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OCCUPATIONAL ACCIDENTS IN HOSPITAL SETTINGS: AN EPIDEMIOLOGICAL ANALYSIS FOCUSING ON THE NURSING TEAM

ACIDENTES OCUPACIONAIS EM AMBIENTE HOSPITALAR: ANÁLISE EPIDEMIOLÓGICA COM FOCO NA EQUIPE DE ENFERMAGEM

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Abstract. This study aimed to characterize occupational accidents recorded in a university hospital, with a focus on the nursing team among the affected professional categories. This was a documentary, descriptive, epidemiological study with a quantitative approach, based on the analysis of occupational accident records reported to the Occupational Health and Worker Safety Unit of a university hospital in the state of Paraíba, Brazil, during 2023. Variables related to professional category, type of accident, anatomical location of injury, sector of occurrence, and work leave were analyzed. A total of 20 occupational accidents were identified during the study period. Nursing technicians represented the most affected professional category, accounting for 11 cases (55%), followed by nurses, with 4 cases (20%). Together, nursing professionals accounted for 75% of all recorded accidents. Injuries caused by sharps were the most frequent type of accident, totaling 9 cases (45%), followed by exposure to biological material, with 4 cases (20%). Fingers were the most affected anatomical region (60%), and the Surgical Clinic showed the highest frequency of occurrences (25%). Regarding occupational impact, half of the accidents resulted in work leave. It was concluded that occupational accidents remain an important health problem among hospital workers, particularly affecting nursing professionals. The predominance of accidents involving sharps and exposure to biological material highlights the need to strengthen surveillance, prevention, and continuing education actions in occupational health. The findings may support institutional strategies aimed at promoting safer work environments and reducing occupational risks.

Keywords: Occupational Health. Occupational Accidents. Nursing. University Hospitals.

Resumo. O estudo teve como objetivo caracterizar os acidentes ocupacionais registrados em um hospital universitário, com ênfase na ocorrência desses eventos entre os profissionais de enfermagem e nas demais categorias profissionais acometidas. Trata-se de um estudo documental, descritivo, de caráter epidemiológico e abordagem quantitativa, realizado com base na análise dos registros de acidentes de trabalho notificados na Unidade de Saúde Ocupacional e Segurança do Trabalhador de um hospital universitário da Paraíba, durante o ano de 2023. Foram analisadas variáveis relacionadas à categoria profissional, à natureza do acidente, à localização anatômica da lesão, ao setor de ocorrência e à necessidade de afastamento das atividades laborais. Foram identificados 20 acidentes de trabalho no período estudado. Os técnicos de enfermagem constituíram a categoria profissional mais acometida, com 11 casos (55%), seguidos pelos enfermeiros, com quatro casos (20%). Em conjunto, os profissionais de enfermagem corresponderam a 75% dos acidentes registrados. Os acidentes envolvendo materiais perfurocortantes foram os mais frequentes, totalizando nove casos (45%), seguidos pelos eventos relacionados à exposição a material biológico, com quatro casos (20%). Os dedos das mãos foram a região anatômica mais acometida (60%), enquanto a Clínica Cirúrgica apresentou a maior frequência de ocorrências (25%). Em relação ao impacto sobre as atividades laborais, metade dos acidentes resultou no afastamento dos trabalhadores. Conclui-se que os acidentes ocupacionais representam um importante agravo à saúde dos trabalhadores no ambiente hospitalar, acometendo principalmente os profissionais de enfermagem. A predominância de acidentes envolvendo materiais perfurocortantes e a exposição a material biológico evidencia a necessidade de fortalecer as ações de vigilância, prevenção e educação permanente em saúde do trabalhador. Os achados podem subsidiar o desenvolvimento de estratégias institucionais voltadas à promoção de ambientes laborais mais seguros e à redução dos riscos ocupacionais.

Palavras-chave: Saúde do trabalhador; Acidentes de trabalho; Enfermagem; Hospitais universitários.

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INTRODUCTION

The 1988 Federal Constitution recognizes health as a right of all and a duty of the State, establishing the implementation of social and economic policies aimed at reducing the risk of disease and other health problems. In this context, worker health is an essential component, regulated by the Organic Health Law (Law No. 8,080/1990), which provides for actions to prevent occupational risks and promote safe working conditions[1].

Occupational accidents are a significant problem in the hospital environment, affecting the health and safety of professionals as well as institutional efficiency. The Ministry of Social Security defines an occupational accident as one that occurs in the course of professional activity and may cause bodily injury, temporary or permanent functional impairment, or even death. In the hospital context, occupational risks are heightened by workers' constant exposure to biological, chemical, and physical agents, in addition to conditions related to work overload[2].

