

Attention and/or concern variants for COVID-19 genomic sequencing in Brazil

Variantes de atenção e/ou preocupação por sequenciamento genômico do COVID-19 no Brasil

Variantes de atención y/ o preocupación para la secuenciación genómica de COVID-19 no Brasil

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In the city of Wuhan, Hubei province in the People's Republic of China, an event classified as an outbreak was registered by the local authorities, which allowed the diagnosis of pneumonia (PNM) to be carried out.^{1,2} This important phenomenon was dated to the month of December of the year 2019, being identified a strain of coronavirus unknown until that time, and which spread rapidly, showing its high potential for transmissibility in twenty-four (24) other countries.¹⁻³

In this context, this fact was notified on January 7, 2020, as a new strain belonging to the coronavirus, which was not recognized in humans to date.³⁻⁵ As of January 30, 2020, the Organization World Health Organization (WHO), defended that this outbreak was constituted as a noisy public health problem, constituting also as a true Public Health Emergency of International Importance (PHEII).⁴⁻⁵

On February 11, 2020, it was given the designation of SARS-CoV-2, as it was responsible for causing the disease that became known as COVID-19.^{4,5,6} On February 26, 2020, the first notification of a confirmed case in Brazil by the Ministry of Health (MH) of COVID-19 and, on March 11 of the same year, the WHO characterized COVID-19 as a pandemic, communicating to all nations updated information on its complexity and magnitude of this new phenomenon.^{6,7,8}

According to the MS, the most identified classes of coronaviruses to date are the “alpha coronavirus HCoV-229E”, the “alpha coronavirus HCoV-NL63”, the “beta coronavirus HCoV-OC43”, the “beta coronavirus HCoV-HKU1”, “SARS-CoV”, which has been identified as the cause of severe acute respiratory syndrome (SARS), “MERS-CoV”, which has been identified as the cause of Middle East respiratory syndrome (MERS) and also SARSCoV-2.⁹ Regarding the different types of classification of the aforementioned variants of COVID-19, the WHO took the initiative of bringing together an association of experts, which instituted the nomenclatures to be used to designate what is understood as "Variants of Interest" (VOI) and the “Variants of Concern” (VOC), using letters of the Greek alphabet for this action, such as alpha (α), beta (β), delta (Δ or δ), gamma (Γ or γ) and omicron (O or \omicron).^{10,11}

With regard to SARS-CoV-2 VOCs, they receive this designation, as they have the possibility of increased frequency in their virulence, changes in their clinical presentation, increased transmissibility or harmful alteration of COVID-19, or even in the reduction of its effectiveness in social and diagnostic measures, public health or accessible therapies.^{10,11} The VOI, on the other hand, have this designation because it caused community transmission of multiple cases of COVID-19, and also, of its genome having undergone mutations that changed its viral phenotype, in addition to needing to be detected in several nations.^{10,11}

Another important issue that characterizes VOI is that it can be classified by carrying out an assessment by the Working Group on the Evolution of the SARS-CoV-2 Virus or otherwise by the WHO.^{10,11} In table 1, COVID-19's VOCs of concern are presented in relation to the labels instituted by WHO, strains, GISAID clade/strain, first documented samples and respective designation dates.

Table 1 - COVID-19 variants of concern (VOC), strains, GISAID clade/strain, place of identification of first documented samples and date designations: ^{*,**,***}

WHO Label	Lineage	GISAID Clado/lineage	First document samples	Designation date
Alpha	B.1.1.7	GRY(antigamente GR/501Y.V1)	Reino Unido, september/ 2020	18/12/2020
Beta	B.1.351	GH/501Y.V2	África do Sul, may/2020	18/12/2020
Gamma	P.1	GR/501Y.V3	Brasil, november/2020	11/01/2021
Delta	B.1.617.2	G/452R.V3	Índia, october/2020	VOI: 04/04/2021 VOC:11/05/2021

Source: Adapted from WHO, 2021.

* The data presented here were updated on 12/01/2021.

** Due to the potential complexity of COVID-19 and its variants, the aforementioned data is updated daily.

*** The authors are faithful to the sources consulted..

In Table 1, the frequencies of confirmed and notified cases of the variants, federative units (UF) in Brazil, between epidemiological weeks (EW) 2 to 47, up to November 2021, are presented, totaling a universe of 44,334 cases with mean and standard deviation (1.642± 2.916,3).

Table 1 - Frequency of confirmed and notified cases of attention and/or concern (VOC) variants by genomic sequencing, by FUs, in Brazil, between SE 2 to 47, in the year 2021 (n=44.334):*,**,***

	Total	VOC Gama	VOC Delta	VOC Alfa	VOC Beta	VOC Ômicron
UF	f (%)	f (%)	f (%)	f (%)	f (%)	f (%)
SP	14.113 (31,8)	2.915 (12,7)	11.138 (53,4)	54 (12)	3 (60)	3 (100)
RJ	6.403 (14,4)	3.522 (15,3)	2.825 (13,5)	56 (12,4)	-	-
MG	5.057 (11,4)	3.019 (13,1)	1.831 (8,8)	207 (46)	-	-
GO	2.889 (6,5)	2.199 (9,6)	652 (3,1)	37 (8,2)	1 (20)	-
DF	2.147 (4,8)	1.026 (4,5)	1.113 (5,3)	8 (1,8)	-	-
AM	1.930 (4,4)	1.687 (7,3)	242 (1,2)	1 (0,2)	-	-
PE	1.683 (3,8)	1.304 (5,7)	376 (1,8)	3 (0,7)	-	-
CE	1.552 (3,5)	1.132 (4,9)	419 (2)	1 (0,2)	-	-
ES	1.131 (2,6)	429 (1,9)	684 (3,3)	18 (4)	-	-
SC	1.107 (2,5)	715 (3,1)	386 (1,8)	6 (1,3)	-	-
BA	933 (2,1)	566 (2,5)	326 (1,6)	40 (8,9)	1 (20)	-
RO	925 (2,1)	883 (3,8)	42 (0,2)	-	-	-
PR	917 (2,1)	618 (2,7)	288 (1,4)	11 (2,4)	-	-
RS	495 (1,1)	427 (1,9)	66 (0,3)	2 (0,4)	-	-
MS	480 (1,1)	379 (1,6)	101 (0,5)	-	-	-
PB	385 (0,9)	257 (1,1)	127 (0,6)	1 (0,2)	-	-
AL	361(0,8)	348 (1,5)	12 (0,1)	1 (0,2)	-	-
SE	324 (0,7)	294 (1,3)	29 (0,1)	1 (0,2)	-	-
PA	308 (0,7)	239 (1)	69 (0,3)	-	-	-
AC	250 (0,6)	231(1)	19 (0,1)	-	-	-
RR	236 (0,5)	234 (1)	2 (0,0)	-	-	-
MA	227 (0,5)	174 (0,8)	53 (0,3)	-	-	-
TO	163 (0,4)	137 (0,6)	26 (0,1)	-	-	-
RN	109 (0,2)	75 (0,3)	33 (0,2)	1 (0,2)	-	-
PI	103 (0,2)	103 (0,4)	-	-	-	-
MT	90 (0,2)	84 (0,4)	4 (0,0)	2 (0,4)	-	-
AP	16 (0,0)	11 (0,0)	5 (0,0)	-	-	-
Total	44.334 (100)	23.008 (100)	20.868 (100)	450 (100)	5 (100)	3 (100)

Source: Adapted from the State Departments of Health (SDH) and MS, 2021.

* The data presented here were last updated on the day 01/12/2021.

** Due to the potential complexity of COVID-19 and its variants, the aforementioned data is updated daily.

*** The authors are faithful to the sources consulted.

Among the SE 2 to 47 of the year 2021, it was found that the VOC Gamma registered the greatest preponderance with 51.9% (n=23,008), followed by VOC Delta with 47.1% (n= 20,868), VOC Alpha with 1% (n=450), VOC Beta with 5% (n=0.01) and VOC Ômicron 0.01% (n=03).¹² The state of São Paulo (SP) registered the greatest preponderance among the FUs analyzed, adding 31.8% (n=14,113) and Amapá (AP) the smallest with 0.04% (n=16).¹²

What is noteworthy in this table is the presence of three (03) cases of VOC Ômicron identified in the state of SP in November 2021.

According to WHO, the first known Ômicron VOC infection (B.1.1.529) was from a sample collected on 9 November 2021, which was first reported to WHO South Africa on 24 November from 2021.¹³⁻¹⁵

Thus, and according to some researchers, Ômicron VOC (B.1.1.529) comprises a high number of developed mutations, some of which are possibly classified as worrisome.¹³⁻¹⁵ The complexity and magnitude of Ômicron VOC (B.1.1.529) is such that preliminary evidence suggests the presence of an increased risk of reinfection in people affected by it, when compared to other types of VOCs in COVID-19.¹³⁻¹⁵

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Nursing Entrepreneurship: sharing experiences

Empreendedorismo Empresarial na Enfermagem: compartilhamento de experiências

Emprendimiento Empresarial en Enfermería: compartiendo experiencias

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RESUMO

Objetivo: descrever experiências de enfermeiros empreendedores empresariais. **Método:** Trata-se de um relato de múltiplas experiências de enfermeiros com empreendimentos em diferentes regiões do Brasil. As narrativas das experiências foram descritas pelos autores em julho de 2021. **Resultados:** As experiências relatam que para o desenvolvimento de seus empreendimentos foram necessárias ações como: planejamento, dedicação, investimento em educação, preocupação permanente com as práticas baseadas em evidências científicas, conhecimento de legislação e elaboração de plano de negócios. Também foi descrito que é igualmente importante coragem de arriscar, autoconfiança, não ter medo de falhar, buscar informações, estabelecer parcerias com pessoas que são autoridades no assunto que se deseja empreender. **Considerações finais:** Empreender na enfermagem é buscar a transformação pessoal, profissional e da categoria, em busca de uma profissão mais forte, com mais visibilidade social em um processo em que essa transformação repercute em crescimento pessoal, valorização profissional e reconhecimento do trabalho.

Descritores: Empreendedorismo; Enfermagem; Pesquisa em Administração de Enfermagem; Enfermeiras Administradoras; Papel do Profissional de Enfermagem.

ABSTRACT

Objective: to describe the experiences of entrepreneurial nurse practitioners. **Method:** This goal was met by listening to the different experiences lived by nurses with companies are mainly located in different regions of Brazil. The description provided by them was assessed and processed in July, 2021. **Results:** Some critical factors to the development of their business were identified herein, which include planning actions, dedication, investment in education, permanent seeking of practices based on scientific evidence, knowledge of legislation and development of a business plan. The participants also described that it is equally important to take risks, to have self-confidence, not to be afraid of failing, to seek information, to establish partnerships with people who are very knowledgeable in the subject that one wishes to undertake. **Final considerations:** becoming an entrepreneurial nurse demands a constant search for personal, professional and class transformation, as well as the pursuit of a stronger and socially visible nursing profession, in a process where this transformation has an impact on personal growth, professional valorization and work recognition.

Descriptors: Entrepreneurship; Nursing; Nursing Administration Research; Nurse Administrators; Nurse's Role.

RESUMEN

Objetivo: describir las experiencias de enfermeros emprendedores de negocios. **Método:** Este es un relato de múltiples experiencias de enfermeros con emprendimientos en diferentes regiones de Brasil. Las narrativas de las experiencias fueron descritas por los autores en julio de 2021. **Resultados:** Las experiencias relatan que para el desarrollo de sus emprendimientos fueron necesarias acciones con planificación, dedicación, inversión en educación, preocupación permanente por prácticas basadas en evidencia científica, conocimiento de legislación y desarrollo de planes de negocios. También se describió que es igualmente importante correr el riesgo, tener confianza en sí mismo, no tener miedo a fallar, buscar información, establecer alianzas con personas que son autoridades en el tema que se desea emprender. **Consideraciones finales:** Emprender en enfermería es buscar la transformación personal, profesional y de categoría, en busca de una profesión más fuerte, con más visibilidad social, en un proceso donde esta transformación repercute en el crecimiento personal, la valorización profesional y reconocimiento laboral.

Descritores: Emprendimiento; Enfermería; Investigación en Administración de Enfermería; Enfermeras Administradoras; Rol de la Enfermera.

Introduction

To undertake is to be willing to idealize and coordinate projects, services, businesses.¹ It means identifying a customer's "pain/need" and thinking of a solution for it. It's managing and taking risks. The operationalization of entrepreneurship is carried out through the identification of opportunities and the implementation of the transformation process between possibilities and potentially profitable activities.²

Entrepreneurship is one of the main factors that promote the economic and social development of a country.² With the pandemic caused by the new Coronavirus (Sars-Cov-2), Brazil is facing a serious economic crisis and innovative and entrepreneurial initiatives may represent a way of coping with the consequences of the pandemic on the economy.

The holistic view of nursing, with care and management, makes it possible to lead spaces and markets with solutions aimed at improving the quality of life of individuals, families and communities. In this way, it enables the creation of innovative solutions for health, directing entrepreneurial action. Entrepreneurship in nursing contributes to the consolidation of the profession as science, technology and innovation in the most diverse scenarios.¹

In the scientific literature it is possible to identify three types of entrepreneurship in Nursing: social entrepreneurship, business and intrapreneurship. Social entrepreneurship is understood as a mechanism for mobilizing and transforming society. In Brazil, the creation of the Unified Health System (UHS) and the Family Health Strategy (FHS) helped nurses to have their role and insertion in the community and social field expanded, obtaining greater visibility from a scenario with greater professional performance opportunities.³

Intrapreneurship in nursing refers to the action of nurses with an innovative spirit who, even though they do not have their own business, undertake in the organizations that work, whether public or private, even though they do not intend to value their projects and products.⁴

Business entrepreneurship, the subject of this article, is about enterprises in which nurses build and manage businesses and work autonomously. Several modalities for these activities can be pointed out, which may or may not be specific to nursing, such as home nursing care companies, maternal and child health care consultancies, stomatherapy clinics, among others.⁵

Characteristics identified as typical of this profile of nurses are: responsibility, personal and professional commitment, good self-esteem, perseverance and determination to achieve the necessary success for the company. In this sense, the entrepreneurial nurse must have holistic capacity, that is, have a vision of the whole, regardless of social, political or economic conditions.¹

In the United States and Canada, the consultancy carried out by nurses with advanced practices is widespread, especially in rural areas. In this context of work, the autonomy of these professionals is greater compared to other scenarios, and sometimes these nurses work in places where doctors often find obstacles to act.⁶

In Brazil, the nursing consultation is regulated by the professional practice law nº 7.498/86⁷ and this consultation is a private activity of the nurse. The opening and operation of nursing clinics and practices are regulated by

resolutions 568/2018⁸ and 606/2019⁹, which include annexes containing application models for registration of clinics and nursing clinics, in addition to their registration model, in the regional councils of nursing.

Despite the relevance of entrepreneurship in nursing, this theme is still little discussed in the scientific literature. Initiatives that describe the paths taken by entrepreneurial nurses are scarce, in this perspective, this study aims to describe the experiences of entrepreneurial nurses.

Method

This is an account of multiple experiences of entrepreneurship in nursing, with a narrative description by the authors. These ventures are headquartered in the states of São Paulo and Minas Gerais, but develop activities that serve audiences from different regions of Brazil.

The narratives of the experiences were described in July 2021, but refer to the period from the start of the project to the aforementioned month. The experiences described are respectively: Sleep and Child Development Consultancy; Maternal and Child Consultancy; Professional Training and Management Company; Integrative and Complementary Practices in Health (PICS); VGB Research Consulting. These experiences are about individual undertakings carried out by nurses within the scope of their work.

For the development of the narratives, the following guiding question was suggested: How was the development process of your enterprise? The authors were free to narrate such experiences, which were later reviewed by the other authors with a view to complying with the presentation. For this, all the described content was read and re-read.

Considering that this is a report of multiple experiences, and that these are from the authors of the article, submission to the Research Ethics Committee was not necessary. Thus, the authors themselves, when writing their entrepreneurial experiences, gave their consent for the publication of this manuscript.

Results and Discussion

Sleep and child development consultancy

Doctor in Health Sciences, professor of Nursing in Child Health and specialist in Pediatrics and Neonatology, has been working for 10 years in the care of children and their families in the most diverse care scenarios. During the period of work as a nurse and teacher, it was possible to highlight the need that families have to learn how to take care of sleep and child development.

Children's sleep is one of the main challenges for family members in the first year of life and, in practice, this reality is clear. Parents need attention to manage and promote quality child sleep. Facing the identification of this need and facing the experience in the clinical field, associated with the constant study on the theme of child development, there was a gap in the role of nurses. Faced with a possibility of entrepreneurship, the search for improvement in the area was necessary, in addition to the development of products/services to be offered, as well as a business plan and definition of the target audience. After this first stage, care began via online and face-to-face consulting for families.

The provision of this service includes a nursing consultation with parents and caregivers, which aims to understand the difficulties and challenges in sleep care and child development and identify care needs. After the consultation, the nurse forwards a comprehensive care plan and offers support via email, phone and WhatsApp. During this period, the child's sleep environment, habits and routines are adjusted.

The target audience is families of children aged 0 to 5 years, as well as pregnant women who can hire the preventive consulting service.

With the development of the consultancy, there was a need to expand the offer of products and services such as: preparatory courses for the care of the newborn, breastfeeding, a course for teaching Shantala massage, as well as a first aid course for prevention and care in childhood accidents. With the growing demand, it seeks to offer other products such as: courses for families and health professionals on how to take care of sleep and child development.

The initial challenges were numerous: the need to understand how to manage a business, marketing strategies, legislation and management of other activities as a university professor. However, planning and organization are essential in an entrepreneur, added to a continuous search for improvement and grounding the practice on scientific evidence.

Mother and Child Consulting

Nurse Obstetrician, working in maternal and child health for 10 years, I have always been delighted with the assistance and academic area of obstetrics since graduation. Upon finishing my bachelor's degree, I worked in a maternity hospital in the south of Minas Gerais, specialized in Obstetric Nursing in the State of São Paulo and a master's degree in the area of maternal and child care. Focusing on the area of Obstetric Nursing, I did my doctorate at the University of São Paulo, enabling me to work in a Higher Education Institution.

At the end of the doctorate in 2019, the search for entrepreneurship became more evident. The beginning of the journey began with care for women in the puerperal period with an emphasis on breastfeeding, which was the initial idea. In the first consultations, the need to expand services was assessed, providing the development of courses for pregnant couples, preparation for childbirth, breastfeeding and care for the newborn. The appointments have the flexibility to take place, whether in person at the office, at home or online.

With the advent of the Coronavirus pandemic, another niche that became evident was the monitoring of home births, which culminated in the development of two products: the first is four prenatal consultations, evolution of labor with referrals and monitoring to the maternity hospital for the parturition process and consultancy in breastfeeding. The second product refers to the provision of services in Planned Home Birth.

The planning and execution of ideas requires courage, willingness and patience, as the first fruits do not come so quickly. It's hard work, it's not an easy journey, it takes dedication and hard work. However, understanding and acting in the area you like, provides half the success, so that opportunities are conquered.

Company Leap in Management

Graduated in Nursing for 10 years and exercising a professional activity for seven years, I covered all sectors within public health until I reached the area of management, which I currently practice. There was always a discomfort in me generated by the idea that public health services were recognized as environments with low resolution and little involvement of servers, which motivated me to study alternatives to contribute to changing this scenario.

