Desafios enfrentados por enfermeiros na gestão de leitos hospitalares durante a pandemia por COVID-19

RESUMO | Objetivo: relatar desafios enfrentados por enfermeiros na gestão de leitos em uma unidade de internação hospitalar durante a pandemia pela COVID-19. Método: trata-se de estudo descritivo, do tipo relato de experiência. As experiências advêm de enfermeiros que atuam em um hospital público de grande porte, localizado no município de Belo Horizonte-MG. As experiências foram coletadas entre março de 2020 a março de 2022 e organizadas em polos temáticos, fundamentados nos pressupostos da análise de qualidade proposta por Donabedian. Resultados: os desafios enfrentados residem na manutenção do distanciamento entre os leitos, compartilhamento de banheiros, adaptações elétricas, criação de leitos de retaguarda, mudança no perfil dos leitos e na comunicação entre profissionais. Conclusão: os resultados convergem com os desafios previamente encontrados na literatura. Entretanto, apresentam de forma minuciosa e estruturada a realidade de uma unidade de internação, a qual tem potencial para auxiliar em situações de crise, sem previsibilidade e arcabouço científico.
Descritores: Avaliação de processos; COVID-19; Enfermagem; Estrutura dos serviços; Leito hospitalar.

ABSTRACT | Objective: to report challenges faced by nurses in managing beds in a hospital inpatient unit during the COVID-19 pandemic. Method: this is a descriptive study, of the experience report type. The experiences come from nurses who work in a large public hospital, located in the city of Belo Horizonte-MG. The experiences were collected between March 2020 and March 2022 and organized into thematic poles, based on the assumptions of the quality analysis proposed by Donabedian. Results: the challenges faced lie in maintaining the distance between beds, sharing bathrooms, electrical adaptations, creating backup beds, changing the profile of beds and communication between professionals. Conclusion: the results converge with the challenges previously found in the literature. However, they present in a detailed and structured way the reality of an inpatient unit, which has the potential to help in crisis situations, without predictability and scientific framework
Keywords: Process evaluation; COVID-19; Nursing; Structure of services; Hospital bed.

RESUMEN | Objetivo: relatar los desafíos enfrentados por los enfermeros en la gestión de camas en una unidad de hospitalización durante la pandemia de COVID-19. Método: se trata de un estudio descriptivo, del tipo relato de experiencia. Las experiencias provienen de enfermeros que actúan en un gran hospital público, ubicado en la ciudad de Belo Horizonte-MG. Las experiencias fueron recolectadas entre marzo de 2020 y marzo de 2022 y organizadas en polos temáticos, a partir de los supuestos del análisis de calidad propuesto por Donabedian. Resultados: los desafíos enfrentados radican en mantener la distancia entre camas, compartir baños, adaptaciones eléctricas, crear camas de respaldo, cambiar el perfil de las camas y la comunicación entre profesionales. Conclusión: los resultados convergen con los desafíos previamente encontrados en la literatura. Sin embargo, presentan de forma detallada y estructurada la realidad de una unidad de hospitalización, que tiene el potencial de ayudar en situaciones de crisis, sin previsibilidad y marco científico.
Palabras claves: Evaluación de procesos; COVID-19; Enfermería; Estructura de los servicios; Cama de hospital.

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INTRODUÇÃO

The Covid-19 pandemic promoted a context full of challenges. It demanded the planning of effective management policies and practices for the provision of structural conditions and the realignment of processes for health care in hospital settings. [1]

Structurally, the number of clinical and intensive beds has become a chronic problem due to the naturalization of the underfunding of the Unified Health System (SUS) and the growing demand in health. [2] This scenario intensified during the Covid-19 pandemic and SUS faced one of the biggest challenges since its creation, in which the expansion of beds, acquisition of equipment and supplies became a priority. [3]

In this chaotic scenario, nurses played a leading role in a managerial task force, with a view to effective management of beds and reorganization of work processes, especially in inpatient units, as these became a backup for the lack of intensive beds. [4-5]

As it is a little-known infection, the literature has few experiences on coping with COVID-19. Furthermore, the first experiences came from European countries and portray scenarios and work processes very different from those found in Brazil, in which the key point for the management of beds was based on the availability of beds in health institutions, combined with the low occupancy rate and turnover interval. [6]

In the national scenario, two years after the notification of the first case of covid-19, some challenges for bed management are mentioned in the literature, such as: cancellation of elective surgeries in order to direct human resources and physical structure to care for patients affected by covid-19, conversion of inpatient units for clinical and surgical patients to care for suspected or confirmed cases of the coronavirus. [7]

In addition, some changes were also proposed in experience reports from other hospitals, such as: changes in physical spaces, distance between patients, use of closed curtains separating beds, as well as blocking beds in cases of collective wards with confirmed or suspected patients for Covid-19. [8]

However, due to the heterogeneity of hospital institutions, more experiences should be described, in order to understand the similarities and polarizations found in bed management, especially with regard to structure and processes. In this way, contingency plans for health crises involving respiratory syndromes can be proposed at the national level, respecting diversities, optimizing bed management and helping nurses to face challenges with predictability, preserving access and sustainability of health services.