Studies show that these injuries, although potentially predictable and preventable, result from multiple factors and go beyond the physical dimension, also affecting the social, economic, and emotional dimensions of workers' lives[3]. Work overload, long working hours, and loss of autonomy contribute to the physical and mental suffering of these professionals[4]. Between 2018 and 2022, 329,176 accidents involving exposure to biological material were recorded in Brazil, 54.4% of which occurred among nursing professionals, predominantly nursing technicians and assistants (83.4%). Most of these accidents were related to needlestick injuries, mainly during medication administration, venous or arterial puncture, and improper disposal of sharps[2].

In the state of Paraíba, between 2020 and 2021, notifications of occupational accidents increased by 27%, from approximately 2,300 to 2,900 cases. During the same period, the number of deaths increased by 35%, from 14 to 19. In 2021, hospital care activities accounted for the largest number of records among the economic activities mentioned, with 244 notifications. The nursing technician occupation, in turn, accounted for 140 occurrences, corresponding to 8.3% of the accidents recorded in the state[5].

Studies reinforce that nursing professionals are among the categories most exposed to work-related health problems, both because of their care activities and because of their daily confrontation with pain, suffering, and death6. These conditions contribute to the development of work-related musculoskeletal disorders (WMSDs), mental and behavioral disorders, and burnout syndrome, whose prevalence was 18.3% in Bahia and 48.6% in Alto Sertão da Paraíba[7]. Added to this scenario are biological risks arising from direct contact with body fluids and pathogenic microorganisms, frequently aggravated by the handling of sharps and by the inadequate use or absence of personal protective equipment (PPE)[6].

The COVID-19 pandemic intensified these risks, increasing the physical and emotional burden on health professionals and contributing to a rise in accidents involving biological material[2]. In this context, epidemiological bulletins are strategic tools for analyzing the relationship between health, work, and illness, supporting health surveillance actions and the formulation of public prevention policies[7,8].

Based on the above, this study aimed to identify and characterize occupational accidents recorded at a university hospital, with emphasis on their occurrence among nursing professionals and the other affected professional categories.

The specific objectives were to identify the most affected professional categories, describe the nature of the accidents, map the sectors where they occurred, analyze the recorded outcomes, and prepare an epidemiological bulletin of the occupational accidents recorded among professionals at the Hospital Universitário Lauro Wanderley (HULW).

MATERIALS AND METHODS

This is a documentary, descriptive, epidemiological study with a quantitative approach, based on the collection and analysis of data obtained from the database of the Occupational Health and Worker Safety Unit (USOST) on occupational accidents involving professionals in 2023.

The study was conducted at the Hospital Universitário Lauro Wanderley (HULW), a large hospital affiliated with the Universidade Federal da Paraíba (UFPB), located on Campus I in João Pessoa, Paraíba, Brazil. HULW is a teaching hospital that plays a strategic role in the training of health professionals and in the production of scientific knowledge. Part of the Brazilian Unified Health System (SUS) and managed by the Brazilian Hospital Services Company (EBSERH) since 2013, the hospital operates in an integrated manner in the areas of health care, teaching, research, and extension, and has become a regional reference in health care and academic-scientific activities.

Furthermore, the management of university hospitals by EBSERH involves different categories of workers, notably public employees hired through competitive examination and outsourced workers, such as those employed by the company JMT Serviços de Locação de Mão de Obra Ltda. The former are employed under the Consolidation of Labor Laws (CLT) and covered by the EBSERH Positions, Careers, and Salaries Plan (PCCS), performing care, administrative, and academic functions, whereas the latter perform support activities, such as cleaning and sanitization, under contracts awarded through public bidding. Although outsourced workers have no direct employment relationship with EBSERH, their activities are supervised by managers from the institution.

The study population consisted of all occupational accident records reported to the Occupational Health and Worker Safety Unit (USOST) of the Hospital Universitário Lauro Wanderley during 2023, totaling 20 occurrences. The sample comprised all of these records, since all notifications made during the study period were included, regardless of the professional category involved, thus characterizing a census.

Data were obtained from the HULW database of occupational accident notifications involving professionals. The variables included occupation, type of accident, place of occurrence, body part affected, nature of the accident, source and location of the injury, work environment conditions, leave from work, and consequences of the accidents, among others.

Data collection was carried out at the HULW USOST, a sector that acts as the Specialized Service in Safety Engineering and Occupational Medicine (SESMT), whose purpose is to promote health and ensure the physical integrity of the hospital's workers. USOST maintains permanent coordination with the Internal Accident Prevention Commission (CIPA), which acts as a multiplier of preventive actions, contributing to risk identification and to the proposal of corrective and preventive measures.