Upon witnessing numerous meetings with managers in the public health area, I identified that the complaints they reported were very similar and it became evident that, when assuming positions that did not require technical training in health, many found themselves totally unprepared to deal with the challenges that the function itself required. Based on this gap and added to the experience lived in the profession, I identified the opportunity to open a company that gathered the necessary knowledge to deal with the main problems experienced in public health services.

A market analysis was carried out and verified the absence of service providers aimed at this audience in the southern region of Minas Gerais, boosting the creation of the company "Salto na Gestão - Managerial and Professional Training", with the municipal secretariats of health. With a polysemic meaning, the word "leap" was used both to convey the idea of "advancement/improvement", as well as to refer to the female presence in leadership positions.

With the offer of training, another gap was identified that met the services that the company already offered and that were also deficient in the public sector, leading to the implementation of the supply of inputs aimed at the work of Community Health Agents and Combating Endemic Diseases, reflecting the expansion of the company's legal category.

The initial challenges were numerous, especially regarding the security of posing herself as an entrepreneur as a nurse. Learning about all aspects of entrepreneurship was extremely challenging and taking, especially because in this early stage of entrepreneurship, many nurses take on multiple work shifts because they do not leave formal employment until there is consolidation of the company in the market.

Without a doubt, business entrepreneurship in nursing is something extremely challenging. Firstly, due to the lack of stimulation of this type of knowledge during graduation, then due to the absence of professional references that can inspire the initiation of this practice in the profession, and finally, due to the fact that the socially constructed action of the profession is directed almost exclusively to the concept of mission and love.

Integrative and Complementary Practices in Health (ICPH)

Before attending graduation, the use of ICPH had already occurred for 2 years as a massage therapist. When starting studies at the School of Nursing of the University of São Paulo (EEUSP), the use of these practices continued with the participation in the Study Group on Integrative and Complementary Practices in Health at EEUSP. Belonging to this group enabled scientific discussions on this topic, knowledge of legislation, training in various ICPH and clarity of the nurse's role in this area.

The contact with nurses working with different ICPH, in different business models, was decisive not only for their professional performance, but also for the decision to carry out research with high levels of evidence, such as randomized clinical trials (RCT). There was a master's degree focused on pain and a doctorate focused on stress with hormonal and pain evaluation, both with massage in RCT from USP.

The use of Integrative Practices by nurses is supported by the National Policy on Integrative and Complementary Practices in the SUS - PNPIC-SUS, approved by Ordinance 971/2006¹⁰, with expansion of practices in this policy by Ordinances 849/2017¹¹ and 702/2018¹², and supported by the Resolution Cofen No. 581 of 2018.¹³

ICPH enables different business models, such as: offices, services in clinics, consultancies, home care and course offerings. With the completion of the doctorate, the services could be expanded with private care at home and in a clinic specializing in genetic syndromes with three practices: auriculotherapy, massage, including Shantala, and aromatherapy in patients with Down Syndrome, Autism, Attention Deficit Disorder with Hyperactivity and others, as well as for parents and other interested parties. In this way, performing nursing consultations with intervention in integrative practices, the holistic look of this professional being a market differential.

The challenges in this area mainly refer to the nurses' lack of knowledge of this area of work, as it is not included in the curriculum as a regular subject. Much of it occurs by optional discipline, added to the lack of legal issues about the performance of each ICPH with the Regional Council of Nursing and Federal Council of Nursing and especially in secondary and tertiary care, due to limitations of action imposed by the management. The greater opening of operations occurs in private care, associated with services such as childbirth care and primary health care.

Despite the absence of the subject of entrepreneurship in graduation, the contact with business nurses in the research group was decisive, stimulating and inspiring to develop interest and action strategies in this area.

VGB Research Consulting

With experience in the development of scientific research since the first year of graduation in 2009 until the doctorate in progress at the USP School of Nursing, teaching in the discipline of research methodology in different undergraduate and graduate courses and participating in the development of several research and extension projects and in various scientific events, it was possible to highlight the need that nursing students and workers have in relation to various aspects involving scientific research.

Sanna¹⁴ describes that the activities of Assisting, Administering, Teaching, Politically Participating and Researching are involved in the nursing work process. The author¹⁴ describes in her manuscript that the work process "Research" aims to "the knowledge already available in Nursing and the gaps in this knowledge, on which she works in order to discover new and better ways to assist, manage, teaching and researching in nursing". In view of this activity, inherent to the professional practice of nursing workers and the difficulties with the theme, constantly reported in the spaces I occupy, I saw the need to assist

these people in the development of activities related to scientific research directly and indirectly.

The activities developed by VGB Consultoria em Pesquisa are: Consulting in scientific methodology; academic professional career planning and preparation; formatting theses, dissertations, monographs, articles and academic papers; review and search of bibliographic references; development and updating of memorial and Lattes Curriculum; database collection and filling; and organization of scientific events. The target audience are students and nursing workers who need some of these activities developed by the company.

The initial challenges were related to lack of experience with some scientific methods and development of some activities. To meet this main challenge, the solution found was to take specific courses and training for training in the topics that were needed.

For the development of this type of enterprise, constant training and updating is necessary, as research is dynamic and has constant transformation and the emergence of new theoretical-philosophical, technological and material resources. The suggestion for those who are thinking of doing business in this area is, in addition to studying a lot, to seek a *stricto sensu* postgraduate course, since training in scientific methodology in Brazil is still centralized in Universities and Postgraduate Programs.

Entrepreneurship in nursing is to seek personal, professional and category transformation, with the intuition of a stronger profession, with more social visibility, in a process in which this transformation has repercussions on personal growth and professional valuation.

Contributions to practice

The presentation of these experiences enables the encouragement and guidance for professionals who aim to initiate business entrepreneurship projects in nursing.

Final considerations

Entrepreneurship in nursing has gained visibility. Experiences of nurses in the business sphere and their challenges in different sectors were presented. Success in entrepreneurship requires planning, dedication, investment in education, permanent concern with practices based on scientific evidence, knowledge of legislation and preparation of a business plan. It is equally important to have the courage to take risks, self-confidence, not be afraid of failure, seek information, establish partnerships with people who are authorities on the subject you want to undertake, maintain good relationships, exercise humility to listen to suggestions from those who have already traveled a similar path, develop good communication skills, being flexible to change routes as often as necessary, reinventing yourself, being collaborative and creative.

Entrepreneurship is an opportunity for nurses to achieve satisfaction, visibility, appreciation and recognition of their work. Using training in support of the health needs of the other makes nursing unique, as there is an

understanding of the human being's needs in a comprehensive and contextualized way.

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Regulatory Sanitary Framework in Coping with Covid-19 in Brazil

Marco Regulatório Sanitário no Enfrentamento do Covid-19 no Brasil

Marco Normativo Sanitario para Enfrentar el Covid-19 en Brasil

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RESUMO

Introdução. A atuação da Vigilância Sanitária na prevenção, promoção e proteção da saúde estão voltadas para as ações que interferem nos fatores de risco relacionados ao processo saúde-doença. **Objetivo.** Descrever sobre o marco regulatório sanitário brasileiro diante do enfrentamento da Covid-19 no Brasil. **Método.** Trata-se de estudo exploratório no tocante ao propósito, desenvolvido por meio de pesquisa documental. **Resultados.** Foi possível identificar que os esforços da Anvisa vão além de tentar conter a disseminação do coronavírus, tendo suas ações voltadas nos mais diversos setores da saúde, como medicamentos e equipamentos para a saúde; imunobiológicos; serviços de diagnóstico; e barreira sanitária. **Conclusão.** A Anvisa exerce papel primordial no combate e enfrentamento a Covid-19.

Descritores: Infecção por Coronavírus; Agência Nacional de Vigilância Sanitária; Sistema Único de Saúde.

ABSTRACT

Introduction. The role of Health Surveillance in the prevention, promotion and protection of health is focused on actions that interfere with risk factors related to the health-disease process. **Objective.** Describe the Brazilian health regulatory framework in the face of the Covid-19 confrontation in Brazil. **Method.** This is an exploratory study with regard to the purpose, developed through documentary research. **Results.** It is possible to identify that Anvisa's efforts go beyond trying to contain the spread of the coronavirus, with its actions focused on the most diverse health sectors, such as medicines and health equipment; immunobiologicals; diagnostic services; and sanitary barrier. **Conclusion.** Anvisa plays a major role in combating and confronting Covid-19.

Descriptors: Coronavirus Infections; Brazilian Health Surveillance Agency; Unified Health System.

RESUMEN

Introducción. El papel de la Vigilancia en Salud en la prevención, promoción y protección de la salud se centra en acciones que interfieran con los factores de riesgo relacionados con el proceso salud-enfermedad. **Objetivo.** Describir el marco regulatorio de salud brasileño ante el enfrentamiento Covid-19 en Brasil. **Método.** Se trata de un estudio exploratorio con respecto al propósito, desarrollado a través de la investigación documental. **Resultados.** Es posible identificar que los esfuerzos de Anvisa van más allá de tratar de contener la propagación del coronavirus, con sus acciones enfocadas en los más diversos sectores de la salud, como medicamentos y equipos de salud; inmunobiológicos; servicios de diagnóstico; y barrera sanitaria. **Conclusión.** Anvisa juega un papel importante en la lucha y el enfrentamiento al Covid-19.

Descritores: Infección por coronavirus; Agencia Nacional de Vigilancia Sanitaria; Sistema de Salud Unificado.

Introduction

In Brazil, health surveillance was relevant after the promulgation of the Federal Constitution of Brazil, and after 1990 surveillance actions became more expressive with the implementation of the Unified Health System (SUS) - the Regulatory Agency was created. Created by Law 9782, the National Health Surveillance Agency (Anvisa) emerged with the institutional role of promoting the health of the population and the sanitary control of the production and sale of products and services.¹

Law 8080/90 states that sanitary surveillance is a set of actions capable of eliminating, reducing or preventing health risks and intervening in sanitary problems arising from the environment, the production and circulation of goods and the provision of services in the interest of health, covering: I - the control of consumer goods that, directly or indirectly, are related to health, including all stages and processes, from production to consumption; II - the control of the provision of services that are directly or indirectly related to health.²

The role of Health Surveillance in the prevention, promotion and protection of health are aimed at actions that interfere with risk factors related to the health-disease process, with prevention actions aimed at preventing the emergence of specific diseases, with a reduction in its incidence and prevalence in the population. In health promotion, the actions are aimed at training and raising awareness in an educational way, in order to intervene in improving health and consequently in the quality of life. Health protection actions concentrate a large part of health surveillance actions, based on the structural concept of risk, as the possibility of occurrence of events with damage to health.³

In this sense, since December 2019, the world has been concerned about Covid-19 - Coronavirus (Sars-CoV-2) - which has spread with high levels of contamination throughout the world, being declared a pandemic in March 2020 by the World Health Organization (WHO). The first cases were registered by the Wuhan Municipal Health and Sanitation Commission, China, which identified 27 cases of severe pneumonia of unknown etiology. In January 2020, Chinese authorities identified the virus of the Coronaviridae family, thus called the new Coronavirus or Coronaviridae family, called Covid-19.⁴ In Brazil, data from the Ministry of Health indicate that the first case was identified on February 26, 2020. On March 17, 2020, the first death was registered. Until March 23, 2021, 12,130,019 cases and 298,676 confirmed deaths had been recorded, with a mortality rate of 2.5%.⁵

With the worsening of Covid-19, Anvisa played an important role in society, as the pandemic strongly encompasses health issues, and these have an essential role in combating and controlling the new coronavirus. Sanitary measures encompass a wide range of actions, namely: standards for the production and distribution of drugs to combat the coronavirus; control of the manufacture, import and sale of medical equipment and devices necessary for the treatment of the disease; health control at ports, airports and borders; manufacture and distribution of sanitizers - such as alcohol gel; technical criteria for examination and screening of coronaviruses using blood, cells, tissues and organs; guidelines on clinical trials and the experimental use of options for

copied with the disease; measures relating to the continuity of vaccination services during the pandemic; actions to prevent contamination of the elderly in long-stay institutions; among others.⁵

However, the objective of this text is to describe the Brazilian sanitary regulatory framework in the face of Covid-19.

Method

This is an exploratory study in terms of purpose, developed through documentary research, which provided a comprehensive approach to the main regulatory standards for sanitary surveillance in Brazil, in confronting the Covid-19.

The survey was carried out on April 8, 2021 by consulting the Anvisa website <http://antigo.Anvisa.gov.br/legislacao#/>. Two searches were made, one with the descriptor "Covid" and the other with "coronavirus infection" and the type of legal acts selected in the two searches were: "Resolution of the Collegiate Board of Directors - RDC"; "Resolution - RES"; "Resolution - RE"; "Normative Instruction - IN" and "Joint Normative Instruction - INC". Revoked and expired acts were excluded, resulting in a final sample of twenty-seven documents. Data analysis was based on the thematic organization of regulatory standards for the discussion.

This research followed the provisions of Resolution 510/2016 of the National Research Ethics Commission, as it used information from public domain or access.

Results e Discussion

After searching with the descriptor "Covid", seventeen documents were identified, and of these, six were excluded because they were revoked acts (with eleven rules included). After conducting the research with the descriptor "coronavirus infection", 23 documents were found, of which one was a revoked act; three expired acts - which lost their validity; and three appeared repeated in the search made by the descriptor "Covid", and were excluded from the sample (with sixteen current norms remaining).

For a better discussion of the measures adopted by Anvisa in the fight against Covid-19, the rules were separated by thematic areas arranged in tables. Thus, it forms a sample of 27 norms organized into thematic categories, namely: I) Medicines and equipment for health; II) Immunobiologicals; III) Diagnostic services and IV) Sanitary barrier.

Table 1- Standards for medicines and health equipment.

Resolution	Objective
RDC No. 485, OF MARCH 26, 2021. ⁶	Changes RDC No. 352/20, which provides for the prior authorization for the purpose of exporting raw material, semi-finished product, bulk product or finished pharmaceutical product intended to combat COVID-19.
RDC No. 352, OF MARCH 20, 2007. Effective with amendment	Provides for the prior authorization for export of chloroquine and hydroxychloroquine, azithromycin intended to combat Covid-19.
RDC No. 425, OF SEPTEMBER 24, 2020. ⁸	Changes RDC No. 357/20, which temporarily extends the maximum quantities of drugs subject to special control allowed in Prescription Notifications and Special Control Prescriptions and allows, due to the Public Health Emergency of International Importance related to the new Coronavirus.
RDC No. 419, OF SEPTEMBER 1, 200. ⁹	Amend RDC No. 346/20, which defines the extraordinary and temporary criteria and procedures for the certification of good manufacturing practices for the purposes of registration and post-registration changes of active pharmaceutical ingredient, medicine and health products due to the emergency of Coronavirus International Public Health.
RDC No. 415 OF AUGUST 26, 2020. ¹⁰	Defines new extraordinary criteria and procedures for handling registration petitions and post-registration changes of medicines and biologicals due to the international public health emergency arising from the new Coronavirus.
RDC No. 405, OF JULY 22, 2020. ¹¹ Effective with change	Establishes the control measures for drugs that contain substances alone or in association, due to the Public Health Emergency of International Importance related to the new Coronavirus.
RDC No. 402, OF JULY 21, 2020. ¹² Effective with change	Establishes the temporary opening of entry and exit points for substances subject to special control, due to the Public Health Emergency of International Importance related to the new Coronavirus.
RDC No. 400, OF JULY 21, 2020. ¹³	Defines the extraordinary and temporary criteria and procedures for the application of exceptionalities to specific labeling requirements and drug inserts, due to the international public health emergency arising from the new Coronavirus.
RDC No. 392 OF MAY 26, 2020. ¹⁴ Effective with change	Defines the extraordinary and temporary criteria and procedures for the application of exceptionalities to specific requirements of the Good Manufacturing and Importing Practices of Medicines and Pharmaceutical Ingredients, due to the international public health emergency resulting from the new Coronavirus.
RDC No. 387, OF MAY 26, 2020. ¹⁵	Alters Annex I of the Collegiate Board Resolution - RDC No. 357/20, which temporarily extends the maximum quantities of drugs subject to special control allowed in Special Control Prescription and Prescription Notifications and temporarily allows remote delivery defined by a public program and the home delivery of drugs subject to special control, due to the Public Health Emergency of International Importance related to the new Coronavirus.
RDC No. 357, OF MARCH 24, 2020. ¹⁶	It temporarily extends the maximum quantities of drugs subject to special control allowed in Prescription Notifications and Special Control Prescriptions and allows remote delivery defined by a

Effective amendment	with	specific public program and home delivery of drugs subject to special control, due to the Emergency of Public Health of International Importance related to the new Coronavirus.
RDC No. 346, OF MARCH 12, 2020. ¹⁷		Defines the extraordinary and temporary criteria and procedures for the certification of good manufacturing practices for the purposes of registration and post-registration changes of active pharmaceutical ingredient, medicine and health products due to the international public health emergency of the new Coronavirus.
RDC No. 484, OF MARCH 19, 2021. ¹⁸		Provides for temporary and extraordinary procedures for the authorization, on an emergency basis, of anesthetics, sedatives, neuromuscular blockers and other hospital drugs used to maintain the lives of patients in the face of a public health emergency of national importance resulting from the outbreak of the new coronavirus.
RDC No. 378, OF APRIL 28, 2020 ¹⁹		Provides, in an extraordinary and temporary way, on the requirements for the import, marketing and donation of pulmonary ventilators, vital signs monitors, infusion pumps, used oximetry equipment and capnographs, indispensable in intensive care units, due to the emergency of international public health related to COVID-19.

With regard to sanitary standards that encompass Anvisa's actions in the areas of medicines and health equipment, it is observed that in 2020 RDC were published that provide for temporary and extraordinary procedures for manufacturing, registration and post-registration change active pharmaceutical ingredient, medicine, health products and equipment. In addition, it establishes control measures for drugs subject to special control during the duration of the pandemic by the new coronavirus (SARS-CoV-2).

RDC No. 419/209 amends Resolution of RDC No. 346/2017, in order to modify its validity, which will automatically terminate when the Ministry of Health configures that there is no longer an emergency situation in public health. The last resolution mentioned deals with the temporary criteria and procedures for certification of good manufacturing practices, registration and post-registration alteration of pharmaceutical inputs, medicines and health products.

RDC No. 357/2016 temporarily expands the maximum quantities of drugs subject to special control allowed, which remains in force, but with two new changes - one through RDC No. 387/20 15 that excludes the maximum allowed amounts of base drugs thalidomide and lenalidomide for women of childbearing age or of childbearing potential, who must meet the provisions previously provided; and the other change is given by RDC No. 425/208, which changes in terms of its validity, which will automatically end when the Ministry of Health establishes that there is no longer an emergency situation in public health.

On March 26, 2021, Anvisa enacted RDC No. 4856, which amended RDC No. 352/207, which deals with the export of medicinal oxygen (O₂), Covid-19 vaccines and drugs used in Covid-19 treatment. In addition, it provides that bulk products or finished products (ready for sale) will temporarily require prior authorization from Anvisa. Corroborating, RDC No. 484/2118, provides for extraordinary procedures for authorization of the

manufacture of drugs used in the treatment and maintenance of life of patients with Covid-19.