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In this sense, the following research question was established: what are the challenges faced by nurses in bed management during COVID-19? The objective was defined: to report challenges faced by nurses in the management of beds in a hospital inpatient unit during the COVID-19 pandemic.

METHOD

This is a descriptive study of the experience report type. The experiences come from nurses who work in inpatient units of a large public hospital, located in the city of Belo Horizonte-MG. The time horizon for describing the challenges faced by these professionals was from March 2020 to March 2022.

The challenges were identified during a meeting of the Study Group on Nursing in Global Contexts and inserted into tables built in Microsoft Word 2016. The experiences were organized in two thematic poles, which had as theoretical foundation, the assumptions of the quality analysis proposed by Avedis Donabedian, supported by the structure and the processes. [9] It is noteworthy that the aforementioned theoretical framework also proposes the evaluation of results, which in this study was not possible due to the nature of the study and previously defined objectives.

RESULTS

The reporters of this experience are nurses who work in inpatient units of a large hospital, located in the city of Belo Horizonte-MG. This scenario is one of the largest health service providers in Minas Gerais and a reference in the treatment of medium and high complexity pathologies, serving all specialties and subspecialties offered by the SUS.

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It has a total installed capacity of 504 beds, 18 of which are in the Adult Intensive Care Center, 11 pediatric intensive beds, 19 coronary, 56 urgent and emergency beds and 24 neonatology beds. With the advent of the pandemic, there were structural reformulations, providing 74 beds for the care of cases of covid-19, as follows: 30 beds for an adult infirmary, 14 beds of adult intensive care, 1 bed isolated pediatric intensive care, 20 beds of Clinical Decision Unit Emergency Room, 5 beds of pediatrics and 4 neonatal beds.

The experience was organized into two thematic poles, which guide the challenges in the structure and processes, as described in Figure 1:

Figure 1 - Challenges in bed management during COVID-19. Belo Horizonte-MG, Brazil, 2022.

Structure Dimension	
Challenges	**Justification**
Bathroom sharing in wards with more than 2 beds	The sharing of bathrooms between wards required, at a given moment, the blocking of beds for the implementation of precautionary measures.
Preservation of the distance between beds	In order to implement precautionary measures by contact and droplets in wards, it was necessary to preserve the distance between the beds and armchairs of companions, which required the removal of beds from the ward.
Creation of clinical backup beds due to lack of intensive beds	The inpatient unit was a backup for the overcrowding of ICU beds, which required the creation of stabilization units for semi-intensive patients.
Electrical adaptations for the use of artificial ventilation systems, infusion pumps and hemodialysis	The pandemic required the use of more electronic equipment and the electrical network required adaptations in voltage and in the format of sockets and adapters.
Dimension: Processes	
Change in bed profile	Surgical and pediatric beds were transformed into clinical beds to meet the demand created by Covid.
Cancellation or suspension of surgeries	Surgeries were canceled due to lack of beds, relocation of health professionals and preservation of material resources to care for clinical cases of COVID-19.
Effective communication between the multiprofessional team in the admission of patients	Communication between medical and nursing staff was not effective. There was suppression of important information for defining the bed at hospital admission.

Source: Developed by the authors (2022)

DISCUSSION

COVID-19 is an ongoing global concern. Since the notification of the first case in the world, health systems have initiated structural formulations and institutional processes, with a view to maintaining users' access to health and maintenance of life. [10]

The structural challenges identified in this study are anchored in the old infrastructure, built more than nine decades ago. Thus, during the acute phase of the pandemic, it was necessary to quickly adapt the physical space to face the care demand in the face of the new reality. [11]

Traditionally, theorization of the quality of health services and its challenges has been based on the model of Avedis Donabedian, [9] because the elegant simplicity of the paradigm is better adapted to crisis situations. The model describes the structure, process and outcome measures in a synergistic and interdependent relationship, the symbiosis between structure and processes for service quality. [12]

The symbiosis between structure and processes for service quality has already been validated. The structure is described as characteristics of the space where care takes place, including architecture and availability of equipment. The processes include the delivery of patient care and the workflows included in it. [9,12]

In the structure, the need to increase distance was highlighted, the challenge generated by sharing bathrooms in wards, creating stabilization beds and electrical adaptations.