The data were made available to the researcher as secondary data, with authorization from USOST and the Teaching and Research Management (GEP/HULW). Before being shared, the database was anonymized to protect the identity of the workers involved. Data collection took place from September 2024 to March 2025.

The data underwent descriptive quantitative analysis, were organized in Microsoft Excel® spreadsheets, and were subsequently interpreted. Based on the variables collected, graphs were prepared to represent the distribution and main characteristics of the occupational accidents recorded during the study period.

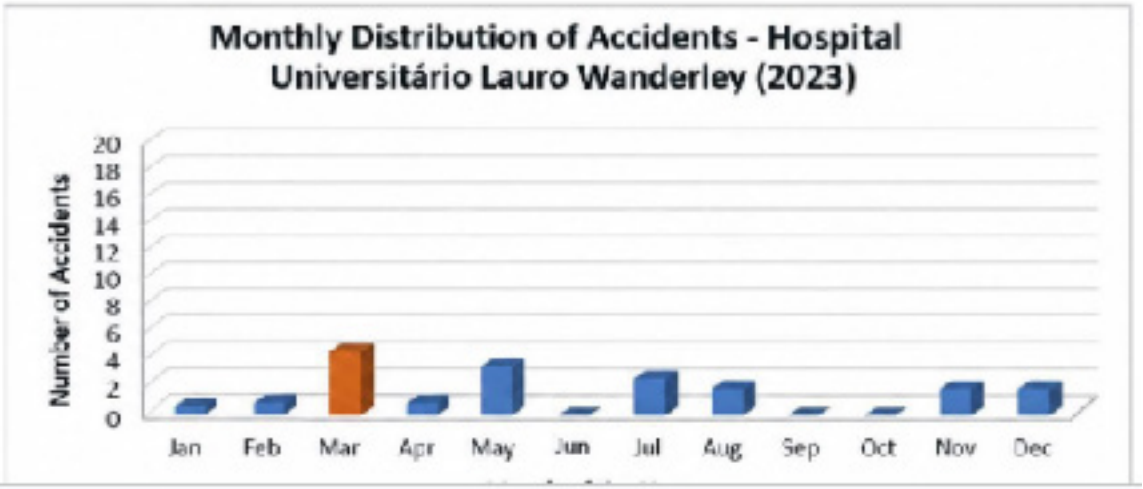
The project was approved by the Research Ethics Committee (CEP) of the Hospital Universitário Lauro Wanderley (HULW/EBSERH), under opinion No. 6,828,681. Throughout the research, the ethical principles and standards applicable to research involving human beings were observed, in accordance with Brazilian National Health Council (CNS) Resolution No. 466/2012 and CNS Resolution No. 738/2024, which addresses the use of databases for scientific research involving human beings. The ethical standards relevant to professional nursing practice, as set out in Federal Nursing Council (COFEN) Resolution No. 706/2022, were also considered.

The research was also approved by the Teaching and Research Management (GEP/HULW), as recorded in SEI No. 87/2024/SGPITS/GEP/HULW-UFPB-EBSERH, and USOST consented to the use of the data under its responsibility. Before the occupational accident records were shared with the researcher, the database controller anonymized the information. Therefore, no data allowing the identification of the workers involved in the accidents were made available, which justified the request for a waiver of the Informed Consent Form (ICF).

RESULTS AND DISCUSSION

The analysis of occupational accident records at HULW identified 20 occurrences reported throughout 2023, involving different professional categories. A higher concentration of accidents was observed in March, with five records, corresponding to 25% of the total notifications for the period. This result shows a higher frequency of accidents in that month and points to the need for further investigation to identify possible factors related to the work process and occupational safety conditions that may have contributed to this concentration of occurrences.

Graph 1: Total Occupational Accidents at the Hospital Universitário Lauro Wanderley. João Pessoa, PB, 2023.



Source: Prepared by the authors, 2025.

Analysis of the data on the professionals involved in the accidents showed that the largest proportion corresponded to nursing technicians, with 11 cases (55%), followed by nurses, with 4 cases (20%), together accounting for 75% of the occurrences. Moreover, outsourced workers (JMT) were involved in 2 cases (10%). Other workers, such as students, physiotherapists, and laboratory technicians, accounted for 15% of the cases.

Graph 2: Professionals involved in occupational accidents at the Hospital Universitário Lauro Wanderley. João Pessoa, PB, 2023.



Source: Prepared by the authors, 2025.

