advanced practice nursing for northwestern Mexico by the University of Sonora. SANUS. 2023;8(19). http://doi.org/10.36789/revsanus.vi1.450
29. Lee G, Nigenda G. Changing the delivery of healthcare in Mexico: time for advanced practice nursing. J Adv Nurs. 2025;81(9):5634-5. http://doi.org/10.1111/jan.16872. PMID: 40019018.
30. Urrutia-Egaña MJ, Perucca-Gallegos D, Valdés-Martinic CF. Advanced practice nurses in Chile: identifying barriers and opportunities in their role. Enferm Univ. 2021;18(2):128-37. http://doi.org/10.22201/eneo.23958421e.2021.2.952
31. Bryant-Lukosius D, Dicenso A. A framework for the introduction and evaluation of advanced practice nursing roles. J Adv Nurs. 2004 Dec;48(5):530-40. http://doi.org/10.1111/j.1365-2648.2004.03235.x. PMID: 15533091.
32. Mackay MCC, Doren FM, Dias BM. Ampliação do âmbito de atuação dos enfermeiros no Chile. Acta Paul Enferm. 2025;38(nspe 1):e-SPE01p. http://doi.org/10.37689/acta-ape/2025SPE01p
33. Aguirre-Boza F, Mackay MCC, Pulcini J, Bryant-Lukosius D. Estratégia de implementação para a prática avançada de enfermagem na Atenção Primária à Saúde no Chile. Acta paul enferm. 2019;32(2):120–8. https://doi.org/10.1590/1982-0194201900018
34. Rojas LZ, Mendoza-Quiñonez AC, Mora Rico LA. El desafío global de la enfermería de práctica avanzada: un llamamiento a la estandarización y el reconocimiento. Rev Cuid. 2026;17(1):e5965. https://doi.org/10.15649/cuidarte.5965. PMID: 41994340.
35. Toso BRGO, Peres EM. Mais avanços que retrocessos na implementação da Prática Avançada de Enfermagem no Brasil. Online Braz J Nurs. 2023; 22(Suppl 2). https://doi.org/10.17665/1676-4285.20236694
36. Dantas RDS, Flores PVP, Aquino ACO, Tomaz CPR, Tinoco JMVP. Advanced Practice Nursing, leadership,and implementation of improvements to reduce health care-associated infections. Online Braz J Nurs. 2024;22 Suppl 2:e20246717. https://doi.org/10.17665/1676-4285.20246717
37. Vitor AF. Perspectivas da Prática Avançada de Enfermagem no Brasil e no mundo. Online Braz J Nurs. 2019;17(1):1. https://doi.org/10.17665/1676-4285.20186189
38. Silva IR, Mendes IAC, Ventura CAA. Strategic directions for strengthening nursing and midwifery: potentialities and connections in the complex perspective. Rev. Latino-Am. Enfermagem. 2020;28:e3380. https://doi.org/10.1590/1518-8345.4456.3380. PMID: 33084779.

39. Mundinger MO, Kane RL, Lenz ER, Totten AM, Tsai WY, Cleary PD et al. Primary care outcomes in patients treated by nurse practitioners or physicians: a randomized trial. JAMA. 2000;283(1):59-68. https://doi.org/10.1001/jama.283.1.59. PMID: 10632281.
40. Kuo YF, Chen NW, Baillargeon J, Raji MA, Goodwin JS. Potentially preventable hospitalizations in Medicare patients with diabetes: a comparison of primary care provided by nurse practitioners versus physicians. Med Care. 2015;53(9):776-83. https://doi.org/10.1097/MLR.0000000000000406. PMID: 26270826.
41. Neff DF, Yoon SH, Steiner RL, Bejleri I, Bumbach MD, Everhart D et al. The impact of nurse practitioner regulations on population access to care. Nurs Outlook. 2018;66(4):379-85. https://doi.org/10.1016/j.outlook.2018.03.001. PMID: 29703627.
42. Bae K, Norris C, Shakya S, Timmons E. Advanced practice registered nurse full practice authority, provider supply, and health outcomes: a border analysis. Policy Polit Nurs Pract. 2024;25(1):6-13. https://doi.org/10.1177/15271544231212155. PMID: 38116640.

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Data analysis: Almeida EWS, Silva MCN, Peres EM, Khalid K, Costa SG, Mendes IAC.
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All authors are responsible for the textual writing and critical review of the intellectual content, the final version published, and all ethical, legal, and scientific aspects related to the accuracy and integrity of the study.

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