Table 2 presents the sanitary norms aimed at immunobiologicals. Note that in November 2020, Anvisa publishes Normative Instruction No. 7720, which deals with differentiated procedures to allow the analysis of data for registration of vaccines in the Covid-19 combat, as they are generated and presented to the Agency.

Table 2- Standards for immunobiologicals

Resolução	Objetivo
NORMATIVE INSTRUCTION - IN No. 77, OF NOVEMBER 17, 2020. ²⁰	Provides for the continuous submission procedure of technical data for the registration of Covid-19 vaccines.
RDC No. 465, OF FEBRUARY 9, 2021. ²¹	It establishes the exemption from registration and authorization for emergency use and the procedures for importing and monitoring Covid-19 vaccines acquired by the Ministry of Health, under the Covid-19 Global Access Instrument for Vaccines (Covax Facility).
RDC No. 475, OF MARCH 10, 2021. ²²	Establishes the procedures and requirements for submitting a request for temporary authorization for emergency use (AUE), on an experimental basis, of drugs and vaccines for Covid-19 to face a public health emergency of national importance.
RDC No. 476, OF MARCH 10, 2021 (*). ²³	Establishes the procedures and requirements for submitting an exceptional and temporary authorization request for the import and distribution of medicines and vaccines to Covid-19 to face the public health emergency of national importance resulting from the outbreak of the new coronavirus, pursuant to Law No. 14,124 /2021.

RDC No. 465/21²¹ extraordinarily established the exemption from registration and authorization for emergency use, as well as the procedures for importing and monitoring Covid-19 vaccines acquired exclusively by the Ministry of Health, within the scope of the Covax Facility instrument, which is a international alliance managed by the World Health Organization that aims to help all nations have equal and fair access to immunization.

In relation to RDC No. 475/21²², it aims to establish the procedures and requirements for submitting a request for temporary authorization for emergency use (AUE), on an experimental basis, of drugs and vaccines for Covid-19, while RDC No. 476/21²³ regulates the requirements for submitting an exceptional and temporary authorization request for the import and distribution of drugs and vaccines against Covid 19.

It should be noted that measures were adopted to ease the procedures for registration, authorization, import and distribution of medicines and vaccines for the duration of the pandemic. Table 3 describes the health standards related to diagnostic services.

Table 3- Standards aimed at diagnostic services.

Resolution	Objective
RDC No. 377 OF APRIL 28, 2020. ²⁴	It authorizes, on a temporary and exceptional basis, the use of "quick tests" (immunochromatographic tests) for COVID-19 in pharmacies, suspending the effects of § 2 of art. 69 and art. 70 of RDC No. 44/09.
RDC No. 426, OF SEPTEMBER 30, 2020. ²⁵	Changes RDC No. 364/20, which suspends the effects of Resolution of the Collegiate Board of Directors - RDC No. 302, of October 13, 2005, on a temporary and exceptional basis, for the official laboratories that will carry out the diagnosis of COVID-19.
RDC No. 364, OF APRIL 1, 2020. ²⁶ Effective with change	Suspends the effects of Collegiate Board Resolution - RDC No. 302/05, on a temporary and exceptional basis, for the Federal Agricultural Defense Laboratories (LFDA) that will carry out analyzes for the diagnosis of COVID-19
RDC No. 366, OF APRIL 2, 2020 ²⁷	Provides for the importation of products for <i>in vitro</i> diagnosis of Coronavirus during the public health emergency of international importance arising from the new Coronavirus.

Due to the pandemic related to the new coronavirus, RDC n° 364/2020²⁶ suspended the effects of RDC n° 302/2005²⁸ in relation to the Federal Agricultural Defense Laboratories (LFDA) that will carry out analyzes for the diagnosis of COVID-19. RDC No. 426/20²⁵ amended RDC No. 364/20²⁶ where it modifies its validity, which will automatically terminate when the Ministry of Health configures that there is no longer an emergency situation in public health of national importance.

RDC n° 366/20²⁷ established the activities of sanitary surveillance in relation to the importation of products for *in vitro* diagnosis of Coronavirus. This import must be through the Import Licensing modalities only to authorized companies.

Furthermore, since April 2020, RDC No. 377/20²⁴ has authorized pharmacies and drugstores to carry out rapid tests to diagnose the new coronavirus. Such tests must be performed by the responsible pharmacist, who must use devices regulated by the Regulatory Agency - the results must be recorded to ensure their traceability and informed to the competent health authority. Table 4 describes the standards for the sanitary barrier.

Table 4- Standards aimed at the sanitary barrier.

Resolution	Objective
RDC No. 384, OF MAY 12, 2020. ²⁹	Provides for the temporary inclusion of the procedure for issuing a health certificate by documentary analysis, regulated in RDC No. 72/09 to vessels during the COVID-19 pandemic period.
RDC No. 373, OF APRIL 16, 2020. ³⁰	Changes art. 29 of RDC No. 72/09, which provides for the Technical Regulation aimed at promoting health in sanitary control ports installed in the national territory, and vessels that pass through them during the Public Health Emergency of International Importance COVID-19.

RDC No. 479, OF MARCH 12, 2021. ³²	Provides for prohibitions on imports carried out by individuals for their own use by any import modalities during the new coronavirus pandemic.
RDC No. 477, OF MARCH 11, 2021. ³³	Changes RDC No. 456/20, which provides for the measures to be adopted at airports and aircraft due to the situation of Public Health Emergency of National Importance resulting from the outbreak of the new coronavirus.
RDC No. 456 OF DECEMBER 17, 2020. ³⁴ Effective with amendment	Provides for the measures to be adopted at airports and aircraft due to the situation of Public Health Emergency of National Importance resulting from the outbreak of the new coronavirus.

As a strategy to fight Covid-19, since April 2020, sanitary barriers have been created in order to control the inflow and outflow of people, reducing the possibility of contagion and dissemination of the coronavirus. RDC No. 373/2030 amended RDC No. 72/200931 on the validity of the National Onboard Sanitary Control Certificate (CCSB) and the National Onboard Sanitary Control Exemption Certificate (CICSB) of a national and international vessel, which may be extended, once, in a period of 30 (thirty) days.

The RDC n° 477/2133 changed some measures to be adopted in airports and aircraft due to the coronavirus outbreak, which contemplated the RDC n° 456/20.³⁴ Some changes involve the writing of articles, definitions, dispensing with the use of masks for people with autism spectrum disorder, with intellectual and sensory disabilities, and children under 3 years of age; among other measures.

In addition, RDC No. 479/2132 deals with products that will be prohibited from being imported by individuals during the duration of the coronavirus pandemic. Such products involve the classes of medicines, health products, food, sanitizers, cosmetics, personal care products and perfumes and brings other provisions.

Conclusion

Since the World Health Organization (WHO) declared a global pandemic situation caused by SARS-CoV-2, all the Organs in their most diverse attributions have mobilized to combat the spread of this virus.

It is possible to identify that Anvisa's efforts go beyond trying to contain the dissemination of the coronavirus, having its actions focused on the most diverse sectors of health, such as: medicines and health equipment; immunobiologicals; diagnostic services; and sanitary barrier.

It was observed that Anvisa, as a Regulatory Agency, has as its main functions the prevention, promotion and protection of health, and because its theme involves health issues, it plays a key role in combating and confronting Covid-19.

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The importance of clinical pharmacy in the hospital context

A importância da farmácia clínica no contexto hospitalar

La importancia de la farmacia clínica en el contexto hospitalario

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RESUMO

Objetivo: Descrever a importância e a contribuição da farmácia clínica na promoção em saúde dentro de uma organização hospitalar, destacando os consensos sobre esta temática na literatura científica especializada. **Método:** revisão narrativa realizada por meio de busca online na Biblioteca Virtual de Saúde, com os seguintes descritores: Farmácia clínica; Hospital; Farmacêutico. Delimitou-se o período de 2010 a 2020, ou seja, nos últimos 10 anos, e artigos disponibilizados na íntegra. Os dados de cada estudo foram extraídos, sendo elaborado um quadro com as principais variáveis para analisar o perfil dos artigos coletados. **Resultados:** Após o cruzamento dos descritores, foi possível encontrar uma amostra de 64 artigos inicialmente. Adotando o critério de inclusão relacionado à necessidade de os artigos serem publicados no idioma português, dos últimos 10 anos e disponibilizados em sua íntegra, observou-se que, deste total, 31 atendiam a estes critérios. Por fim, a amostra final foi composta por 12 artigos. O farmacêutico clínico hospitalar tem diferentes responsabilidades, contribuindo para a promoção à saúde através da aquisição, provisão e controle de insumos essenciais para o paciente internado; tem função indispensável na prevenção de reações adversas e dos riscos das interações medicamentosas; garante a segurança do paciente por meio do uso racional dos medicamentos prescritos pelos médicos; e tem uma participação ativa na adesão ao tratamento e prevenção de agravos em geral. **Considerações finais:** a farmácia clínica hospitalar apresenta importância para a saúde pública de uma forma geral e o farmacêutico clínico torna-se uma peça chave dentro da equipe multiprofissional hospitalar.

Descritores: Farmácia Clínica; Farmácia Clínica Hospitalar; Atenção Farmacêutica.

ABSTRACT

Objective: To describe the importance and contribution of clinical pharmacy in health promotion within a hospital organization, highlighting the consensus on this topic in the specialized scientific literature. **Method:** narrative review carried out through an online search in the Virtual Health Library, with the following descriptors: Clinical pharmacy; Hospital; Pharmaceutical. The period from 2010 to 2020 was delimited, that is, in the last 10 years, and articles made available in full. The data for each study were extracted, and a table was created with the main variables to analyze the profile of the collected articles. **Results:** After crossing the descriptors, it was possible to find a sample of 64 articles initially. Adopting the inclusion criterion related to the need for articles to be published in the Portuguese language, from the last 10 years and made available in its entirety, it was observed that, of this total, 31 met these criteria. Finally, the final sample consisted of 12 articles. The hospital clinical pharmacist has different responsibilities, contributing to health promotion through the acquisition, provision and control of essential supplies to inpatients; it plays an indispensable role in preventing adverse reactions and the risks of drug interactions; guarantees patient safety through the rational use of medicines prescribed by doctors; and has an active participation in adherence to treatment and prevention of diseases in general. **Final considerations:** the hospital clinical pharmacy is important for public health in general and the clinical pharmacist becomes a key part of the hospital multiprofessional team.

Descriptors: Clinical Pharmacy; Hospital Clinical Pharmacy; Pharmaceutical attention.

RESUMEN

Objetivo: Describir la importancia y contribución de la farmacia clínica en la promoción de la salud dentro de una organización hospitalaria, destacando el consenso sobre este tema en la literatura científica especializada. **Método:** revisión narrativa realizada mediante búsqueda online en la Biblioteca Virtual en Salud, con los siguientes descriptores: Farmacia clínica; Hospital; Farmacéutico. Se definió el período de 2010 a 2020, es decir, en los últimos 10 años, y se pusieron a disposición los artículos en su totalidad. Se extrajeron los datos de cada estudio y se elaboró una tabla con las principales variables para analizar el perfil de los artículos recolectados. **Resultados:** Luego de cruzar los descriptores, fue posible encontrar inicialmente una muestra de 64 artículos. Adoptando el criterio de inclusión relacionado con la necesidad de que los artículos se publiquen en lengua portuguesa, de los últimos 10 años y estén disponibles en su totalidad, se observó que, de este total, 31 cumplían con estos criterios. Finalmente, la muestra final estuvo conformada por 12 artículos. El farmacéutico clínico hospitalario tiene diferentes responsabilidades, contribuyendo a la promoción de la salud a través de la adquisición, provisión y control de insumos esenciales para pacientes hospitalizados; juega un papel indispensable en la prevención de reacciones adversas y los riesgos de interacciones medicamentosas; garantiza la seguridad del paciente mediante el uso racional de los medicamentos recetados por los médicos; y tiene una participación activa en la adherencia al tratamiento y prevención de enfermedades en general. **Consideraciones finales:** la farmacia clínica hospitalaria es importante para la salud pública en general y el farmacéutico clínico se convierte en una pieza clave del equipo hospitalario multiprofesional.

Descritores: Farmacia clínica; Farmacia Clínica Hospitalaria; Atención farmacéutica

Introduction

The hospital clinical pharmacy is a service of great utility and importance within the context of hospital care in current organizations. This service was first implemented in Brazil in the mid-1980s, with the aim of providing the pharmacist with the possibility of reintegration into the health team. However, at first, a great difficulty was observed in the implementation of this type of service, since hospital administrators did not see advantages in this new practice.¹

However, over the years, the importance of the presence of this professional in the hospital context has been increasingly recognized, having a series of duties and responsibilities, contributing decisively to health promotion.

In this context, the figure of the pharmacist is that of a health care provider, who can actively participate in disease prevention and health promotion, along with other members of the health care team.²

Despite all the evolution in the provision of this service and the recognition of the importance of pharmaceutical professionals specifically in the hospital clinical pharmacy, there is still a lack of studies that address the attributions and importance, in practice, of this professional within the reality of hospital care in Brazil.

In the scientific literature, there are few studies that contemplate the pharmaceutical performance in hospitals in Brazil, especially with regard to pharmacotherapeutic follow-up.³

In this sense, the aim of this study was to describe the importance and contribution of clinical pharmacy in health promotion within a hospital organization, highlighting the consensus on this topic in the specialized scientific literature.

Method

This is a narrative review of the literature, carried out in order to answer the following guiding question: What is the importance of hospital clinical pharmacy and what are the duties of this professional in public health in general?

In this study, to survey the articles, an online search was performed at the Virtual Health Library (VHL), using the following Health Sciences Descriptors (Decs): Clinical pharmacy; Hospital; Pharmaceutical.

Data collection took place during the month of April 2020. The inclusion criteria were written in Portuguese and, furthermore, the period from 2010 to 2020 was delimited, that is, in the last 10 years and articles made available in full. As exclusion criteria, those articles that escaped the topic were excluded from the sample, as well as those that presented themselves only with their abstracts and that escaped the publication period of the last 10 years.

As a search strategy, the combination of descriptors was used: (tw clinical pharmacy) AND (tw hospital) AND (tw pharmacist)). The reading of the material was initially exploratory through summaries of the articles, followed by selective reading by the content and later analytical, aiming at the identification of the information and its synthesis through files to provide a partial report on the topic under study. The data for each study were extracted, and a table was created with the main variables to analyze the profile of the collected articles.

Results

After crossing the descriptors, it was possible to find a sample composed of 64 articles initially. Adopting the inclusion criterion related to the need for articles to be published in the Portuguese language, from the last 10 years and made available in its entirety, it was observed that, of this total, 31 met these criteria.

Making a more careful selection of the articles, it was observed that 19 had a different theme from the main theme that was the objective of this study, which is the importance of the hospital clinical pharmacy, as well as some of them were presented in duplicate, being, therefore, excluded. Finally, the final sample consisted of 12 articles, the results of which are shown in Table 1.

Table 1 - Summary of studies and their main results.

Author (year)	Objective	Method	Results	Conclusion
Bouças et al (2018) ⁴	Analyze the impact of the accreditation process on hospital pharmaceutical care, aiming to identify evidence of changes and improvements in the service provided by the hospital pharmacy.	Focus groups were conducted with pharmacists and internal customers of the pharmacy service of 5 private hospitals in the State of Rio de Janeiro intentionally selected. Recordings were made, later transcribed, for analysis of the content of the dialogues and thematic categorization.	Accreditation resulted in investments of infrastructure and human resources, implementation of new processes and a discreet change in the pharmacist's performance, leveraged by the clinical pharmacy. It was observed that such modifications contributed to a continuous transformation of hospital pharmaceutical assistance, with a modest improvement in the efficiency, quality and safety of the service provided. When considering the final results, satisfaction was partial, since the cycle of pharmaceutical assistance is not yet complete, weakening the newly implemented processes in favor of the quality of care offered to the patient.	The impact on the overall performance of the hospital pharmacy was considered positive, allowing to conclude that the accreditation guidelines pointed the way for the development of evaluated services, insofar as they demanded the fulfillment of the standards necessary for a pharmaceutical assistance quality.
Farias et al (2016) ⁵	Implement a clinical pharmaceutical service focused on the complete review of antineoplastic agents used in the treatment of hematological diseases.	An interventional study was carried out in a Brazilian tertiary teaching hospital in two different periods, based on the absence and presence of the clinical pharmaceutical service, respectively. This service consisted of pharmaceutical validation prescription medication antineoplastic agents (analysis of patient characteristics, laboratory tests, compliance with the therapeutic protocol and pharmacotechnical parameters). Inpatients and outpatients with hematological diseases were included.	There was an increase of 106.5% in the detection of problems related to medicines after the implementation of the service. Comparing the two periods, there was an increase in the age of the patients (26.7 years versus 17.6 years), a predominance of outpatients (54% versus 38%) and an increase in multiple myeloma (13% versus 4%) and non-Hodgkin's lymphoma (16% versus 3%). The most commonly encountered problems were related to the dose (33% versus 25%) and the day of the cycle (14% versus 30%). As for the clinical impact, the majority had a significant impact (71% versus 58%) and one could have been fatal in the second period. The main pharmaceutical interventions performed were dose adjustment (35% versus 25%) and medicines suspension (33% versus 40%).	The pharmaceutical service has contributed to the increase in the detection and resolution of problems related to medicines, being an effective method to promote the safe and rational use of antineoplastic agents.
Lima et al (2016) ⁶	Describe and analyze guidance drug offered at discharge of patients transplanted.	A cross-sectional, descriptive and retrospective study was carried out, which used the records of the guidelines performed by the clinical pharmacist at the inpatient unit of the Renal and Liver Transplantation Service,	The first post-transplant discharge involved the entire multidisciplinary team, with the pharmacist responsible for guiding drug treatment. The mean of discharge / month with pharmaceutical guidance during the study period was 10.6 ± 1.3 , totaling 74 guidelines. The prescribed clinical treatment had an average of 9.1 ± 2.7 drugs per patient. 59 drug-related problems were identified; 67.8% were related to	The orientation of the clinical pharmacist with the multidisciplinary team at the time of discharge of the transplanted patient is important, as it prevents negative results associated with pharmacotherapy, ensuring drug reconciliation and patient safety.