Furthermore, it was possible to classify the occupational accidents according to the nature of the injurious event. The most frequent accidents involved punctures and cuts caused by sharps, accounting for 9 cases (45%) of all occurrences. These accidents occurred during care procedures, such as medication administration, blood collection, and disposal of sharps, highlighting the risks associated with handling these instruments.

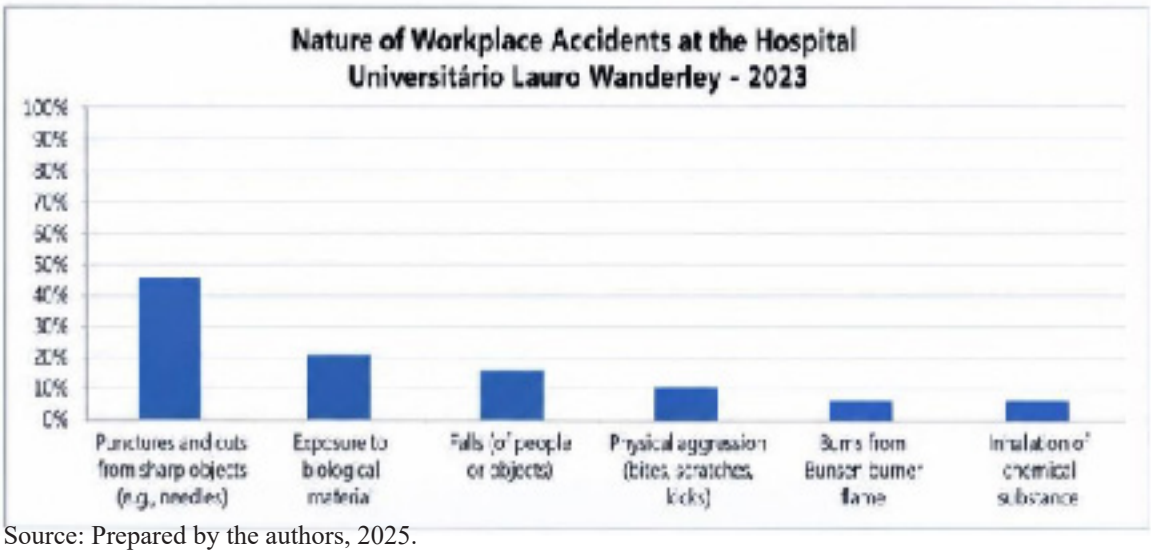
Exposure to biological material, including splashes of blood or secretions on mucous membranes and skin, was identified in 4 cases (20%). These occurrences were recorded during care procedures, such as dressing changes and airway suctioning, highlighting the occupational risks related to contact with potentially contaminated materials.

Falls of people and objects accounted for 3 cases (15%) of the recorded accidents. These events occurred in different contexts, such as during patient transport in elevators with uneven floor levels and in slipping incidents during cleaning activities. These occurrences underscore the importance of adopting preventive measures and maintaining adequate safety conditions in the work environment.

Cases of physical assault accounted for 2 occurrences (10%) and involved episodes of violence by patients or their companions during care, characterized by bites, scratches, and spitting. This result highlights the occurrence of workplace violence and its potential physical and emotional impacts on health professionals.

Isolated accidents were also recorded, including 1 case (5%) of a burn caused by a Bunsen burner flame and 1 case (5%) of inhalation of a chemical substance. These occurrences represent specific events related to exposure to physical and chemical agents in the work environment, reinforcing the need for occupational risk prevention and control measures.

Graph 3: Percentage Distribution by Nature of Occupational Accidents at the Hospital Universitário Lauro Wanderley. João Pessoa, PB, 2023.