Although national regulations allow sharing a bathroom for two wards [13,] It is clear that this situation implied difficulties in implementing the precautionary and control measures for Covid-19, since the aforementioned bathroom was limited to confirmed or suspected cases, which led to a reduction in the supply of beds due to blockade.

The distance between beds and armchairs was another challenge identified in the scenario of this study, since such a measure has become essential for the prevention and control of the coronavirus. 1m Distance between bed and walls is recommended; bed foot =1.2 m; side = 0.5m. As these are wards with 5 beds, it was necessary to deactivate 1 bed in each ward, with a view to also preserving a minimum distance of 0.5 m between beds and the companions' armchairs. [13-14]

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It was also found that the rapid cumulative incidence of COVID-19 is capable of causing overutilization of health systems, especially hospital services and their Intensive Care Unit (ICU) beds, suggesting the formulation of contingency plans and emergency response actions to avoid the collapse of the system. [15]

The hospital contingency was evidenced in the literature and pointed out challenges related to the shortage of beds, which required an increase in the installed capacity of beds. [15] In this sense, the number of ICU beds was insufficient to meet the demand, making it necessary to create clinical backup beds in the hospitalization units.

In response to this reality, the institution in question adapted the wards to a semi-intensive care unit, given that the intensive care center had already expanded its beds and was at full capacity. Similar experiences were adopted by other hospital institutions, which among the measures of their contingency plan, installed rear beds to care for patients suspected of COVID. [16]

In the international scenario, countries such as Germany, Italy, Spain and the United States stood out for the development of studies on the predictability of the demand for beds, mechanical ventilators and the incidence of deaths, with a view to establishing better management of the health crisis and guaranteeing access for all citizens to health services essential for sustaining life. [17-18]

Regarding the challenges involving processes, those related to the conversion of beds and communication between professionals stood out. The conversion of the bed profile and the cancellation or suspension of surgeries were strategies used in the scenario of this study, with a view to expanding the capacity to care for COVID-19 cases.

These strategies are in line with the recommendations of the intensive scientific community and manager of the SUS, at the federal level, as they understood that the surgical block beds and post anesthetic recovery rooms would serve as a backup for possible complications of patients with COVID, in addition to the rational use of medication, diagnostics and personal protective equipment (PPE). [19]

In Brazil, discussions about the impact on the pent-up demand for surgeries and on the sustainability of hospital bills were incipient. In the international scenario, the suspension of surgeries was discussed from a financial point of view, in which surgical recovery plans were previously established, given that the impact for US health systems could reach 25 million dollars per week. [20]

In an unexpected and troubled scenario, effective communication has also become a challenge, especially due to the need to maintain the sanitary measures in place to control the spread of the coronavirus. [21] In this view, it was identified that communication between the hospital care teams was not effective, resulting in the suppression of crucial information for defining the admission bed and safety of care, such as: recent hospitalization in another hospital, contact with people contaminated by COVID-19 and presence of flu-like signs and symptoms.

Effective communication and the work of the multidisciplinary team are understood as determinants of quality and safety in the provision of care to individuals. [22] Failures in communication between health professionals have been one of the main factors that contribute to the occurrence of adverse events and, consequently, to a decrease in the quality of care. [23]

A review study indicated that the factors for non-adherence to safety goals, which include effective communication, may be related to excess activities and lack of time, lack of personal involvement and standardization in processes. [24] It appears that in the experience report in question, such factors were present and intensified by the COVID-19 pandemic situation.

It is understood as a limitation of this study, the fact that the challenges of results have not been described. However, it is justified that SARS Cov-2 is a disease of recent incidence and that outcome indicators are not yet well established and validated in the national literature. Thus, theoretical inferences and associations in bed management could not be true.

CONCLUSION

The results of this study described challenges faced by nurses in managing beds in a hospital inpatient unit in the context of the Covid-19 pandemic. The structure and processes were the dimensions addressed and it is concluded that aspects such as the old infrastructure of the scenario and the lack of discussion of contingency plans for health crises contributed to numerous situations becoming challenges for the management of beds.

The challenges mentioned are not recent and very common in Brazilian health institutions, which intensified with the advent of the covid-19 pandemic and created limitations that had an impact on access and comprehensiveness of health care.

It also confirms the role of nurses in the management role of beds and especially in this period of crisis, which identified challenges for optimizing the available beds and helped in the creation of units to ensure ordering principles of the Unified Health System

In this way, the results of this study contribute to the construction of an overview on the management of beds in a scenario of intense health crisis, since, until then, we did not have national studies that alert professionals to possible challenges, which will allow us to develop strategic plans and implement predictable actions in similar cases.

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