		<p>Walter Cantídio University Hospital, in Fortaleza (CE), from January to July 2014.</p> <p>The following variables registered in the Database of the Clinical Pharmacy Service were analyzed: pharmaceutical guidelines at discharge, problems and negative results related to drugs, and pharmaceutical interventions performed.</p>	<p>the non-prescription of the necessary medication, resulting in 89.8% risk of negative results associated with medications due to an untreated health problem. The main intervention was the request for inclusion of the drug (66.1%), and 49.2% of the drugs involved acted in the digestive system / metabolism. All interventions were classified as appropriate, and 86.4% were able to prevent a negative result.</p>	
Fideles et al (2015) ⁷	<p>Analisar 3 anos de atividades clínicas e recomendações farmacêuticas aceitas durante a rotina diária do farmacêutico na unidade de terapia intensiva clínica adulta.</p>	<p>An exploratory, descriptive, cross-sectional study was carried out from June 2010 to May 2013, in a tertiary teaching hospital, during which pharmaceutical recommendations were categorized and analyzed.</p>	<p>834 pharmaceutical recommendations were analyzed, which were classified into 21 categories. Pharmaceutical recommendations were mainly directed to doctors (n=699; 83.8%), the most frequent being: dilution management (n=120; 14.4%), dose adjustment (n=100; 12.0%) and management of adverse drug events (n=91; 10.9%). Comparing the periods, there was an increase, over the years, of pharmaceutical recommendations with a greater clinical component and a decrease in those related to logistical aspects, such as the provision of medicines. The recommendations involved 948 drugs, with emphasis on anti-infectives for systemic use.</p>	<p>The role of the pharmacist in intensive care has evolved at the institution where the study was conducted, moving from reactive actions associated with logistics to effective clinical participation with the multidisciplinary team (proactive actions).</p>
Bernardi et al (2014) ⁸	<p>Report the process of computerization and systematization of pharmaceutical evaluations of medical prescriptions, as well as describe the profile of medical prescriptions and pharmaceutical interventions in an oncology hospital in southern Brazil.</p>	<p>The study was carried out from February 28 to November 11, 2011, in an oncology hospital. The collection was performed through the hospital's computerized system, taking into account the adult and pediatric inpatient wards. 3,221 medical prescriptions were evaluated, 28.0% of the total medical prescriptions in the period. A high rate of prescription of antibiotics (52.9%) and antineoplastic agents was evidenced (27.1%). Based on the evaluations, 284 pharmaceutical interventions (8.8%) were performed, mainly related to professionals doctors and pharmacists</p>	<p>Of the total, 93.7% of the interventions were considered adequate and accepted by the team.</p>	<p>The computerization process took place with good acceptance by the team, and the proper registration allowed the verification of the pharmacist's performance in the evaluations, reinforcing the importance of this professional for the multiprofessional team.</p>
Penna (2014) ⁹	<p>Raise expectations of the health team regarding the role of the Clinical Pharmacist in the Institution's Pediatric and Neonatal ICUs to guide the actions that will be performed during the service implementation process.</p>	<p>Questionnaire application prepared by the Division of Pharmaceutical Assistance to members of the Pediatric and Neonatal CII team at HCFMRP-USP.</p>	<p>Fifty professionals were interviewed, including nursing assistants / technicians, nurses, physiotherapists, doctors and other professionals. Nursing assistants / technicians and physiotherapists showed a greater expectation with questions related to medication administration; for resident doctors and nurses the expectation revolves around issues related to medical prescription.</p>	<p>The service of Clinical Pharmacy in Intensive Care Units is a work still little known.</p>

<p>Paulo (2014)¹⁰</p>	<p>To better understand the steps taken by the medicine during its dispensing and distribution trajectory, the processes of each step of the flow and the most complex and important subprocesses, aiming at improvements and benefits both for health professionals and for the institution and, mainly, for the patient.</p>	<p>The data collection performed by the ethnographic method of description and observation of the phenomenon presented a context very close to the daily reality of the teams and provided a view of the complex scenario of the Hospital Pharmacy of the Health Complex of the Hospital das Clínicas of the State University of Campinas, São Paulo, from April to September 2010.</p>	<p>The professionals involved in dispensing and distribution, and even in the administration of medicines, make simple mistakes in these processes, usually associated with the lack of attention to the process and the distraction that the environment imposes on them, such as the large circulation of people, telephone service, exchange of information, information between teams and others. Despite not being the object of this study, it is recognized that the hospital pharmacy work environment can indirectly contribute to medication administration errors, and other studies need to be carried out to better understand this scenario</p>	<p>The study concluded that the medication dispensing and distribution flow includes 5 steps: (1) pharmacy warehousing, (2) preparation, (3) dispensing, (4) distribution in the wards and (5) return. There are 18 processes involved, and the critical points of greatest attention are the process of unifying medicines, sorting prescriptions, separating prescriptions and registering medications. It is vitally important to build a strategic plan focused on the prescription, distribution and dispensing of medicines, with short, medium and long term investments, with the objective of guaranteeing full safety to the users of the health system. He also concluded that the computerization of the Medical area, as in any activity, has become extremely important in updating and consolidating data, since in the hospital pharmacy, there are many areas in which the improvement of quality and productivity is associated with the use a more efficient computerized system in data processing and control, making it essential.</p>
<p>Nascimento et al (2013)¹¹</p>	<p>Assess the existence of associations between hospital pharmacy services variables.</p>	<p>30 variables from the Diagnosis project were used of Pharmacy Hospital in Brazil related to the general characterization of the hospital, general characterization of the hospital pharmacy service and stages of pharmaceutical assistance. Dimension 1 of correspondence analysis Multiple explained 90.6% of the variability, differentiating hospital pharmacy services according to the presence of activities, thus suggesting an axis of characterization of the structure of hospital pharmacy services.</p>	<p>The results indicated a direct relationship between fulfillment of activities and type of hospital and specialized pharmacists. The cluster analysis identified six groups related to the size of the hospital, with greater fulfillment of activities by hospital pharmacy services in large units and with pharmacists (more time dedicated to hospital pharmacy service and higher level of training).</p>	<p>It was concluded that the techniques were able to identify associations and a concise list of variables for a comprehensive assessment of hospital pharmacy services in the country.</p>
<p>Rabelo Borela (2013)¹²</p>	<p>The objective of this study was to propose the insertion of the pharmaceutical professional in the control of pain of oncological origin aiming at the rational use and monitoring of adverse reactions to medications.</p>	<p>For the effective control of pain, implementation of analgesic measures and evaluation of therapeutic efficacy of pain, the correct use of the World Health Organization (WHO) "Guide for Pain in Cancer" is essential, which provides guidelines for pain control in most patients with</p>	<p>The scales for measuring pain combined with the protocol recommended by the WHO have proved to be an essential tool for the rational use of medicines.</p>	<p>The pharmaceutical professional, in addition to fulfilling his current activity, is able to interact in multidisciplinary teams, assisting in the pain management of cancer patients, evaluating the length of this protocol established by WHO in pain control.</p>

		advanced cancer, and it is also essential to report the patient's painful experience to health professionals.		
Miranda et al (2012) ¹³	Demonstrate the role and importance of the clinical pharmacist in the First Care Unit in identifying, classification and survey of the number of interventions performed by the clinical pharmacist.	A retrospective study was carried out from January 1, 2010 to December 31, 2010, at the Morumbi First Care Unit of Hospital Israelita Albert Einstein. The interventions were carried out by the clinical pharmacist through work with the interdisciplinary team and active search in medical records, with the daily analysis of the medical prescription in the period of eight hours (10 am and 7 pm) from Monday to Friday	A total of 3,542 medical prescriptions were evaluated and 1,238 interventions occurred. The classifications and quantities of interventions were: route of administration: 105 (8.48%); frequency: 73 (5.89%); dose: 431 (35%); renal function: 14 (1.13%); compatibility: 50 (4%); dilution: 121 (9.77%); legibility: 39 (3.15%); pharmacovigilance: 7 (0.56%); adverse reaction to medications: 7 (0.56%); allergy: 35 (2.82%); infusion time: 76 (6.13%); indication: 52 (4.20%); drug reconciliation: 2 (0.16%); medicines via tube: 38 (3%); schedule: 7 (0.56%); protocol specific anticoagulants: 44 (3.55%); protocol specific hypoglycemic: 42 (3.99%).	The study allowed to demonstrate the importance of the clinical pharmacist working in the First Care Unit. From the classification and the number of interventions performed, it was possible to observe that the Clinical Pharmacy Service had a great impact in increasing patient safety and preventing adverse events.
Ferracini et al (2011) ¹⁴	Demonstrate the development and contribution of the clinical pharmacy to the safe and rational use of medicines in a large tertiary hospital.	The work involved the participation of the clinical pharmacist in all issues related to the use of medicines in the hospital. In the beginning it was related to the analysis of medical prescription, horizontal visit and implementation of protocols. Later, other activities were incorporated, such as: pharmacovigilance, participation in commissions and managed routines. After identifying the drug-related problem, the pharmacist contacted the doctor and, after the intervention, recorded the conduct on the prescription and / or on the patient's medical record.	There was an increase in the number of clinical pharmacists, reaching 22 in 2010. There was also an increase in the types and number of interventions performed (from 1,706 in 2003 to 30,727 in 2010) and we observed 93.4% adherence by the medical team in 2003, reaching to 99.5% in 2010	The clinical pharmacy has shown a positive impact in relation to the number of interventions performed, promoting rational use of medicines and increasing patient safety. The pharmacist was inserted and guaranteed his space with the multidisciplinary team and in the patient safety process within the institution.
Borges Filho et al (2010) ¹⁵	Highlight the contributions of the pharmacist and the hospital clinical pharmacy in the quest to reduce the use of human albumin by 20% with unsubstantiated indication at Hospital Israelita Albert Einstein.	During a period of 30 days (December, 2006), a preliminary prospective analysis was carried out using the medical prescriptions of patients with human albumin, and therapeutic indications were evaluated in relation to the guidelines established by ANVISA resolution RDC 115. Based on this information, an action project was prepared and a routine of daily monitoring of prescriptions by pharmacists was instituted as of January 2007.	From January to October 2007, 14,799 bottles of 20% albumin were consumed. Of these, 4,191 with unsubstantiated indication, corresponding to a loss of R\$ 1.36 million. In 2008 (from January to October), 13,519 vials of 20% albumin were prescribed. Of these, 1,648 with unsubstantiated indication, which accounts for a loss of R\$ 535 thousand. The ratio between the risk of loss and the amount consumed from January to October 2007 was 91.99. In the same period in 2008, it was 39.60. From January to October 2007, the average percentage of albumin prescribed with unsubstantiated indication was 28%. In the same period in 2008, this percentage dropped to 13%. A reduction of 54%.	The Pharmacist's involvement in the process of verifying the indication and justification for the use of the medication represented the guarantee of safe processes for the patient, ensuring that he receives the right medication for the correct indication, thereby reducing the likelihood of adverse events and helping to reduce bureaucracy and expenses unnecessary in this institution.

Discussion

Through the selected sample, it was possible to observe that, especially in recent years, it has been possible to observe that there was a great recognition about the importance of Clinical Pharmacy within the hospital environment specifically. This was possible to observe consensually among the different authors selected here. Still, for sure that the contributions that the Clinical Pharmacy can bring to the practices and care exercised in a hospital environment are, in our understanding, fundamental as a specialty inserted in a highly complex system - like the hospital - making possible the consolidation of a series of advantages and benefits for public health in general.

Likewise, over the past few decades it has also been possible to observe a profound evolution in hospital organizations, which have become much more complex and comprehensive, serving a very high number of patients / clients and requiring the performance of multidisciplinary teams, where each piece plays a very important role within a complex system.

Within this context, it was also observed that, specifically, the greater appreciation of the figure of the pharmacist was due to the finding that he is an indispensable professional to guarantee the quality of the service provided and especially the guarantee to the health of the population served, being their specific duties and which cannot be performed in an "adjusted" or "adapted" manner to other professionals under penalty of compromise of the entire complex system, which is good and efficient hospital management.

Its main duties within a multiprofessional team include the acquisition, provision and control of inputs considered essential for inpatients.¹⁵⁻¹⁶ Also, this is an active health professional and a member of the multidisciplinary patient care team is able to participate in therapeutic decisions, in addition to contributing to treatment adherence.¹²⁻¹⁶

Likewise, when working in the hospital clinical pharmacy, the professional is assuming a great responsibility in patient care and also contributing to the prevention of self-medication and the irrational use of medicines, a problem so common today.^{2-3,16} Specifically, self-medication has been the subject of intense debates and the search for alternatives in the last few years seeking its prevention, considering all the risks associated with it. The irrational use of medicines can bring numerous risks to the individual's health, risks related to problems of the most varied orders, from drug interactions, adverse effects, intoxications, among others.¹²⁻¹⁴

Final Considerations

The hospital clinical pharmacy is of great importance, making indispensable contributions to public health in general.

The figure of the hospital clinical pharmacist has several responsibilities operating in this sector, contributing decisively to health promotion through the acquisition, provision and control of inputs considered essential for inpatients. Also, the hospital pharmaceutical professional has an indispensable role in preventing adverse reactions and the risks of drug interactions, as well as ensuring patient safety through the rational use of medicines prescribed by

doctors, as well as an active participation and greater adherence to disease treatment and prevention in general, which can be considered a key part of the hospital's multiprofessional team.

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Kidney transplantation and the importance of the team in postoperative care: an integrative review

Transplante renal e a importância da equipe nos cuidados destinados ao pós-operatório: uma revisão integrativa

El trasplante de riñón y la importancia del equipo en el postoperatorio: una revisión integradora

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REVISA

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RESUMO

Objetivo: Sob os preceitos da enfermagem na efetivação destes na tomada de decisões acerca de cuidados prescritos ao paciente, torna-se preponderante levantar na literatura os estudos científicos que versavam sobre aspectos da relevância do profissional da enfermagem, no processo de preparo e pós-cirúrgico dos pacientes em terapia renal de substituição. **Método:** Assim, foi realizada revisão integrativa de artigos científicos, para identificar os que versam sobre a importância do enfermeiro nos cuidados pós-operatórios do transplante renal. **Resultados:** Foram selecionadas 10 publicações entre 2015 e 2020. **Conclusão:** Com aproximadamente mais de cinco mil transplantes renais realizados anualmente e baseado na legislação nacional, o Brasil, está no topo dos países que realizam a terapia definitiva para a doença renal crônica. Entretanto, apesar de ser um importante recurso terapêutico, não significa que a cura foi alcançada, mas sim uma nova perspectiva de qualidade de vida.

Descritores: Enfermagem; Transplante; Assistência de enfermagem; Insuficiência Renal Crônica; Transplantados.

ABSTRACT

Objective: Under the precepts of nursing in its effectiveness in making decisions about prescribed care to the patient, it becomes important to bring the literature of scientific studies that dealt with aspects of the relevance of the nursing professional in the process of preparing and post-surgical patients in renal replacement therapy. **Method:** It was made an integrative review of scientific articles, to identify those dealing with the importance of nurses in post-surgical care for kidney transplantation. **Results:** 10 publications were selected between the years of 2015 and 2020. **Conclusion:** With approximately more than five thousand kidney transplants performed annually and based on the national legislation, Brazil is at the top of the countries that perform the definitive therapy for chronic kidney disease. However, despite being an important therapeutic resource, it does not mean that a cure has been achieved, but a new perspective on quality of life.

Descriptors: Transplant; Nursing; Nursing care; Chronic Kidney Failure; Transplanted.

RESUMEN

Objetivo: Bajo los preceptos de la enfermería en su efectividad en la toma de decisiones sobre los cuidados prescritos al paciente, se torna preponderante suscitar en la literatura estudios científicos que aborden aspectos sobre la importancia del profesional de enfermería en el proceso de preparación y postoperatorio de pacientes en terapia de reemplazo renal. **Método:** Así, se realizó una revisión integradora de artículos científicos para identificar aquellos que tratan sobre la importancia del enfermero en el postoperatorio de trasplante renal. **Resultados:** se seleccionaron 10 publicaciones entre 2015 y 2020. **Conclusión:** Con aproximadamente más de 5.000 trasplantes de riñón realizados anualmente y con una base en la legislación nacional, Brasil está a la vanguardia de los países que realizan terapia definitiva para la enfermedad renal crónica. Sin embargo, a pesar de ser un recurso terapéutico importante, no significa que se haya logrado una cura, pero una nueva perspectiva sobre la calidad de vida no siempre es fácil para el paciente.

Descritores: Trasplante; Enfermería; Cuidado de enfermera; Insuficiencia renal crónica; Trasplantado.

Introduction

Chronic Kidney Disease, a serious public health problem, is characterized by the progressive and irreversible loss of the kidneys, which is relevant due to its incapacity in alterations of its organic, psychological and social function, being commonly silent, causing the excess of urea and creatinine in the blood.¹

Of the possible therapeutic possibilities, renal replacement therapy, which is considered the most effective method for hemodialysis or peritoneal dialysis. However, it is up to the multidisciplinary team to evaluate each patient individually respecting their wishes and limitations, choosing the treatment that improves their quality of life within the possible scope.²

Brazil performs approximately 5700 kidney transplants per year. In comparison with the rest of the world, it has one of the largest public health systems, in which the transplantation process and its maintenance are guaranteed by law to the whole society.³⁻⁴

Transplants are part of the budget of financial resources destined to the health sector according to current legislation, based on Law 9434 of 1997 and regulated by Decree No. 9,175, of 2017, consequently, Brazil boasts the largest public transplant system in the world through of the Unified Health System, with a single list of patients (CTU), post-transplant outpatient care, immunosuppressive medications distributed free of charge, dialysis, clinical follow-ups, diagnostic tests, as well as necessary hospitalizations.^{5, 6}

The cataloging of potential recipients carried out by the public health system's unique list is based on the correlation between the donor's anthropometric, immunological, clinical and serological characteristics and the recipients included in the list. After locating a possible donor, the kidney transplant provides the patient with an opportunity to get rid of hemodialysis or peritoneal dialysis, and guarantees the execution of activities that were not previously possible, such as abundant water intake, approaching the family and autonomy gain.⁷⁻⁸

Kidney transplantation is a surgical technique for implanting a donated kidney, being a living or deceased donor, grafted in the lower abdominal region of the patient with the purpose of performing the functions of a non-sick kidney. Despite being an important therapeutic resource, it does not mean that a cure has been achieved, but rather a new quality of life perspective to be presented to patients with chronic kidney disease, therefore, it will be necessary to follow up with exams, use of medications and changes in health habits not always easy for the patient.^{8,9-10}

Based on this perspective, it is possible to understand the importance of the multidisciplinary team that accompanies the patient, and it is up to the nurse to know his behaviors and his daily routine, being able to create a care plan and guidelines for a greater benefit of kidney transplantation, based on the idea of a possible replacement therapy, educating, guiding and highlighting the possible changes in the patient's life habits, making it clear that, despite the probable insubmission to dialysis, the graft is a treatment and not the cure for CKD requiring care and continuous maintenance after the procedure.⁸

Thus, the guiding question of this investigation was: which aspects are more prevalent in national studies on the importance of nursing when determining postoperative care for kidney transplantation?

Under the influence of patient-centered care and the precepts of nursing in its effectiveness in making decisions about care prescribed to the patient, it is preponderant to raise in the literature the scientific studies that dealt with aspects of the relevance of the nursing professional in the preparation process and post-surgical treatment of patients undergoing renal replacement therapy.

In this sense, the objective of the study was to identify and analyze the existing evidence regarding the importance of nursing in relation to the care prescribed to the patient for a satisfactory post-kidney transplant.