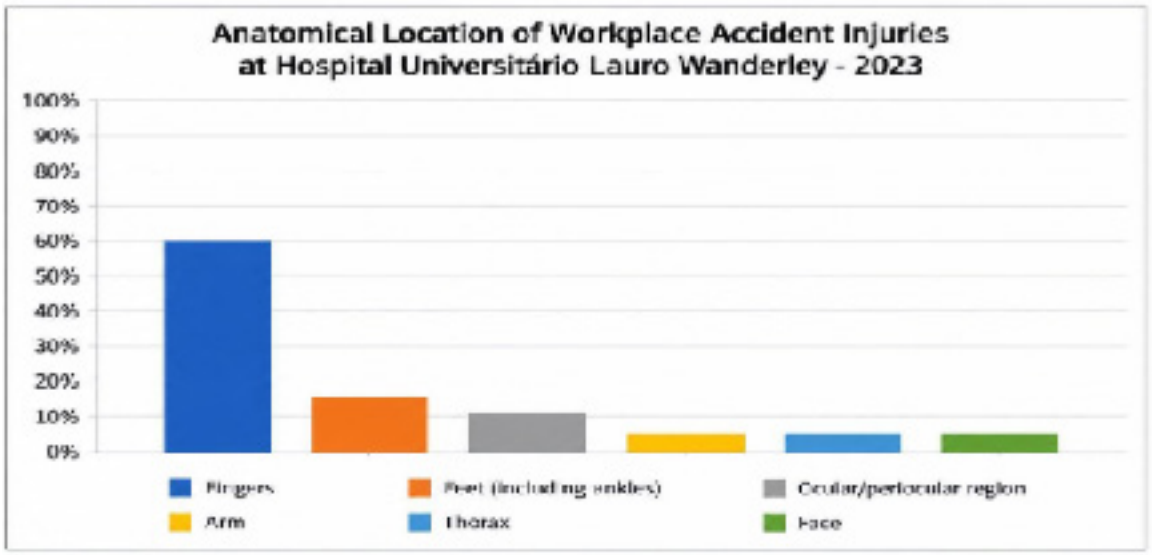


Source: Prepared by the authors, 2025.

Regarding the anatomical location of the injuries, the analysis showed that the most affected region was the fingers, with 12 cases (60%). This predominance may be related to the nature of the activities performed by nursing professionals, which frequently involve handling sharps, surgical instruments, and other materials during care and routine procedures.

Other body regions were also affected, although less frequently. The feet, including the ankles, were involved in 3 cases (15%), possibly associated with falls or with objects striking the lower limbs during work activities. The ocular and periocular region was affected in 2 cases (10%), in situations involving exposure to splashes of blood or secretions during care procedures. Isolated injuries to the arm, chest, and face were also identified, each corresponding to 1 case (5%) of the total records.

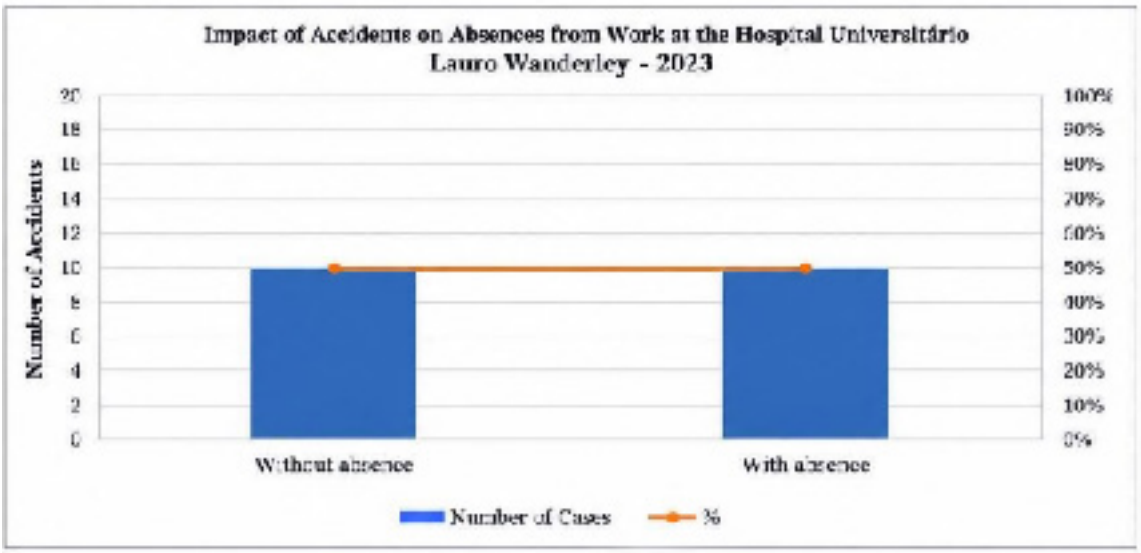
Graph 4: Anatomical Location of Occupational Accident Injuries at the Hospital Universitário Lauro Wanderley. João Pessoa, PB, 2023.



Source: Prepared by the authors, 2025.

Regarding leave from work, half of the recorded accidents, corresponding to 10 cases (50%), did not result in the workers' absence from work. These occurrences generally involved injuries of lesser clinical severity, allowing an immediate or short-term return to work activities. On the other hand, the other 10 cases (50%) resulted in some period of leave, especially those related to fractures, burns, or more severe episodes of physical assault, which required longer recovery time and, in some cases, specialized follow-up.

Graph 5: Impact of Accidents on Leave from Work at the Hospital Universitário Lauro Wanderley. João Pessoa, PB, 2023.



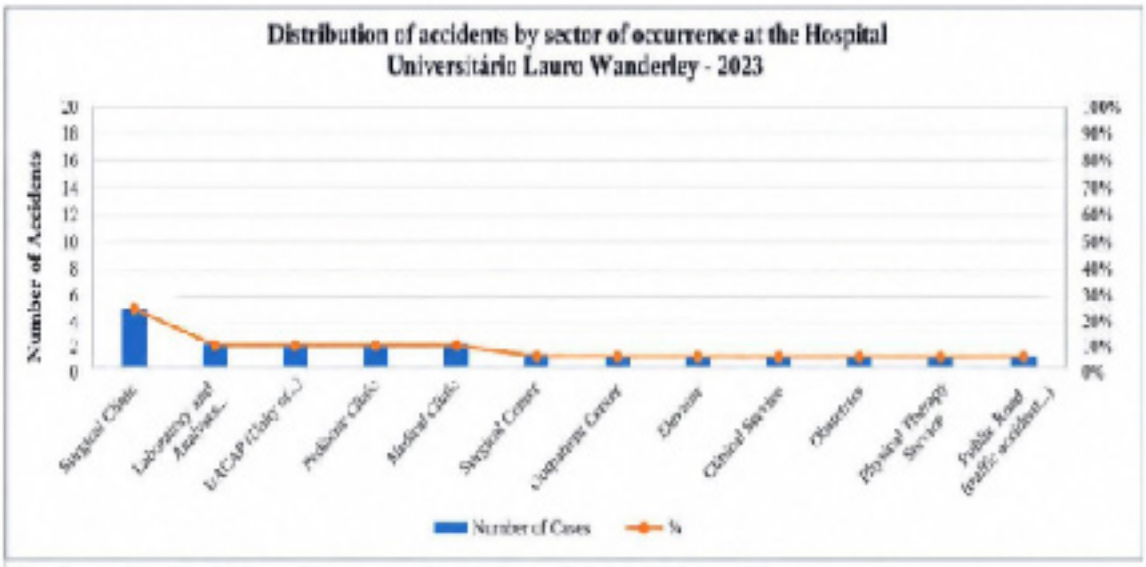
Source: Prepared by the authors, 2025.

The analysis of the distribution of the 20 recorded accidents shows that the Surgical Clinic was the sector with the highest number of occurrences, with 5 cases (25% of the total). This result reinforces the importance of considering the occupational risks associated with the intense dynamics and the nature of the procedures performed in this sector.

Next, the Clinical Analysis Laboratory, the Clinical Analysis and Pathological Anatomy Unit (UACAP), the Pediatric Clinic, and the Medical Clinic recorded 2 cases each, each corresponding to 10% of all accidents. These sectors, related to direct patient care and the handling of biological materials, present different occupational risks that require preventive measures appropriate to the activities performed.

The remaining records were distributed among the Surgical Center, the Dentistry Service, the elevator, the Infectious and Parasitic Diseases (DIP) Clinic, Obstetrics, and the Physiotherapy Service, each with 1 case (5%). There was also 1 occurrence (5%) on a public road during the worker's commute, characterized as a commuting accident.

Graph 6: Distribution of accidents by sector of occurrence at the Hospital Universitário Lauro Wanderley. João Pessoa, PB, 2023.



Source: Prepared by the authors, 2025.

DISCUSSION

The analysis of occupational accidents recorded at HULW reveals the persistence of a scenario of vulnerability and exposure to various risks in the hospital environment. The findings of this study are consistent with the national literature, which identifies health services as settings with a high occurrence of occupational accidents, due to the complexity of the activities performed and continuous exposure to biological, physical, chemical, ergonomic, and psychosocial risks. Among the affected professional categories, the nursing team stood out for accounting for most of the recorded accidents, corroborating evidence that identifies it as one of the categories most exposed to occupational hazards[9]. In particular, nursing technicians had the highest frequency of accidents, which may be related to their heavy workload, continuous contact with patients, and frequent performance of invasive care procedures, conditions that increase exposure to occupational risks.

The predominance of accidents involving sharps and exposure to biological material observed in this study corroborates previous findings that identify these injuries as among the most frequent among health workers, especially nursing professionals, due to the constant handling of needles and sharp instruments during care activities[10]. The literature also emphasizes that occupational risks go beyond the biological dimension, encompassing other types of occurrences, such as falls, physical assaults, and accidents involving chemical agents, as shown in the results of this study.

Another relevant aspect concerns the process of reporting occupational accidents. Studies show the persistence of underreporting, a problem also identified in the present study[11]. The experience reported by the authors with the implementation of the Occupational Accident Communication Kit (Kit-CAT) showed that this strategy can help improve the notification flow and strengthen preventive actions. This gap was also highlighted by the Ministry of Health in recent reports, which point to inconsistencies between local notifications and the data consolidated in the Notifiable Diseases Information System (SINAN)[2].