Method

An integrative literature review was carried out. The following stages for the development of the research were delimited: the identification of the theme and selection of the research question; the establishment of criteria for inclusion and exclusion; the definition of the information to be extracted from the selected studies and; the evaluation of the studies included in the integrative review; interpretation of results, presentation of the review; and the synthesis of knowledge.¹¹⁻¹²

Studies on nursing communication in renal replacement therapy (kidney transplantation and the importance of the team in post-operative care: an integrative review.) Aimed to answer the following guiding question: What are the most prevalent aspects? in national studies on the importance of nursing when determining postoperative care for kidney transplantation? In the construction of the appropriate question for the resolution of the researched clinical question, the PICO strategy was used: "P" corresponds to the population (Patients with Chronic Kidney Disease indicated for transplantation); "I" to the intervention (research articles); "C" for comparison (not applicable, as this is not a comparative study) and "O" for the outcome (effective communication between nurse and patient with recommendation to be transplanted).¹³

Controlled descriptors identified in the Health Science Descriptors were used (DECs), Medical Subject Headings (MESH), e CINAHL Headings: "Transplante" (Transplant), "Transplantados" (Transplanted), "Enfermagem" (Nursing), "assistência de enfermagem" (nursing assistance), "Cuidado de enfermagem" (nursing care), "Atendimento de Enfermagem" (Nursing Attendance), "Insuficiência Renal Crônica" (Chronic Kidney Failure), "Doença Crônica Renal" (Chronic Kidney Disease), "Nefropatias Crônicas" (Chronic Nephropathies),

The search strategy using the Boolean AND operator was: Transplant AND nursing; Transplant AND nursing care; Transplant AND nursing care; Transplant AND Chronic Kidney Failure; Transplant AND Chronic Kidney Diseases; Transplanted AND Chronic Kidney Disease; Transplant AND Nursing Care, and occurred in Portuguese and English, depending on the research base. Data collection took place between the months of September and October 2020. The databases searched were SCIELO® and other members of the Latin American and Caribbean Health Information Network (via Bireme®). Research was also carried out on the following bases of health sciences: Latin American

and Caribbean Literature on Health Sciences (LILACS) and Nursing Database (BDENF).

Original research articles, whose theme answered the guiding question, published in the last five years, in the Portuguese language, with Brazil as the country of origin, were included. Studies that did not have research methodology (case reports, reflections, recommendations), reviews, studies that focused on other topics were excluded. The studies were also included, considering the limitation in the number of studies with the studied population, in order to achieve the maximum information about this population. An exhaustive reading of the titles and abstracts was carried out, independently, between two authors, to ensure that the texts contemplated the guiding question of the review and met the established inclusion and exclusion criteria.

In case of doubt regarding the selection, it was decided to initially include the publication, and to decide on its selection only after reading its contents in full. The analysis of the data of the integrative review was elaborated in a descriptive way. A table, constructed by the authors, was used for the extraction and synthesis of data from each primary study included in the review, with the following information: article title, authors, objectives, method, main results and summary of conclusions. This table allowed the comparison and organization of data, according to their differences, similarities and the review question, which were critically analyzed and grouped into two categories (Chart 1).

Results

Using the descriptors DeCS Transplantation, Transplantation, Nursing, nursing care, Nursing care, Nursing Care, Chronic Kidney Disease, Chronic Kidney Disease, Chronic Kidney Diseases in Portuguese, a total of 1001 articles were found, however, after excluding the repeated articles we have 142 articles left. After reading the title and abstract, it was restricted to 14 articles that fit the proposed objective. Therefore, 14 studies were read in full, where 1 was a duplicate publication and 3 others did not answer the proposed guiding question, finally having 10 articles. A table was created (Table 1) in which the following information from the remaining articles was added: article title, objectives, method, main results and summary of conclusions. At the end of the selection, the works were categorized as follows: Importance of the professional's communication with the patient; patients' perception about transplantation; Postoperative care.

Table 1- Distribution of selected articles according to title, objectives, methodology, results and conclusions.

Title	Goals	Methodology and Results	Conclusions
Communication as an Educational Tool in the Mediation of Preoperative of Kidney	Recognize the importance of communication as a tool used by nurses in the mediate preoperative	This is a descriptive, convergent study, with an approach qualitative. Data were collected through semi-structured interviews	The nurse's responsibility in the communication process with the patient emerged from the importance of guiding him regarding health care. Communication should

Transplantation	of the patient on hemodialysis therapy indicated for kidney transplantation.	with 9 nurses. Data collection was carried out during the first semester of 2013 using a script pre-established with subjective questions.	be effective, welcoming, attentive to the individualities of each one.
Strategy Implemented by the nurse for learning of renal transplant recipients in immunosuppression	Describe the experience of nursing in the implementation of learning strategies in immunosuppression for kidney transplant recipients.	Qualitative, descriptive study that uses the theoretical framework convergent care research. Thematic interviews and workshops were used in a kidney transplant unit All information was collected through interviews with 151 patients, from the history and evolution of nursing recorded in their medical records.	The study demonstrated the importance of nurses as educators, with a view to developing and adapting strategies and learning resources.
It was / wasn't everything I thought: facilities and difficulties after kidney transplantation	To know the facilities and difficulties that people with chronic kidney disease experience after kidney transplantation.	Qualitative and descriptive study, carried out with 20 kidney transplant patients from May to July 2013. Semi-structured interviews were used, analyzed according to the technique critical incidents.	The facilities and difficulties depend on the experience of each person. Health professionals need to understand and promote health actions that favor the uniqueness and context of the kidney transplant patient.
Care performed by people with kidney transplantation for organ maintenance	Identify the care performed by people with kidney transplantation to maintain the transplanted organ.	Descriptive, qualitative, experimental study with 20 people interviewed who underwent kidney transplantation and who met the inclusion criteria.	Performing a kidney transplant can cause changes in the behavior of the person with the CKD. Health professionals need to be attentive to the care taken. In this context, the role of Nursing becomes essential, especially in guiding the actions that permeate the life of the person with kidney transplantation, facilitating them to become protagonists in their treatment.
Knowledge and practices shared with renal clients to be transplanted: health education for self-care	Describe the knowledge and practices of the chronic renal client about self-care in the pre and post-transplant; analyze these knowledge and practices from the perspective of self-care and to elaborate an educational strategy based on the sharing of knowledge and practices customer and professional.	Study with a qualitative approach in which patients with chronic kidney disease who opted for kidney transplantation as replacement therapy. A sample of 17 customers was considered eligible to participate in the research but after the criterion exclusion left 11 patients to participate in the study.	It is concluded that the nursing consultation is not only necessary, but indispensable and must be conducted by trained professionals to share knowledge from the transplant process.

<p>Kidney transplantation: perceptions of transplanted patients and health professionals</p>	<p>identify the care provided by people with kidney transplantation for the maintenance of the transplanted organ.</p>	<p>Exploratory-descriptive qualitative research. The research subjects were 16 patients who underwent renal transplantation of and 14 health professionals who worked directly with these patients, totaling 30 people. The information obtained was grouped into three categories, namely: Changes resulting from kidney transplantation; Main difficulties encountered after the kidney transplantation; Adherence to treatment.</p>	<p>Demonstrates the need for establishment of a bond of trust between patients and professionals, as a way of to optimize the treatment adherence process.</p>
<p>Quality of life in kidney transplants</p>	<p>Show the quality of life of patients who have had a kidney transplant, and draw a sociodemographic profile.</p>	<p>Descriptive, cross-sectional and qualitative study. Twelve chronic renal patients who underwent kidney transplantation participated. They were divided into categories of time that had the transplant, tracing the sociodemographic profile.</p>	<p>The study showed reflections on the experiences and perceptions of patients who performed kidney transplantation. Emphasizing aspects, such as regaining health, freedom and autonomy</p>
<p>The meanings attributed to kidney transplantation</p>	<p>To present the meaning of kidney transplantation to transplanted people.</p>	<p>Qualitative, descriptive study. Twenty people who underwent kidney transplantation were interviewed.</p>	<p>Kidney transplantation brought happiness and rebirth, citing new life and being good, compared with hemodialysis, for doing activities again and for having quality of life. There have also been reports of seeking information about treatment.</p>
<p>Quality of life of kidney transplant patients after a long period of transplantation</p>	<p>To evaluate the quality of life of patients after kidney transplantation using a generic and specific protocol.</p>	<p>Cross-sectional study with a quantitative approach. During the study 55 kidney transplant patients were in side dish. With the exclusion criteria, at the end of the research only 24 patients were eligible for study.</p>	<p>The quality of life of kidney transplant patients after long-term transplantation is good in most domains, with marked impairment in the domains related to physical, mental and pain-related issues.</p>
<p>Dialogic relationship with the client about kidney transplantation: Educational nursing care</p>	<p>Describe the knowledge of chronic renal patients about kidney transplantation and discuss the contributions of this knowledge in nursing educational care.</p>	<p>Qualitative research, with a convergent-care approach, carried out with 11 patients with chronic kidney disease qualified for transplantation.</p>	<p>The dialogue enabled reflection on the construction and reconstruction of knowledge and practices on kidney transplantation and revealed co-responsibility between professionals, clients and their families.</p>

Discussion

Through the analyzed literature and the interpretation of the data, aiming to answer the proposed guiding question, we can categorize the works in 3 themes: Importance of the professional's communication with the patient; patients' perception about transplantation; postoperative care.

Importance of professional communication with the patient

The theme included 80% of the articles analyzed. Systematization is important for the patient to clearly understand the whole process of his treatment, and for the multidisciplinary team to have a good interaction focusing on the individual's well-being.

Among the preoperative care, the nurse has a relevant role in health education, informing the patient step by step about the procedure to be submitted, the immunosuppressive drugs that he will need to use throughout his life and its side effects, the necessary preparation on the day before surgery, the importance of family support, taking possible doubts and carrying out their physical evaluation, always maintaining a holistic view

The nursing team in the intraoperative period aims to assess, detect and intervene in possible complications.

Perception of patients about transplantation

The category defined 90% of the articles analyzed. A study carried out in a municipality in the south of Brazil from May to July 2013, aimed to identify the positive and negative factors about kidney transplantation, interviewing patients who underwent this treatment. It was identified that after the procedure, patients could return to perform activities that were impossible because of hemodialysis, such as housework, physical activities and leisure. It was noticed that the realization of these activities regains its autonomy. Kidney transplantation may be the best option for CKD, however, there are some limitations reported by the patients interviewed in the same study, which may interfere with their social life. They reported the need for some care, such as: protecting themselves from the cold, not exercising extreme force, from contact with people, especially if they have an infectious disease. This can be correlated to the use of immunosuppressants.

Postoperative care

This last subdivision included 40% of the articles analyzed. The best treatment option provided to patients with Chronic Kidney Disease (CKD) is renal replacement therapy, even though this is the best form of treatment, important changes occur in the daily habits of transplant patients who need to be taken into account.

The hemodynamic part of the patient in the first 24 hours after transplantation is extremely important for a successful procedure. In the postoperative period, the nursing team must be attentive to possible

complications, avoiding infections, being attentive to SSVV, controlling diuresis, water control and signs of pain, highlighting the patient's progress in relation to gastrointestinal functions and renal function.

For success in renal replacement therapy, it is important that all stages of systematization are completed.

Final considerations

Kidney transplantation is one of the best ways for the patient to return to normal life activities. But it requires a lot of care for the rest of the patient's life, considering mainly that the patient will not only suffer physical, but also psychological changes. Health professionals have an important role in ensuring a quality transplant. All the instructions given in the pre and postoperative period are important for the individual to clearly understand the whole process of their treatment. This whole phase shows the importance of a multidisciplinary team, so that the patient is taken care of as a whole, not just the part of his pathology. Health care has an extremely important role, since it will take care of the patient from the moment of discovering CKD until after receiving the kidney.

With the increase in the population with CKD, the researched literature reinforces the importance of actions through health education, citing the risk factors and the relevant guidelines about self-care, which these patients need to have throughout their lives. It is also present that the knowledge produced by this research can make health professionals improve their conduct towards a patient undergoing transplantation, given the importance of health education.

In the study carried out, there is a delimitation on the data obtained. Since these are based only on national data and within the past five years, then we propose further studies using also the international literature, to enter the topic so that the results reflect in professional practice.

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The role of nurses in the face of dialysis chronic kidney disease in the intensive care unit

Papel do enfermeiro frente a doença renal crônica dialítica na unidade de terapia intensiva

Papel de las enfermeras frente a la enfermedad renal de diálisis crónica en la unidad de cuidados intensivos

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RESUMO

Objetivo: Analisar o papel do enfermeiro no cuidado com pacientes com doença renal crônica dialítica na unidade de terapia intensiva. **Método:** Trata-se de um artigo de revisão integrativa realizado por meio da análise de 5 artigos científicos extraídos do google acadêmico, Portal da Biblioteca Virtual em Saúde (BVS), Revistas de Saúde, Scientific Electronic Library OnLine (SciELO), Biblioteca Virtual em Saúde (BVSMS). **Resultados:** O enfermeiro é muito importante no desenvolvimento da qualidade de vida e no processo de enfrentamento da doença renal crônica, no tratamento de hemodiálise, é a pessoa que mais tem contato com o paciente antes, durante e após a diálise. Uma vez que a vida do paciente pode depender de muitas dessas medidas, o enfermeiro deve permanecer vigilante para detectar possíveis complicações durante a diálise e tomar as medidas adequadas de forma rápida. **Considerações finais:** A importância desta pesquisa é buscar o melhor atendimento para os pacientes com a doença renal crônica, destacando que o paciente deve estar consciente da sua enfermidade e do seu tratamento, as formas de terapia renal, dieta, restrição hídrica, uso de medicamentos, controle da pressão arterial e da glicemia. O enfermeiro orienta para amenizar o impacto e o estresse, minimizando alguma ocorrência inesperada do tratamento.

Descritores: Enfermagem; Doença renal crônica; Unidade de Terapia Intensiva.

ABSTRACT

Objective: To analyze the role of nurses in caring for patients with dialysis chronic kidney disease in the intensive care unit. **Method:** This is an integrative review article carried out through the analysis of 5 scientific articles extracted from google academic, Portal of the Virtual Health Library (VHL), Health Journals, Scientific Electronic Electronic Library OnLine (SciELO), Virtual Library in Health (BVSMS). **Results:** The nurse is very important in the development of quality of life and in the process of coping with chronic kidney disease, in the treatment of hemodialysis, he is the person who has the most contact with the patient before, during and after dialysis. Since the patient's life can depend on many of these measures, the nurse must remain vigilant to detect possible complications during dialysis and take the appropriate measures quickly. **Final considerations:** The importance of this research is to seek the best care for patients with chronic kidney disease, highlighting that the patient must be aware of his illness and treatment, the forms of renal therapy, diet, water restriction, use of medications, blood pressure and blood glucose control. The nurse guides to mitigate the impact and stress, minimizing any unexpected occurrence of the treatment.

Descriptors: Nursing; Chronic kidney disease; Intensive care unit.

RESUMEN

Objetivo: Analizar el papel de las enfermeras en el cuidado de pacientes con enfermedad renal de diálisis crónica en la unidad de cuidados intensivos. **Método:** Este es un artículo de revisión integradora realizado a través del análisis de 5 artículos científicos extraídos del google académico, Portal de la Biblioteca Virtual de Salud (VHL), Revistas de Salud, Biblioteca Electrónica Científica OnLine (SciELO), Biblioteca virtual de salud (BVSMS). **Resultados:** Las enfermeras son muy importantes en el desarrollo de la calidad de vida y en el proceso de hacer frente a la enfermedad renal crónica, en el tratamiento de la hemodiálisis, es la persona que tiene más contacto con el paciente antes, durante y después de la diálisis. Dado que la vida del paciente puede depender de muchas de estas medidas, las enfermeras deben permanecer vigilantes para detectar posibles complicaciones durante la diálisis y tomar las medidas adecuadas rápidamente. **Consideraciones finales:** La importancia de esta investigación es buscar la mejor atención para los pacientes con enfermedad renal crónica, haciendo hincapié en que el paciente debe ser consciente de su enfermedad y tratamiento, las formas de terapia renal, dieta, restricción del agua, uso de medicamentos, presión arterial y control de la glucosa en sangre. La enfermera aconseja mitigar el impacto y el estrés, minimizando alguna ocurrencia inesperada de tratamiento.

Descritores: Enfermería; Enfermedad renal crónica; Unidad de Cuidados Intensivos.

Introduction

Nursing occupies an important position in direct care to patients, because its activities are directly related to it. Systematization and help can greatly interfere in the quality of care for patients with chronic dialysis kidney disease. In view of the highly specialized and complex care developed by nurses in the hospital, the intensive care unit, the systematization and organization of their work, therefore, in the work of the nursing team, they seek efficient and effective quality care.¹

Given the high incidence of chronic kidney disease and the high mortality associated with it, it seems to be a major public health problem in Brazil. Its evolution is considered gradual and there is no rapid improvement in prognosis, and its consequences have greatly changed people's lives.²

Chronic kidney disease usually remains silent, which can cause major changes in personal life and, depending on the stage, hospitalization is required for clinical or surgical treatment, which requires nursing time.³

Chronic diseases have attracted more attention from health professionals, morbidity and mortality are high, so the main concern in the field of public health. In several chronic diseases affecting the population, chronic renal failure (CRF) is considered to be that there is no expectation of cure, rapid and progressive development, triggering various patient reactions endangering quality of life.⁴⁻⁵

Hemodialysis is the most rigorous physiotherapy selected in this study. It filters blood through arteriovenous access to compensate for kidney function. Arteriovenous access connects the patient to a computer that can monitor and eliminate excess salt, water and toxins in external forms.

According to the doctor's prescription, people may need to spend several years on hemodialysis and need to go to the hospital two or twice a week to the hospital or specialized clinic for two to four hours. In addition, drug management and strict maintenance of the diet are necessary. Because it is long-term, the treatment will cause a number of injuries, damage to physical and psychological aspects, and its impact will affect all aspects of life, including family, society and work.²⁻⁶

Therefore, people undergoing hemodialysis should seek to overcome the difficulties inherent to the disease, so they should resort to coping strategies or methods, that is, behavioral and cognitive skills used to control the needs caused by the internal and external environment. This will make it possible to deal with stressful events and control, reduce or eliminate emotional reactions. Among these techniques, we emphasize family support, attachment to religion or belief, denial, avoidance and resilience. In view of this situation, nursing professionals consider themselves an essential part of the process of improving quality of life and care for patients on hemodialysis. Interventions such as health guidance, family empowerment and nursing supervision demonstrate the importance of nurses' actions in this situation.⁷

In the face of the above, the fundamental question of this study is: How can nursing care management mediate the process of patients treating hemodialysis with chronic kidney disease?

The aim of this study is to analyze the role of nurses in the care of patients with chronic dialysis kidney disease in the intensive care unit.

Method

This is an integrative review, carried out through a bibliographic survey referring to the role of nurses in the face of dialectical chronic kidney disease in the intensive care unit.

For the construction of the integrative review, six distinct stages were: the identification of the theme and the northern question; establishing criteria for inclusion and exclusion of studies/sampling; definition of the information to be extracted from the selected studies/ categorization of the studies; evaluation of the included studies; interpretation of the results; and presentation of the review/synthesis of knowledge. For the survey of the scientific articles of the study, searches were carried out in the academic Goole, Portal of the Virtual Health Library (VHL), Health Journals, Scientific Electronic Library OnLine (SciELO), Virtual Health Library (BVSMS). The descriptors used were: Nursing, Chronic kidney disease; Intensive Care Unit.

We observed through the material studied the extent and complexity of the problem inherent to chronic diseases, stimulating the analysis of the quality of life sick. Twenty articles were found and after the inclusion and exclusion criteria were applied, 5 articles were selected. The criteria taken into account for inclusion were: articles directly related to nursing care in patients with chronic kidney disease in the intensive care unit, chronic renal failure (CR), hemodialysis, year of publication of the article with time between 2013 and 2019.

Chart 1- On the main reasons for chronic kidney disease.