When considering the subjective perspective of workers, studies add an important psychosocial dimension to the understanding of occupational accidents. The fear, anxiety, and emotional distress reported after these events reinforce the need for structured psychological follow-up and institutional policies that ensure support for exposed workers[12]. This emotional dimension, although not directly investigated by the quantitative approach adopted in this study, is essential for understanding the impact of accidents on workers' health and for supporting the formulation of comprehensive care strategies.

Other authors, when addressing occupational risks in a hemodialysis unit, confirm that biological risk is present in different sectors of the hospital environment. This finding corroborates the diversity of places and situations of exposure identified in this study, showing that risks are not restricted to sectors considered "critical" but are distributed throughout the entire care process[13].

The historical analysis of worker health in Brazil demonstrates important regulatory advances, but also reveals persistent challenges regarding the effective implementation of surveillance and prevention policies[8]. Although the legal framework guarantees the right to health and to worker protection, as provided for in the 1988 Federal Constitution and regulated by the Organic Health Law, preventive practices remain insufficient in view of the hospital reality, marked by the intensification of work and the precariousness of working conditions.

A comparison of the studies reveals methodological complementarity. While some authors prioritize qualitative approaches, emphasizing the emotional aspects of occupational accidents, others focus on the management and notification of these events. The present study, in turn, adopted an epidemiological approach, focusing on describing the magnitude of the accidents, the associated factors, and the sociodemographic profile of the victims, based on updated data[11,12]. This complementarity reveals the complexity of the phenomenon and points to the need for research that integrates different methodological approaches.

The results of this study are in line with the national scenario, in which nursing technicians account for the largest proportion of occupational accidents, which may be related to their central role in direct patient care and to working conditions characterized by long hours, work overload, and insufficient preventive resources[9]. In addition, the occurrence of accidents during routine activities, such as medication administration and blood collection, highlights the need to provide continuous biosafety training and reinforce the proper use of PPE14.

Among the limitations of this study is the use of secondary data, which are subject to underreporting and possible inconsistencies in institutional records. In addition, the exclusively quantitative approach limits the understanding of the subjective repercussions of accidents for workers, including psychological distress, feelings of insecurity, and impacts on motivation and professional performance.

As a future perspective, research using a mixed-methods approach (quantitative and qualitative) is recommended, allowing both the statistical analysis of accident occurrence and qualified listening to the professionals involved. It is also important to strengthen continuing education programs in biosafety, expand the adoption of technologies that promote safer practices, such as safety-engineered devices for sharps, and implement organizational strategies, such as the Kit-CAT, that help optimize the institutional response to accidents and strengthen the safety culture in the hospital environment.

Finally, the diversity of risks identified in this study, ranging from sharp injuries to physical assaults, reinforces the urgent need for a comprehensive approach to worker health in the hospital environment. This approach should combine prevention, continuing education, psychosocial support, and the strengthening of an institutional safety culture. The knowledge produced may support both the implementation of preventive measures at the institutional level and the formulation of more effective public policies capable of reducing work-related morbidity and mortality and promoting more dignified and safer working conditions for nursing professionals and other members of health care teams.

CONCLUSION

The study showed that occupational accidents remain relevant and concerning events in the hospi-tal environment, reflecting workers' exposure to the different risks inherent in the health care work process. Although accidents involving different professional categories were recorded, a higher frequency was ob-served among nursing professionals, especially nursing technicians, which reinforces the need for attention to working conditions and for the development of prevention strategies directed at this group.

The findings highlight the importance of strengthening worker health actions through institutional policies aimed at accident prevention, continuing education, and the promotion of a safety culture. Such measures are essential for building safer work environments, reducing work-related injuries, and protecting the health of professionals working in hospital services.

Among the limitations of the study is the use of documentary data restricted to records of reported accidents, which may imply underreporting and limit the understanding of the scope of the events and their associated factors. Furthermore, the lack of qualitative information on workers' perceptions of workplace safety restricts the analysis of subjective dimensions relevant to understanding this issue.

Thus, the study contributes to increasing the visibility of occupational risks and provides support for managers and professionals to formulate evidence-based strategies. By reinforcing the centrality of worker health, it shows that the quality of care is intrinsically linked to the protection and well-being of nursing pro-fessionals.

Finally, it is recommended that the Occupational Health and Worker Safety Unit (USOST) of the Hospital Universitário Lauro Wanderley (HULW) strengthen institutional strategies for preventing occupa-tional accidents, including continuing education actions and the improvement of processes for investigating and reporting occurrences. The importance of conducting periodic inspections of work environments and expanding intersectoral dialogue between care sectors and worker health services is also highlighted. It is further recommended to implement or expand spaces for listening to and supporting professionals involved in occupational accidents, in order to promote a more humanized, effective, and care-centered approach.

REFERENCES

1. Brasil. Constituição Federal reconhece saúde como direito fundamental. Governo do Brasil. 2018 Oct 5 [cited 2025 Aug 19]. Available from: https://www.gov.br/pt-br/constituicao-30-anos/textos/constituicao-federal-reconhece-saude-como-direito-fundamental

2. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde e Ambiente. Boletim Epidemiológico: acidentes de trabalho com exposição a material biológico em profissionais da enfermagem, 2018-2022. Bol Epidemiol. 2023 Dec 4;54(17). [cited 2025 Aug 19]. Available from: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/boletins/epidemiologicos/edicoes/2023/boletim-epidemiologico-volume-54-no-17/view

3. Binder MCP, Almeida IM. Acidentes do Trabalho: acaso ou descaso? In: Mendes R, editor. Patologia do Trabalho: atualizada e ampliada. São Paulo: Atheneu; 2005. p. 769-808

4. Lourenço EÂS. Agravos à saúde dos trabalhadores no Brasil. Rev Pegada. 2011 Jun;12(1):3-20. [cited 2022 Jun 19]. Available from: http://revista.fct.unesp.br/index.php/pegada/article/viewFile/927/940

5. Associação Brasileira de Estudos do Trabalho (ABET). Por dia, Paraíba registra 15 acidentes de trabalho e afasta 5 trabalhadores. [date unknown] [cited 2025 Aug 19]. Available from: https://abet-trabalho.org.br/por-dia-paraiba-registra-15-acidentes-de-trabalho-e-afasta-5-trabalhadores/

6. Amaral DKL, Souza EB, Fernandes PSC. Atuação da equipe de enfermagem frente aos riscos biológicos na área hospitalar. Rev ICESP. 2023;2(2). Available from: http://revistas.icesp.br/index.php/Real/article/view/4930/2663

7. Silva CCS, et al. Efeito da auriculoterapia sobre os níveis de cortisol em enfermeiras com Síndrome de Burnout. Res Soc Dev. 2022;11(8):e40411831229. doi: 10.33448/rsd-v11i8.31229

8. Gomez CM, Vasconcelos LCF, Machado JMH. Saúde do trabalhador: aspectos históricos, avanços e desafios no Sistema Único de Saúde. Cienc Saude Colet. 2018;23(6): 1971-80. doi: 10.1590/1413-81232018236.04922018 [cited 2025 Jan 19]. Available from: https://doi.org/10.1590/1413-81232018236.04922018

9. Oliveira JF, Vasconcelos JN. Acidentes de trabalho em ambiente hospitalar e riscos ocupacionais para os profissionais de enfermagem. Rev Iberoam Cienc Saude. 2023;12(1):1-15. Available from: https://www.revistas.imcsaude.com.br/index.php/RICSA/article/view/1466

10. Trindade JPA, Guimarães RA, Tipple AFV. Acidentes com material biológico durante limpeza de produtos para saúde na Enfermagem. Acta Paul Enferm. 2025;38:eAPE0002701. doi: 10.37689/acta-ape/2025AO0002701 [cited 2025 May 27]. Available from: http://dx.doi.org/10.37689/acta-ape/2025AO0002701

11. Porto CMF, Lazzarini MPT, Redígolo LRP, Neves FRAL. Implantação de um kit para comunicação de acidente do trabalho (KIT-CAT) como facilitador das ações que envolvem os acidentes com perfurocortantes. Rev Latino--Am Enferm. 1999;7(5):121-126

12. Magagnini MAM, Rocha SA, Ayres JA. O significado do acidente de trabalho com material biológico para os profissionais de enfermagem. Rev Gaúcha Enferm. 2011;32(2):302-8. doi: 10.1590/S1983-14472011000200018

13. Silva MKD, Zeitoune RCG. Riscos ocupacionais em um setor de hemodiálise na perspectiva dos trabalhadores da equipe de enfermagem. Esc Anna Nery Rev Enferm. 2009;13(2):279-86. doi: 10.1590/S1414-81452009000200015

14. Oliveira QB, Santos RS, Santos CMF. Acidentes de trabalho na equipe de enfermagem: uma revisão de literatura. Rev Enferm Contemp. 2013 Aug;2(1):1-8. doi: 10.17267/2317-3378rec.v2i1.199