Study	Author	Title	Objective	Results	Conclusions
1	Trepichio et al.	Profile of patients and nursing workload in the nephrology unit	Describe the profile of hospitalized patients and measure the nursing workload.	Chronic Kidney Disease Main causes of hospitalization in patients undergoing hemodialysis	The main reasons for hospitalization were critical hypertension, unexplained fever, melena, gastrointestinal bleeding, and congestive heart failure.

2	Costa et al.	Quality of life of patients with chronic renal failure undergoing to hemodialysis	Evaluate the quality of life of patients with chronic kidney disease.	Chronic Renal Failure (CRF)	To date, progress has been made in technology and treatment, the goal is to improve the clinical condition of patients with CKD and increase their survival rate, their quality of life continues to decrease
3	Cruz et al.	The maintenance of working life by chronic renal patients undergoing hemodialysis treatment: an analysis of the meanings of the study	Understand how hemodialysis happens.	Hemodialysis	Hemodialysis for patients with chronic kidney disease is a painful form and physical and psychological restrictions imposed.
4	Xavier et al.	In the current of life: the discovery of chronic kidney disease	Understand what form hemodialysis treatment affects the patient.	Hemodialysis treatment	Hemodialysis treatment causes some changes, in addition to physical limitations, also brings a variety of feelings has obvious effects on psychological and emotional aspects.
5	Pires et al.	The role of nursing in the care of patients undergoing hemodialysis	Analyze the role of nursing in the care of patients undergoing hemodialysis	Nursing care	It is important that nurses attend the hemodialysis meeting to coordinate the team and determine the special needs of each patient.

The studies analyzed portray chronic kidney disease characterized by insufficient functions, such as waste filtration, water regulation and other chemical elements and hormone production, chronic diseases have attracted more attention from health professionals, has been the main concern in the field of public health, whose main treatment is dialysis. This disease exists in many people, progressive and irreversible evolution, bringing complications and injuries to patients.

The articles studied show that hemodialysis is considered synonymous with life support, because one of the important functions it performs is a blood filtration system of toxic waste not suitable for the human body. Hemodialysis is a painful treatment that does not take long and that causes various changes and impact on the person's life. We can understand that these treatments can affect or hinder work and leisure activities. Nursing care related to diet, medications are the basis for treatment success. Treatment can trigger various conditions in patients damage to various aspects related to health.⁸

In the articles we noticed that the interdisciplinary team, especially the nurse, nursing professionals have a fundamental role in the treatment of these patients, talking to the patient and the family, due to the long coexistence. Nurses must have technical and scientific knowledge, are basic elements of the dynamics of work care for kidney disease. First, the nursing process is the essence of caring, by understanding the importance of relationships, the sensitivity of listening and welcoming, establishing the necessary connection with the treatment of hemodialysis patients.⁹

In the specific case of the department of clinical hemodialysis, it is necessary that nursing deepens, is perfected, and constantly updated in this area, especially to maintain the quality of life of the patient. The nurse should be present at the hemodialysis session to supervise the team and determine the specific needs of each patient. Having knowledge about the function of hemodialysis, is essential for the patient to adapt and be calm about the hemodialysis process, increasing the success of treatment. The nurse guides and provides guidance on the therapeutic plan, with technical and psychological aspects.¹⁰

We can mention that the care provided by nurses involves checking the functioning of the hemodialysis machine, preventing infection during the operation and checking vital signs for signs of discomfort for the patient. Nursing technicians can perform their activities 48 hours/week, and nurses 30 to 36 hours/weeks. Therefore, the role of nurses is as an educator who teaches, cares and facilitates the patient's life, which requires special skills and experience to understand the feelings expressed by the patient at the time of the hemodynamic session.¹⁰

The way the diagnosis of chronic kidney disease is transmitted, the impact generated by the knowledge of the loss of function of an important organ, without the time necessary to absorb more information about the disease greatly affect the emotional and psychological aspects of the patient, who will often have difficulties and understand the information, treatments and procedures related to the disease, with the concern of dying. In this aspect, communication between the nurse and the patient is essential with the guidelines, promoting a successful patient's treatment, alleviating the disease-related anxieties.¹¹

Therefore, it can be emphasized nursing professionals in the intensive care unit sector regarding the care provided and the care and education to patients with chronic kidney disease, the objective is considering the high level of service, obtain qualified care in the service complexity and dependence of hemodialysis treatment.

The main focus of nursing is to care for and help patients, and these go beyond technical procedures and need to establish a client-professional relationship to understand the greater needs of patients who ensure human work are related to care. In response to this situation, the nursing professional is an essential part to improve the quality of life, coping process of patients on hemodialysis. Interventions on health, family autonomy and nursing supervision prove the importance of nurses' actions in this context.

Final Considerations

In this study we understand that chronic kidney disease (CKD) is a metabolic syndrome, caused by progressive loss of glomerular filtration, decreased excretion of toxins and homeostasis, which causes hydrolysis, acidobasic and hemodynamic imbalance. The number of people affected by CKD has been increasing year by year, leading to an increase in the number of hospitalizations.

Thus consequences of chronic kidney disease and hemodialysis are undeniable in the lives of patients, cause profound and extensive changes daily. Given this reality, the family plays a major role in the care and monitoring of the patient's daily life together with the nursing team of the intensive care unit. The work of a nurse should be based on the decision-making capacity to ensure effective results without wasting resources, having the capacity to evaluate, systematize and decision-making for more appropriate conduct, highlighting the responsibility and knowledge in dealing with treatment and the patient.

In a moment, this research is important because it provides subsidies, raise awareness among the team responsible for hemodialysis treatment, assesses the needs and importance of the patient's quality of life, in hemodialysis and providing them with optimized methods of this form of treatment.

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Clinical pharmacist's performance in the intensive care unit

Atuação do farmacêutico clínico na unidade de terapia intensiva

Papel del farmacéutico clínico en la unidad de cuidados intensivos

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REVIS

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RESUMO

Objetivo Dentro do ambiente hospitalar, a Unidade de Terapia intensiva é a responsável pelo cuidado do paciente crítico. Esse cuidado é realizado por uma equipe multidisciplinar, que trabalha em conjunto para garantir a integralidade do cuidado ao paciente. O Farmacêutico Clínico, dentro dessa equipe, garante a economia e o uso racional dos medicamentos, sem perda da qualidade e eficácia do tratamento. Esse artigo tem como objetivo analisar os benefícios da atuação do farmacêutico dentro da equipe multiprofissional na Unidade de Terapia Intensiva. Para isso, foi realizada uma revisão integrativa de literatura, utilizando descritores de Assistência Farmacêutica, Farmácia Clínica e atuação do Farmacêutico em Unidades de Terapia Intensiva. Dentro dos resultados obtidos destaca-se, em todos os artigos, a importância do Farmacêutico no cuidado ao paciente crítico, a importância e necessidade desse profissional e as melhorias obtidas em hospitais que implantaram o serviço de Cuidado Farmacêutico. A intervenção desse profissional gera melhoria na qualidade de vida do paciente, promove redução de custos, aumenta a eficácia, a segurança e o uso racional de medicamentos.

Descritores: Assistência Farmacêutica; Farmácia Clínica; Unidade de Terapia Intensiva.

ABSTRACT

Within the hospital environment, the Intensive Care Unit is responsible for the care of critically ill patients. This care is a director by a multidisciplinary team, which works together to ensure the integrality of patient care. The Clinical Pharmacist, within this team, guarantees the economy and rational use of medicines, without loss of quality and efficacy of treatment. This article aims to analyze the benefits of the pharmacist's performance within the multidisciplinary team in the Intensive Care Unit. For this, an integrative literature review was carried out, using descriptors of Pharmaceutical Care, Clinical Pharmacy and the pharmacist's performance in Intensive Care Units. Within the results obtained, the importance of the Pharmacist in the care of critical lye, the importance and need of this professional and the improvements obtained in hospitals that implemented the Pharmaceutical Care service stand out in all articles. The intervention of this professional generates improvement in the quality of life of the patient, promotes cost reduction, increases efficacy, safety and rational use of medications.

Descriptors: Pharmaceutical Assistance; Clinical Pharmacy; Intensive Care Unit.

RESUMEN

Dentro del ámbito hospitalario, la Unidad de Cuidados Intensivos se encarga de la atención de los pacientes críticos. Esta atención es dirigida por un equipo multidisciplinario, que trabaja en conjunto para garantizar la integralidad de la atención al paciente. El Farmacéutico Clínico, dentro de este equipo, garantiza la economía y el uso racional de los medicamentos, sin pérdida de calidad y eficacia del tratamiento. Este artículo tiene como objetivo analizar los beneficios del desempeño del farmacéutico dentro del equipo multidisciplinar en la Unidad de Cuidados Intensivos. Para ello, se realizó una revisión integradora de la literatura, utilizando descriptores de Atención Farmacéutica, Farmacia Clínica y el desempeño del farmacéutico en Unidades de Cuidados Intensivos. Dentro de los resultados obtenidos, destacan en todos los artículos la importancia del Farmacéutico en el cuidado de la leja crítica, la importancia y necesidad de este profesional y las mejoras obtenidas en los hospitales que implantaron el servicio de Atención Farmacéutica. La intervención de este profesional genera mejora en la calidad de vida del paciente, promueve la reducción de costes, aumenta la eficacia, la seguridad y el uso racional de los medicamentos.

Descritores: Asistencia Farmacéutica; Farmacia Clínica; Unidad de Cuidados Intensivos.

Introduction

The clinical pharmacist works to promote health, preventing and monitoring adverse events, intervening and contributing to the prescription of medications to obtain positive clinical results, improving the quality of life of patients without, however, losing sight of the economic issue related to therapy.¹

Clinical pharmacy, characterized in the 1960s in the United States, comprises activities aimed at maximizing therapy and minimizing risks and costs, promoting the safe and rational use of medications. It is focused on patient care and aims to promote, protect and recover health and prevent their health problems due to the inappropriate use of medication. The clinical pharmacist's conduct seeks to improve pharmacotherapy, promote the rational use of medications and, whenever possible, improve the patient's quality of life.¹⁻²

The pharmacist has been incorporated into the multidisciplinary team of the ICU, aiming to provide better patient care, contributing, above all, to the monitoring of drugs and the assessment of effectiveness, contributing to the increase in patient safety. In this way, the insertion of the clinical pharmacist in the routine of patient care in the ICU occurs mainly through active participation in daily clinical visits, providing information support to the medical and nursing staff; analyzing and monitoring the effectiveness of pharmacotherapy; performing medication reconciliation; and preventing, identifying and reporting adverse reactions³.

The care environment in the Intensive Care Unit (ICU) is an environment designed for the care of severe and unstable patients, which is generally located in the hospital environment, and is considered to be highly complex⁴.

The present work aims to carry out an integrative review, highlighting the contribution of the pharmacist in the intensive care unit and its importance within the multidisciplinary team in the ICU.

Method

This study is a literature review, with a qualitative approach, which aims to analyze the benefits of the pharmacist's performance within the multidisciplinary team in the Intensive Care Unit, highlighting the contribution and importance of the pharmacist when inserted within the multidisciplinary team in the ICU. The analysis of bibliographic documentation from 2002 to 2019 was used and the descriptors/key words used were: Pharmaceutical Care, Clinical Pharmacy, Intensive Care, Hospital Pharmacy and ICU Pharmacist, with the Boolean operator "AND".

After carrying out the collection of bibliographic data, the results obtained were read. Then, the inclusion and exclusion criteria were applied, selecting the articles to be used in the constitution of the review. The criteria used and established for the inclusion of scientific articles were articles that present the role of the clinical pharmacist in the intensive care unit, as well as the benefits of the interventions of the pharmacist for the clinical improvement of the patient in the Intensive Care Unit. The exclusion criterion was based on articles that did not fit into this period and addressed the role of clinical pharmacists in other hospital sectors not specifically related to intensive care for patients.

Results and Discussion

Data obtained from a search initiated between December 2020 and March 2021, in bibliographic publications attached to databases in electronic format using the search form of the Virtual Health Library (VHL).

Table 1. Articles captured in BVS. 2021.

Origin	Article Title	Considerations/ Theme
BATISTA, Arlane et al Centro de Pós-Graduação Oswaldo Cruz	The pharmacist and the intensive care unit	Describe the interaction of the pharmacist with the entire health team
FERNANDES, Luana Leal. Revista Farol	The importance of the hospital pharmacist together with the multidisciplinary team in the Intensive Care Unit (ICU)	Present the benefit of the professional pharmacist with the multidisciplinary team.
MACIEL, Eduarda Cristina et al Santa Casa BH Ensino e Pesquisa	Pharmaceutical performance in intensive care units: contributions to the rational use of medications	Evaluate the role of the clinical pharmacist in the Intensive Care Unit
MEDEIROS, Renata Daniele Amaral et al. Revista Brasileira de Farmácia Hospitalar	Pharmaceutical interventions in medical prescriptions in the intensive care unit	Reports the main Pharmaceutical Interventions in the Intensive Care Unit
MONTE, L. E. M. et al Associação de ensino superior do Piauí. Revista interdisciplinar de ciências médicas	The importance of pharmaceutical care in intensive care units	Emphasize the importance of the Pharmacist in critical patient care
PILAU, Raquel et al Revista Brasileira de Farmácia Hospitalar,	The role of the clinical pharmacist in an adult intensive care unit: a literature review	Present the role of the clinical pharmacist in the Unit of Adult Intensive Care
JUNIOR et al. Revista Eletrônica de Trabalhos Acadêmicos	The importance of the Clinical Pharmacist in the Intensive Care Unit	Review on the importance of the clinical pharmacist in the intensive care unit and highlight their contribution to the critical care health team.
SILVA et al. einstein (São Paulo)	Pharmacotherapeutic follow-up in a respiratory intensive care unit:	Describe and evaluate the pharmacotherapeutic

	description and analysis of results.	follow-up of the clinical pharmacist in an intensive care unit.
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The pharmacist, part of the multidisciplinary team in the Intensive Care Unit, is able to form a connection between the doctor and the nurse, have an overview of the entire process from prescription to drug administration and, in this way, integrate patient safety in use of medicine in the form of Pharmaceutical Intervention. Thus, the pharmacist can work in the Intensive Care Unit as part of the multidisciplinary clinical visits at the bedside, part of the prevention and monitoring of medication errors, inconsistent prescriptions, pharmacoconomics, drug interactions and any other intervention for the benefit of the patient.⁵⁻⁶

The participation of the pharmacist in the Intensive Care Unit (ICU) is described in Brazil by ANVISA (National Health Surveillance Agency), through Resolution (RDC) February 7, 2010. There are countless humanistic benefits brought about by the clinical pharmacist. The Pharmacist, nowadays, is no longer just a professional with a technical vision, but a professional who cares and is responsible for the patient. One of the main benefits is the consequent cost reduction for the hospital unit. There are reports in the literature that point to a sharp reduction in spending on medications where the pharmacist was present. In addition, there was also a considerable reduction in the rate of hospital infections, in addition to the great relevance of the clinical pharmacist's contribution in relation to patient safety in terms of safe medicine.⁶⁻⁹

The clinical pharmacist, within intensive care, has the role of providing care to the patient, in relation to the rational use of medications. In this way, there is the optimization of pharmacotherapy and the promotion of health and well-being. In addition, it minimizes risks and costs, promotes health, prevents disease and improves the patient's quality of life. Among the contributions that can be seen, the interventions performed are directly related to the assessment of need (inclusion/withdrawal of medication), effectiveness (interventions based on the patient's clinical response) and safety (interventions related to the dose of the medication, minimization of predictable ADRs and reduction of drug interactions that compromise the clinical course), triad that is based on the rational use of drugs.^{7,10,11}

Taking into account that institutional clinical protocols were part of the references used by pharmacists for decision-making, there is a contribution to improve the adherence of these protocols in units that have the participation of the clinical pharmacist, bringing benefits to patients and also reinforcing the role of clinical pharmacy in medical care.^{7,9}

In the surveys surveyed it is concluded that the presence of the Pharmacist in Intensive Care Units improves the patient's quality of life, reducing costs, increasing the effectiveness of medicines and safety for use by patients. Thus, its absence results in an increase in the time/cost of hospitalizations and problems related to drug interactions.^{8,11,12}

Conclusion

Patients who are hospitalized in Intensive Care Units may be considered at higher risk of developing drug-related problems, with a lethal and serious severity. The Pharmacist, inserted in this environment, together with the multidisciplinary team, works by ensuring effective, safe and rational pharmacotherapy, increasing the effectiveness of the treatment and reducing the side and toxic effects of medications.

The implementation of this service in hospitals, in addition to increasing the patient's well-being, also increases the valuation of the pharmacist by the healthcare team.

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Nursing Diagnosis in the ICU: the beginning of an implantation

Diagnóstico de Enfermagem em UTI: o início de uma implantação

Diagnóstico de enfermería en la UCI: el inicio de una implantación

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REVISA

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RESUMO

Objetivo: Essa pesquisa busca analisar as propostas de implantação da SAE em unidade de terapia intensiva (UTI). **Método:** Trata-se de uma revisão de literatura. Realizado os seguintes procedimentos: levantamento e análise da documentação bibliográfica do período de 2002 a 2019, através da busca, seleção e leitura analítica dos títulos. Adotou-se como fonte a Biblioteca Virtual em Saúde (BVS), utilizando-se os descritores: processo de enfermagem, cuidados de enfermagem e unidade de terapia intensiva. Dessa forma, possibilitou relatar a importância do processo de enfermagem, acerca de sua implementação. **Resultados:** para tanto, as etapas sequenciais da implementação da SAE serão descritas mediante revisão integrativa, com níveis de evidências de estudos descritivos, vivenciadas na implementação do diagnóstico tais como: adequação à rotina da unidade, tempo disponível do enfermeiro para a execução das etapas do processo, impressos indisponíveis, resistência do enfermeiro à utilização e desvalorização do método. **Conclusão:** o resultado obtido por meio da revisão foi significativo, pois, verificou a execução do processo de enfermagem, visando melhorar a qualidade na assistência prestada ao ser humano e consequente crescimento profissional, valorização e autonomia à enfermagem.

Descritores: Processo de Enfermagem; Cuidados de Enfermagem; Unidade de Terapia Intensiva.

ABSTRACT

Objective: to analyze the proposals for the implementation of SAE in an intensive care unit. **Method:** This is a literature review. Performed the following procedures: survey and analysis of the bibliographic documentation from 2002 to 2019, through the search, selection and analytical reading of the titles. The Virtual Health Library (VHL) was adopted as the source, using the descriptors: nursing process, nursing care and intensive care unit. Thus, it made it possible to report the importance of the nursing process, about its implementation. **Results:** to this end, the sequential stages of the implementation of NCS will be described through integrative review, with levels of evidence of descriptive studies, experienced in the implementation of the diagnosis such as: adequacy to the routine of the unit, available time of the nurse for the execution of the process steps, unavailable printed, resistance of the nurse to the use and devaluation of the method. **Conclusion:** the result obtained through the review was significant, because it verified the execution of the nursing process, aiming to improve the quality of care provided to human beings and consequent professional growth, valorization and autonomy to nursing.

Descriptors: Nursing Process; Nursing care; Intensive Care Unit.

RESUMEN

Objetivo: analizar las propuestas de implantación del SAE en una unidad de cuidados intensivos. **Método:** Esta es una revisión de la literatura. Realizó los siguientes procedimientos: encuesta y análisis de la documentación bibliográfica de 2002 a 2019, a través de la búsqueda, selección y lectura analítica de los títulos. La Biblioteca Virtual de Salud (VHL) se adoptó como fuente, utilizando los descriptores: proceso de enfermería, cuidados de enfermería y unidad de cuidados intensivos. Así, ha hecho posible informar de la importancia del proceso de enfermería, sobre su aplicación. **Resultados:** con este fin, las etapas secuenciales de la implementación de NCS se describirán a través de la revisión integrativa, con niveles de evidencia de estudios descriptivos, experimentados en la implementación del diagnóstico tales como: adecuación a la rutina de la unidad, tiempo disponible de la enfermera para la ejecución de los pasos del proceso, impresiones no disponibles, resistencia de la enfermera al uso y devaluación del método. **Conclusión:** el resultado obtenido a través de la revisión fue significativo, ya que verificó la ejecución del proceso de enfermería, con el objetivo de mejorar la calidad de la atención prestada a los seres humanos y el consiguiente crecimiento profesional, la valorización y la autonomía a la enfermería.

Descritores: Proceso de enfermería; Cuidado de Enfermería; Unidad de Cuidados Intensivos.

REVISA

Introduction

The area of Nursing, characterized as Science, is related to an extensive theoretical and methodological structure applied to practice, through the integrated process of the nursing team (NP), which has been gradually described by nurses, students and educators as something Extremely necessary. However, it is still desirable that the process is conducted and traced by a nursing theory, making the results of the care provided to patients in the current hospital context more functional and accurate.¹

Nursing contributes significantly to the systematization of Assistance as a whole in this area, characterized in five sequential and interrelated phases: data collection, diagnosis, planning, implementation and evaluation, which is a work method, which are aspects that involve involves the consultation, nursing, history, physical examination, nursing diagnosis (partial), nursing prescription, nursing evolution, physical nursing exams, highlighting that these actions must be performed within 24 hours of care, as well as, the progressive evolution of the patient.²

It should be emphasized that the introduction of SAE is an indispensable factor, because it improves the quality of nursing care in this area.²

Through resolution 358/2009 the (COFEN) Federal Council of Nursing, recommends in its guidelines, systematized nursing care and basically institute the nursing process (NP).⁴

Nurses can use SAE to determine satisfactory results, thereby seeking to contribute data to increase knowledge and quality of care and also record important and accurate nursing information. And fundamentally, contributing to expand the bond between nurses and patients.⁴⁻⁵

It is necessary to highlight that for the SAE to be introduced in the hospital routine, it is necessary to have a permanent education and based on effective methodological instruments so that nurses can sequentially implement the steps recommended in the NP (nursing process) in practice.⁵⁻⁶

It appears that the systematized organization of technical nursing knowledge has been evolving since 1950, with the increase in the organization of theoretical nursing models. But it was only in the mid-1960s, with the studies of Horta (1979), that there was a direction for SAE Through the garden in this scope, assistance planning stood out, with the purpose of intervening, of making it a free profession and also conceptualizes it as a science through SAE.^{6,7}

At the end of the 1980s, the law of professional practice was regulated, under the decree law 94406/87, which characterized nursing as a private activity for nurses, with the proper preparation of the nursing prescription, among others, becoming incorporated the SAE, the practice of nurses, thereby increasing the records of experiences. With the implementation of this systematized organization, with new research and commitment to the NP, it should be properly implemented in the care practice.⁶⁻⁷

Therefore, SAE provides safety to patients and its proper implementation fundamentally requires clinical judgment on the part of nurses, favoring care practice, based on scientific knowledge, thinking and accurate clinical decision making with theoretical and methodological support of empirical scientific

evidence, based on subjective and objective data of the individual, family and community.⁹⁻¹⁰

In the current context, there is an increasing need for knowledge about the nursing theories and methodologies of the NP (nursing process), semiology, physiology, pathology without forgetting the skills for managing care. Since this whole set is possible to directly assist and impact the patient, family and community, obtaining accurate data and indicators, through medical records, which also seeks to evaluate the quality of the services provided and measure the contribution of professionals in improving the service. clinical picture of your patient.⁴⁻¹⁰

Thus, the nursing diagnosis According to the North American Nursing Diagnosis Association - NANDA [...]

NANDA (2006) conceptualizes the diagnosis as "a clinical judgment about the individual, family or community's responses to vital processes, or to current or potential health problems, which provides the basis for the selection of nursing prescriptions, and for the establishment of results, for which the nurse is responsible ", therefore, it is an essential instrument for the development of care, confirming the need for the formulation of clinical studies and applied in hospitals, Basic Health Units, Programs and Secretariats of health, not only by nurses linked to teaching. The diagnostic stage presents its importance for the nursing process. However, their greatest contribution depends on the joining of efforts, being necessary to involve the team so that the work has a continuity and is not lost in the random attempts of a single person. Every nursing process must be based on a theory that gives it support and that enables nurses to act with foresight and coherence. In Brazil, the theoretical framework for the nursing process is represented by Wanda de Aguiar Horta, who defined this method as "dynamics of systematized and interrelated actions, aimed at assisting human beings".^{11-12,15}

The Nursing process is characterized by a systematization composed of stages: data collection, Nursing diagnosis, planning, implementation and evaluation, which focus on the individualization of care, adopting an approach that seeks to solve problems in the sectors where they operate. It is noteworthy that it is a phase that needs to use a critical evaluation in its decision-making.⁶

Nursing should aim to comply with the Federal Nursing Council's resolution - COFEN nº 272/2002, which in its guidelines establishes that "the implementation of SAE must occur without fail in every health institution, whether public or private and must always be formally registered in the patient / client / user medical record, comprising: Nursing history, Physical examination, Nursing diagnosis, Nursing prescription and evolution and Nursing report".⁶⁻⁸

Therefore, in addition to the aspects mentioned above, it is important to emphasize the importance of the implementation and systematization of SAE in health institutions in the current context of health, as part of this process - in order to identify the focus of nursing care and also, learning of nurses.⁹⁻¹¹

Health institutions are increasingly adapting to the demands of the market where the human aspect is considered a differential. Special care for clients improves well-being and enhances treatment and for that to happen, we need management concerned with humanization in the ICU. Nowadays patients/

clients are in need of a more welcoming service and be in a humanized environment because they are more and more enlightened and demanding.¹¹⁻¹³

Humanization is a change in the management of health systems and their services, where the way users and workers do not interact with each other will change. The hospital manager needs to know how to coordinate activities, promote training for professionals and promote the motivation of employees to obtain positive results and the return of quality work.^{3,10,15}

Hospitals depend on specialized and competent professionals to guarantee excellence in care, it is also necessary to establish quality standards and criteria, in addition to performance indicators. Quality standards and criteria can be based on International Organization for Standardization (ISO) 9000 certification standards or on Hospital Accreditation (AH) standards. Accreditation considers a specific concept of quality that integrates the themes of safety, professional ethics, responsibility and quality of care. We can also mention the Hospital Quality Program (CHQ), the Health Management Award (PNGS), Joint Commission International (JCI) and Accreditation Canada International (ACI).¹⁰⁻¹⁵⁻¹⁶

In this sense, the objective of the study was to analyze the proposals for the implementation of SAE in an intensive care unit.

Method

This is a study of literature review with a qualitative approach, adopting the following procedures: survey and analysis of bibliographic documentation from 2002 to 2019, through the search, selection and analytical reading of the titles. The Virtual Health Library (VHL) collection was adopted as a source, where literary productions were sought through the descriptors: intensive care, nursing processes, intensive care units¹⁴.

After collecting the bibliographic data, based on the selected descriptors, a targeted, exploratory and selective reading of the results was carried out, a step of great value, as it determined specific purposes and, at this moment, through thorough analysis, the last step was constituted. location of the material to be selected in order to compose the potential bibliography. After this stage, the inclusion and exclusion criteria were applied. The inclusion criteria were the articles that justified the Nursing Care Systematization in the Intensive Care Unit environment. The exclusion criterion was based on articles that did not fit in this period and those that did not address the use of the SAE stages, as well as those that justified their use in other hospital sectors not related to intensive care for the patient.¹⁴

When analyzing each of the studies separately, it was also verified the existence of a high number of publications, however only a small amount met the research objectives. After using the filter and applying the inclusion and exclusion criteria, publications were selected for the construction of this study on the detailed description of the stages of systematization in intensive care.¹⁴

The study sought to understand this proposal from the perspective of its application as a guiding line for the reorientation of the nursing process to professional nurses, it can be of great relevance. In other words, the approach to the theme is justified, because, due to the contribution it can offer to produce

changes in practices and care management, it is fundamental to problematize daily the practice of care in nursing diagnosis.

Results and Discussion

This is a qualitative research, descriptive and bibliographic in nature, which, according to Severino (2007), is based on the available record, resulting from previous research, in printed documents such as books, articles, theses, etc. Theoretical data or categories used by other researchers and duly registered are used.

The researcher works from the contributions of the authors of the analytical studies contained in the texts.

According to Lima and Mito (2007), bibliographic research goes beyond the simple observation of data contained in the researched sources, because it prints on them the theory, the critical understanding of the meaning existing in them. Working with bibliographic research means making a tireless movement of apprehending the objectives, observing the stages of reading, questioning and critical interlocution with the bibliographic material.

The data were obtained from a survey carried out between the months of November 2020 and February 2021 in the bibliographic productions indexed in databases in electronic format.

The search was performed using the search form of the Virtual Health Library (VHL). The descriptors of this research were used: Nursing Process; Nursing care; Intensive care unit. The search was performed using the terms simultaneously.

The inclusion criteria for selecting the research were: complete scientific articles in Portuguese relevant to the theme and with year of publication between 2003 to 2019. Likewise, as exclusion criteria: articles that did not present full texts, in a foreign language and that were published in more than one database, as this would imply duplication of the total number of articles. Applying all the criteria, 7 articles were selected (Table 1).

Table 1- Synoptic table of the studies included in the review.

Origin	Title of the article	Considerations / Theme
ALBUQUERQUE, Julia. Journal of Nursing Electronics. 2014.	Humanization in Nursing Care for Patients in Urgency and Emergency Units.	Reports the humanized work of Nursing in urgency and emergency
KLOCK, Luciana Lúcio; GALVÃO, Claudia Raff; CHANES, Marcelo Edições Loyola	The focus of strategic planning in hospital management.	It describes the planning approach in the hospital context.
LEMOS, Vanda Márcia Ferri; ROCHA, Marcius Hollanda Pereira. VIII Congresso Nacional de Excelência Nacional em Gestão. 2011	The Management of Hospital Organizations and Their Complexities.	Reports the work of hospital management.

LOUZADA, Schenia Soraya Soares; STANG, Francynne; CALABREZ, Maristela. Administrar e Humanizar no Hospital. Rev.Integrative. 2012.	Nursing diagnoses in the ICU:	Focuses on ICU diagnoses and nursing work.
NANDA, 2006 NORTH AMERICAN Nursing Diagnosis Association (NANDA).	Diagnostics of NANDA Nursing: Definitions and Classification. 2005-2006.	It addresses the nursing diagnoses and classification in the years of 2005-2006.
SOUZA, Antonio Arthur et al	Management Control in Hospital Organizations	Characterizes management control in hospitals
MARTINS et al, 2018	Nursing diagnosis	Reports the diagnosis made by the nursing team.

In view of the analysis observed, many nurses fail to make the nursing diagnosis and, with this, start to fragment the patient's care and problems, failing to see them as a whole. Often prescribing care that is unrelated to the problems encountered, as it is in this sense that the nursing diagnosis becomes essential to describe the help relationship in care practice.^{8,12-13}

The ICU allows us to affirm that these units have their own characteristics, such as: the daily contact of professionals and sick subjects with risk situations; the emphasis on technical-scientific knowledge and technology for care with a view to keeping the human being alive is of paramount importance to understand the care process in order to attend to adversities and promptly assist a critical patient.^{6-7,13.}

In relation to the human dimension, it became necessary to draw the profile of the professionals to know how their unique identity is presented, with what values they are working, their perception about the practice of the nursing process, and how this tool is being produced in the daily work of health professionals.^{1,11}

Another fundamental point was the knowledge of the factors and the political-administrative and technical dimensions that regulate, modify and qualify health care. In view of the difficulties established by the professionals in using the technologies that favor sharing problematizations of health practices, I consider it opportune to create mechanisms through which the actions of implantation and use of the nursing diagnosis can be strengthened.¹²⁻¹³

Conclusion

After analyzing the research that reports Nursing Diagnostics classified by NANDA, it is clear the need for nursing professionals to constantly improve themselves, in the hospital context, in the ICU, as they know how to handle NANDA properly so that there are no mistakes in closing the diagnosis and with this, to be able to improve interventions according to the specific needs of each patient. Being able to verify that the teaching-learning process occurs since the

academic formation, where they will be able to improve the intervention techniques and after the formation, to be able to improve the skills in the care.

The implementation of this proposal presupposes a growing and continuous involvement of health professionals, able to implement the nursing diagnosis in health institutions.

Finally, the aim of this study is to expand the training of human resources and ensure the active circulation of learning to learn, improving the quality of health care, democratizing work spaces.

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Nursing care in patients with acute myocardial infarction in an intensive care unit

Os cuidados de enfermagem em pacientes com infarto agudo do miocárdio em unidade de terapia intensiva

Cuidados de enfermería en pacientes con infarto agudo de miocardio en una unidad de cuidados intensivos

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RESUMO

Objetivo: Deste modo, o presente estudo teve como objetivo discorrer sobre os cuidados de enfermagem com pacientes vítimas de IAM em Unidade de Terapia Intensiva. **Método:** Para tanto, foi proposto uma revisão integrativa em artigos que versam sobre o tema que compreendem o período de 2012 a 2020, totalizando 16 estudos. **Resultados e Discussão:** Como resultado obteve-se que os cuidados de enfermagem com o paciente de IAM em unidade de tratamento intensivo vão desde obter a história do paciente, administrar e observar o efeito de medicamentos, fazer exames físicos e demais cuidados técnicos até aliviar a preocupação e o stress do paciente mediante a oferta de conforto e tranquilidade, visto que, no exercício hospitalar, denota-se que um ambiente seguro e calmo é algo apreciado pelos pacientes no decorrer de seu tratamento e recuperação. **Considerações Finais:** Portanto, espera-se que os resultados obtidos neste artigo possam viabilizar reflexões, sobre os cuidados e intervenções de enfermagem, no que diz respeito à pacientes de IAM proporcionando cuidados sistematizados que aumentam a eficiência do tratamento, reduzem os impactos negativos das complicações de patologias cardiovasculares e reabilitando o paciente de IAM.

Descritores: Cuidados em enfermagem; Infarto Agudo do Miocárdio; Unidade de Terapia Intensiva.

ABSTRACT

Objective: Thus, the present study aimed to discuss nursing care for patients suffering from AMI. **Method:** For this purpose, an integrative review was proposed in articles dealing with the theme covering the period from 2012 to 2020, totaling 16 studies. **Results and Discussion:** As a result, it was found that nursing care for patients with AMI in an intensive care unit ranges from obtaining the patient's history, administering and observing the effect of medications, doing physical examinations and other technical care, to relieving patient's concern and stress through the offer of comfort and tranquility, since, in hospital exercise, it is noted that a safe and calm environment is something that is appreciated by patients during their treatment and recovery. **Final Considerations:** Therefore, it is expected that the results obtained in this article may enable reflections on nursing care and interventions with regard to AMI patients providing systematic care that increases the efficiency of treatment, reducing the negative impacts of complications cardiovascular diseases and rehabilitating the AMI patient.

Descriptors: Nursing care; Acute Myocardial Infarction; Intensive Care Unit.

RESUMEN

Objetivo: Así, el presente estudio tenía como objetivo debatir la atención de enfermería con pacientes víctimas de AMI en la Unidad de Cuidados Intensivos. **Método:** Con este fin, se propuso una revisión integrativa en los artículos que abordan el tema que comprenden el período de 2012 a 2020, con un total de 16 estudios. **Resultados y discusión** Como resultado, se obtuvo que la atención de enfermería con el paciente AMI en una unidad de cuidados intensivos va desde la obtención de la historia del paciente, la administración y observación del efecto de los medicamentos, la realización de exámenes físicos y otros cuidados técnicos para aliviar la preocupación y el estrés del paciente a través de la oferta de comodidad y tranquilidad, ya que en el ejercicio hospitalario, se indica que un ambiente seguro y tranquilo es algo apreciado por los pacientes en el transcurso de su tratamiento y recuperación. **Consideraciones finales:** Por lo tanto, se espera que los resultados obtenidos en este artículo puedan permitir reflexiones sobre la atención e intervenciones de enfermería, con respecto a los pacientes con AMI que prestan atención sistematizada que aumentan la eficiencia del tratamiento, reducen los impactos negativos de las complicaciones de las patologías cardiovasculares y rehabilitan al paciente con AMI.

Descritores: Cuidado de enfermería; Infarto agudo de miocardio; Unidad de Cuidados Intensivos.

Introduction

One of the main causes of mortality and morbidity in developing and developed countries are coronary or cardiovascular diseases. According to the Brazilian Society of Cardiology, these types of disease are responsible for 2.3 times more deaths than all other types of external causes such as violence and accidents, as well as killing three times more than respiratory diseases and neoplasms. Also, according to data from the SBC until November 2020, 378,550,000 deaths from cardiovascular diseases were recorded in Brazil, including hypertensive diseases - HIPD - (including arterial hypertension), cerebrovascular diseases -CVD (including stroke) and ischemic heart disease - IHD (including myocardial infarction), being last responsible for 53,400 deaths per year.¹

Although it is possible to notice advances in the treatment of coronary diseases, Acute Myocardial Infarction (AMI) still continues to respond to almost 32% of deaths and is the third largest responsible for hospitalizations in Intensive Care Units (ICU) in the country.²

Given the substantiality of the data presented and the high morbidity and mortality rate caused by AMI, studies focused on the disease become of great relevance, since the scientific basis affirms that the care, follow-up, speed and effectiveness of care provided by ICU nursing professionals are determining factors for the survival of these patients. Given this evidence, in the course of the integrative review, carried out on the subject.¹⁻²

It is also worth mentioning that, to the detriment of the relevance of the theme in terms of public health, it is denoted the indigence of ICU nurses to improve and contract new knowledge that can be applied in their practice of intensive care. Thus, nurses who provide care and care to patients with cardiovascular diseases in the ICU should be continuously seeking to update themselves and be able to better assist these patients.¹⁻²

In this sense, the accomplishment of this article is due to the fact that the patient who suffered AI (Acute Infarction), hospitalized in the Intensive Care Unit, require rapid intervention, and the nurse should be a professional with scientific knowledge and technical skills to perform direct care and procedures, which minimize clinical situations that indicate high risk of death, because the prognosis and rehabilitation of AMI patients depend essentially on this assistance.¹⁻²

Thus, the present study started from the question about: how does the intervention of nursing professionals to patients with Acute Myocardial Infarction (AMI) in an Intensive Care Unit intervene? Aiming, in this way, to identify evidence in the literature on nursing care for patients with AMI hospitalized in the ICU from scientific publications.¹⁻²

This work is justified due to the high rate of people suffering AMI in Brazil and worldwide, most of which require hospitalizations in the Intensive Care Unit, thus requiring the health professional, especially the nurse to be able and qualified to meet the needs of this patient, thus reducing the sequelae and the risk of death resulting from acute amia ischemia.¹⁻²

In this sense, the aim of the study was to investigate in the already established literature on nursing care with patients victims of AMI in intensive care units.

Theoretical Framework

Acute Myocardial Infarction (AMI) is responsible for the highest financial cost of coronary diseases in the Brazilian Unified Health System (SUS), about R\$ 22.4 billion, in addition to accumulating high mortality rates in the population.³ The most common factors responsible for Acute Myocardial Infarction are usually high cholesterol, sedentary lifestyle, obesity, age, hypertension, diabetes and others.⁴

The emphasis given to ischemia is due to the fact that it is one of the most frequent pathologies of hospitalization of patients in intensive care units⁵, in this context the nursing team working in this environment should understand the characteristics of AMI from its physiological process, diagnosis and treatment, important information that will contribute to decision-making and the conduct of interventions by the nurse it provides.

Thus, in relation to the pathophysiological process of AMI, it can be affirmed that it is characterized by rupture of an atherosclerotic plaque of a coronary artery, technically known as coronary arteriosclerosis. That is, it is an interruption of blood flow to a given region, due to partial or complete obstruction of the coronary artery responsible for its irrigation.⁶ This disease is slowly derived, progressing as atheroma plaques appear by the accumulation of lipids in blood vessels and obstructing them. This obstruction favors the formation of thrombi that blocks the arrival of oxygen and nutrients in cardiac tissues, resulting in necrosis of cells and heart muscle, in addition to tissue suffering.⁷ The damage caused by AMI depends on the extent of necrotic cardiac tissue, using a variation of factors to evaluate, such as: time of obstruction evolution, artery caliber and among others.⁸ This damage is what causes cardiac arrest or sudden death, heart failure and late death, and a series of physical limitations that may be irreversible.⁹

When the patient undergoes ANIA, hospitalization is required for specific treatment, primary therapeutic options include the use of aspirin, beta-blockers, nitroglycerin, morphine, heparin and acetylsalicylic acid, arrhythmia monitoring, percutaneous angioplasty, thrombolytic therapy, intravenous access medications (antiplatelet agents, vasodilators and anticoagulants), oxygen and myocardial revascularization, among others.¹⁰

All these procedures should be followed up and evaluated by professionals who will determine the most appropriate type of therapy for each individual.² Usually these patients are referred to the Coronary Intensive Care Unit (ICUs) when the hospital has a specific ward, otherwise they go to the General Intensive Care Unit. These sectors are intended for the clinical or surgical treatment of patients with coronary or non-coronary pathologies that require continuous monitoring and 24-hour surveillance, carried out by multidisciplinary team such as: nutritionists, psychologists, doctors, nursing technicians and nurses, responsible for providing comprehensive care and differentiated care to patients in order not only to meet their needs, but to minimize the risks of death and rehabilitate their vitality.¹¹

In this context, the ICU nursing team is responsible for systematic and continuous observation of the patient with AMI, due to the possible complications that he may still suffer, in this sense the nursing professional

should evaluate the rhythm and heart rate, observing the signs of low cardiac output: hypotension, sweating, tachycardia and arrhythmia constantly in order to detect the early onset of arrhythmias.¹²

The following activities are also included: verifying central venous pressure, performing partial and total water balance, noting drain flow, keeping the headboard elevated, controlling diuresis, performing dressing, communicating changes in ventilatory pattern, performing hemoglycotest, monitoring bleeding, maintaining pulse oximetry, evaluating surgical wound aspect, performing respiratory rate monitoring (RF).¹³ Perform temperature monitoring and bed bathing, oral hygiene, exchange peripheral accesses, equipment and extensors, observe level of consciousness, inspect the skin for hyperemia or ischemic points and blood pressure (BP) monitoring, promptly communicating the manifestation of symptoms and signs outside the standards expected of the on-call physician.⁸

Method

The methodological procedure was the integrative review, since to achieve the proposed objective, it is presented as a broader method with a range of reviews that include experimental and non-experimental studies for complete apprehension of the problem considered.

The present study was further developed through narrative and literature review through bibliographic survey in databases such as Virtual Health Library (VHL), Latin American Literature in Health Sciences (LILACS) and Scientific Electronic Library Online (SCIELO), Nursing Database (BDEnf) and Medical Literature Analysis and Retrieval System Online (MEDLINE), during the month of November 2020.

For the survey of the articles, the Descriptors in Health Science (DeCS): Acute Myocardial Infarction, nursing care and care, intensive care unit and cardiovascular diseases were used. The descriptors chosen were adjusted to each other, according to the database.

The sample was composed of the constitution of articles that used the following inclusion criteria: articles published in the last 8 years (2012 to 2020), with full and accessible text, written in Portuguese and made available online not taking into account the applied research method. Excluding: theses, books, dissertations and book chapters.

Subsequently, the selected articles were analyzed, studied, discussed and systematized. In the operationalization of this review, the following steps were applied: 1. Identification of the theme and selection of the hypothesis or research question for the elaboration of the integrative review; 2. Establishment of criteria for inclusion and exclusion of studies/sampling or search in the literature; 3. Definition of the information to be extracted from the selected studies/categorization of the studies; 4. Evaluation of the studies included in the integrative review; 5. Interpretation of the results; 6. Presentation of the review/synthesis of knowledge.

The topics related to the theme were grouped into a table according to its contents and presenting the following information: publication title, authors, year, objectives, results and conclusions.

Results and Discussion

Based on the inclusion criteria and systematic analysis of the articles, 16 scientific productions were selected with the object of study, on nursing care for patients with Acute Myocardial Infarction (AMI) in intensive care unit (ICU), categorized in Chart 1.

Chart 1. Sample overview of selected articles in descending order.

Title	Author	Year	Objective	Results	Conclusion
1. Care for patients with acute coronary syndrome: integrative review. ⁴	NUNES, Flávia Maria Palmeira; SILVA, Amanda Benício da.	2020	Identify evidence in the literature about nursing care for patients with Acute Coronary Syndrome	The actions of nursing teams, in front of patients with ischemic diseases, were evidenced in the following contexts: patient orientation during specific procedures, bed bathing and adoption of measures that minimize physiological and psychic changes.	Caring for patients with coronary arteriopathy is a challenge for nursing, however, the performance of this professional allows the patient to go through hospitalization and improve his/her clinical condition, provided that he/she receives quality care focused on their specific rehabilitation needs.
2. Nursing conducts applied to patients with acute myocardial infarction. ⁶	SOARES, Francisco Mayron Morais. et al.	2020	Describe nursing conducts applied to patients with acute myocardial infarction in the pre-hospital.	Nurses work in the care of patients with AMI through instrumental and care actions, in the performance of tests, especially the ECG electrocardiogram, this test allows the analysis of all cardiac electrical activity, being possible the identification of ischemic disorders; Ventilatory support, in AMI there is coronary occlusion, which decreases the oxygen supply available for cardiac activity; Guarantee of venous access and administration of medications, such as thrombolytic agents and morphine sulfate; Continuous monitoring, looking at signs and symptoms, respiratory depression and heart rhythm.	The role of nurses in the care of patients with AMI, in the Intensive Care Unit, in addition to the nurse acting in the identification of AMI through signs and symptoms and interpretation of exams, the nurse develops competencies also in the process of continuous care, it is important to highlight that the survival of these patients is directly related to quality care, so the contribution of clinical nursing care involves scientific knowledge and technical skills.
3. Nursing care for patients with Acute Myocardial Infarction: an integrative review. ⁷	OLIVEIRA, Leilyanne de Araújo Mendes, et al.	2019	Answer the following question: "What is the role of nurses in the work of the nursing team in the care of patients with acute myocardial infarction.	The infarcted patient needs to be observed continuously due to possible complications, and the nurse should monitor the patient, evaluate the frequency and heart rate continuously intervene and provide rapid and quality care, to minimize possible damage to the patient, reducing the risk of sequelae or deaths caused by the infarction.	When talking about care to patients with AMI, it should be taken into account that for the same to occur it is necessary an interactive process where the professional caregiver, in this case the nurse, applies in addition to his technical skill, knowledge, intuition and, above all, a lot of sensitivity to the individual to be cared for.
4. The role of nurses in the care of patients victims of acute myocardial	LOPES, Dalva Maria, et al.	2019	Describe the role of nurses in the care of patients who are victims of AMI. To analyze the role	Among the main nursing care so in the AMI protocol we have: to measure vital signs, puncture and maintain venous access, to measure saturation, to perform ECG,	It is undeniable to say that the nurse is one of the great keys in the care of patients with Acute Myocardial Infarction, since in most cases, it is he who will make the risk classification and

infarction: an integrative review. ¹⁴			of nurses to AMI victims and describe the influence of nurses on the recovery of AMI victims.	to make anamnesis administer the prescribed medications quickly, to administer oxygen therapy, reducing pain and improving respiratory distress.	identify the patient who is with suggestive symptoms for AMI and already start the first care.
5. Nursing care for patients with acute myocardial infarction. ³	MARTINI, Ione Coimbra dos Anjos; SAI, Alessandra Aparecida.	2019	To know the role of nursing care in the face of patients with acute myocardial infarction in the hospital unit.	After the identification or confirmation of an AMI, it is up to the professionals to intervene to reduce the effects and discomfort caused by the pathology by implementing an appropriate treatment consisting of medications that minimize pain and establish blood flow in the affected area. In addition to performing all drug care and complementary examinations one of the essential care with the infarction is to keep you at absolute rest and monitored attentive to any change.	The nurse, through his care, is an essential professional in the construction of adequate conduct in the care of the infarcted patient in the intensive care unit requires from the nurse a knowledge of the conditions of each patient, due to the severity and instability, attention is required to prepare the professional to perform procedures with patients in the ICU.
6. Importance of nursing care in the emergency unit for patients affected by Acute Myocardial Infarction. ¹⁵	SILVA, Ana Cristina; MENDES, Jafé de Melo.	2018	To analyze the importance of nursing care in the emergency service for patients affected by acute myocardial infarction.	The role of nurses in the emergency room consists in performing anamnesis, physical examination, performing treatment, advising and teaching health maintenance and guiding for continuity of treatment and vital measures.	Emergency nurses need to have scientific, practical and technical knowledge, so that they can make quick and concrete decisions, transmitting safety to the entire team and, mainly, reducing the risks that threaten the patient's life
7. Nursing interventions in patients in the cardiac intensive care unit of a university hospital undergoing myocardial revascularization surgery. ⁸	SILVA, Lísia Divana Carvalho, et al.	2018	To identify nursing interventions performed in patients undergoing myocardial revascularization surgery correlating them with the Nursing Interventions Classification.	Postoperative nursing interventions are directed towards restoring homeostatic balance, preventing complications. 17 Studies identify how complications directly influence the length of hospital stay and require attention from professionals in order to identify the manifestations and act in the prevention of damages and sequelae.	In the CAIC ICU, in addition to the prescription of intensive care such as invasive hemodynamic monitoring, water control, MV care, most nurses provide uninterrupted care, which allows direct observation, identifying and tracing diagnoses to build the care plan.
8. The work process of nurses in front of patients affected by acute myocardial infarction.	OLIVEIRA, Crislânea Cecílio Goes de. et al.	2018	Describe the importance of nurses in the care of patients affected by acute myocardial infarction.	The nurse stands out with an important and fundamental role, which is to outline goals and care necessary for the client with AMI, interacting and sharing with his team, leading, organizing the care and redistributing the tasks among the nursing team so that the goals can be achieved.	Nurses should also have a focus on strategies that can favor the quality of life of patients affected by AMI. They should be performed from the moment of entry into the hospital until the moment of hospital discharge aiming at self-care and their treatment support.

9. The nursing conduct in emergency care for patients with acute myocardial infarction. ⁹	MARTINS, Idel de Oliveira. et al.	2017	To define the diagnosis of AMI to know the role of nurses with patients who are victims of AMI, emphasizing the nurse as an intermediary of the procedures and tests performed, which is a fundamental part of the follow-up of protocols.	The nurse, through their care, is an essential professional in the construction of adequate conduct in the care of the infarcted patient	It is concluded that the conduct of nurses in the face of the infarcted patient requires training and technical competence.
10. Acute myocardial infarction: an approach with nurses in a coronary intensive care unit. ¹²	SANTOS, Bruno da Silva. et al.	2017	Understand nursing care for victims of Acute Myocardial Infarction in the Coronary Care Unit.	The role of nurses in the ICU consists in obtaining the patient's history, taking physical examination, performing treatment, advising and teaching the maintenance of health and guiding the sick to a continuity of treatment and measures, it is also up to this professional to take care of the individual in different critical situations within the ICU, in an integrated and continuous way.	ICU nurses need to think critically analyzing problems and finding solutions for them, always ensuring their practice within the ethical and bioethical principles of the profession. Evaluating, systematizing and deciding on appropriate care for the intensive care patient.
11. The difficulties of the nurse's performance in the care of the client with acute myocardial infarction in the emergency unit. ⁵	RIBEIRO, Amanda Soares, et al.	2017	To point out the difficulties faced by nurses in the execution of nursing care, as well as to analyze the care of nurses in front of the client affected by AMI in the emergency unit.	It was also possible to establish the importance of as soon as possible care to the client affected by AMI and the qualification of the professional, enabling the best prognosis.	In the care of clients with AMI, it is essential that nurses have a broad view, considering the biopsychosocial aspects. The intervention should be unique and individualized, respecting the conditions of each client.
12. Knowledge of Acute Myocardial Infarction: implications for nursing care. ¹⁰	RIBEIRO, Kaiomakk. Renato Assunção, et al.	2016	Describe the care developed by the nursing team in relation to patients with acute myocardial infarction.	Nursing care for patients who are victims of this pathology is based on psychological and emotional support, reduction of stress and anxiety at the time of symptom sharpening, pain care, family support, guidance, among others.	The care of patients with Acute Myocardial Infarction is based on the elaboration of the systematization of nursing care. The nursing conduct to the infarcted patient requires training and technical competence for detection and immediate action in this situation, which requires this professional assistance centered on scientific knowledge.
13. Clinical Nursing Care for Comfort of Women with Acute Myocardial Infarction. ¹⁶	PONTE, Keila Maria de Azevedo, et al.	2014	Describe the contribution of clinical nursing care to the environmental comfort of women with	The contributions of clinical nursing care to promote comfort based on the Comfort Theory of women with AMI sought to make the adaptation to the coronary unit comfortable, providing a	In these circumstances, it is essential that care nurses be attentive to the training process and professional clinical practice, sensitizing clinical nursing care for the comfort of patients with AMI.

			Acute Myocardial Infarction, based on the Comfort Theory and mediated by research-care.	favorable environment for the recovery and rehabilitation of patients.	
14. Most frequent nursing diagnoses in patients admitted to the Coronary Intensive Care Unit. ¹¹	ALMEIDA, Débora Vieira, et al.	2013	Identify the most frequent nursing diagnoses of NANDA taxonomy II of patients admitted to the Coronary Intensive Care Unit.	The main causes of hospitalization were: angioplasties (38.33%), cardiac surgeries, including myocardial revascularization and mitral or aortic valve replacement (18.33%), congestive heart failure (CHF) (8.33%) and acute myocardial infarction (AMI) (8.33%).	It is observed that in the case of intensive care, the restriction of movements is necessary for the prevention of hemodynamic complications of the patient, or by the constant need for multiparametric monitoring, and the performance of self-care is impaired, requiring nursing support for the planning of specific care for patients hospitalized in the Coronary Intensive Care Unit.
15. The importance of nursing interventions for patients with acute myocardial infarction. ¹³	CARVALHO, Dayane Caroline et al.	2013	Analyze which nursing interventions are adopted in patients with acute myocardial infarction and describe the importance of these interventions and raise the main nursing diagnoses according to NANDA	Early diagnosis of AMI and start emergency care, increases the chance of survival of infarcted patients, for better rehabilitation it is necessary to trace nursing diagnoses by applying necessary interventions to later favor the expected outcome.	We conclude that the nurse is an indispensable piece, to elaborate the systematization of nursing care to patients diagnosed with myocardial infarction, thus enabling a favorable care plan for their rehabilitation and restructuring of the damage, being able to evaluate, implement and reevaluate the results and adapt the treatment according to the needs of each person.
16. Professional competence of nurses to work in Intensive Care Units: an Integrative review. ¹⁷	CAMELO, Silvia Helena Henriques	2012	Analyze the professional competencies of nurses in Intensive Care Units (ICU)	It is the responsibility of ICU nurses, among other activities, to evaluate the patient, plan care, supervise care	By providing nursing care to high complexity patients, as is the case in ICUs, nurses get involved, perform, learn to exercise their commitment, favoring a close relationship with the patient and, consequently, contributing to quality care.

Based on the knowledge seized during the review of integrative literature, the following discussion is elaborated:

In thirteen of the articles (81.25%), we observe the description about the pathophysiology of ischemic disease, taking into note the relevance of the nursing professional to know all physiological action of acute myocardial infarction (AMI) known more popularly as heart attack. The knowledge acquired by nursing professionals will provide a more efficient treatment for ICU patients.¹⁴

Regarding the nursing professional's performance in the care of acute myocardial infarction patients in ICU, only 3 articles (18.75%), deal more specifically with the subject, although the literature states that this professional in the historical course has accumulated a series of scientific, empirical, theoretical and practical knowledge based not simply on disciplinary norms, but also by the continuous and repeated experience of their routine of action and

execution of appropriate technical activities to improve care, the systematization of actions and interventions that provide safety and comfort to AMI patients in an intensive care unit.¹⁵

It can be said that nursing care with the AMI's patients in an intensive care unit ranges from obtaining the patient's history, administering and observing the effect of medications, taking physical examinations to taking care of the adequacy and functioning of devices that are part of their work routine with this type of patient.¹⁸

It is up to the nursing team that deals with AMI patients in the ICU in addition to maintaining technical care to alleviate the patient's concern and stress by offering comfort and tranquility, since, in hospital exercise, it is denoted that a safe and calm environment is something appreciated by patients during their treatment and recovery.¹⁶

Final Considerations

As described, cardiovascular diseases are the main causes of death in Brazil and worldwide, including AMI, which is responsible for a considerable number of hospitalizations in intensive care units, since the patient with this diagnosis needs care in a specialized sector, by personnel able to constantly monitor the patient and be able to act quickly in the different critical situations that the patient may present, it is up to the nurse to provide adequate care and care in search of recovery in the shortest possible time of the patient with AMI and minimizing the risks of sequelae of ischemia.

It is affirmed that despite the importance of nursing professional performance in the care of AMI patients in an intensive care unit, the literature consulted brings little on the work of this professional with this type of patient, presenting more articles that deal with the care of these patients in emergency units in care of the first care and minimization of the risk of death.

Thus, attention is drawn to the need to develop further studies focused on nursing care with patients with Acute Myocardial Infarction in the Intensive Care Unit, to the detriment of the nursing professional being an important factor in the rehabilitation and recovery of these patients, requiring the nurse technical-scientific, humanistic and ethical competence in the care of knowing the need and conditions of each patient, given the severity and instability presented by patients with MRI. Thus, attention and preparation of the nursing professional is required to care for and perform procedures with AMI patients in the ICU.

Therefore, it is expected that the results obtained in this article can enable reflections on nursing care and interventions, with regard to AMI patients providing systematized care that increase treatment efficiency, reduce the negative impacts of complications of cardiovascular pathologies and rehabilitate the AMI patient.

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