# EPIDEMIOLOGICAL PROFILE OF OCCUPATIONAL ACCIDENTS WITH EXPOSURE TO BIOLOGICAL MATERIAL IN THE VALE DO SÃO PATRÍCIO, GOIÁS - 2019 TO 2023

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**ABSTRACT**

Occupational accidents involving exposure to biological material represent a significant public health problem, placing workers at risk of contracting infectious diseases through contact with contaminated body fluids. Regulatory Standard 15 (NR-15) and Regulatory Standard 32 (NR-32) were implemented to minimize these risks, establishing guidelines for occupational safety. This descriptive and quantitative study analyzed secondary data from the Notifiable Diseases Information System (SINAN), covering notifications of occupational accidents in two health regions of Ceres, Goiás, which encompass 28 municipalities and a population of 352,318 inhabitants. Preliminary results indicate that accidents involving biological material occur with significant frequency, especially among healthcare professionals. Reporting these incidents to SINAN is essential for monitoring and controlling risks, allowing for the implementation of prevention policies and adequate follow-up of affected workers. Furthermore, the analysis of epidemiological data is crucial for identifying risk groups and improving working conditions, reducing the incidence of accidents. Awareness about the importance of the correct use of Personal Protective Equipment (PPE) and the adoption of safety protocols are essential measures for preventing these injuries.
**Keywords:** Occupational accidents; Exposure to biological material; Compulsory notification.

## INTRODUCTION

Occupational accidents involving exposure to biological material are a serious global public health problem. These incidents can occur due to workers' contact with contaminated fluids, through percutaneous or mucosal routes, placing them at risk of contracting various infectious diseases (BERTELLI *et al*., 2023). To mitigate these risks, Regulatory Standard 15 (NR-15) was established, setting tolerance limits for exposure to agents harmful to workers' health. This standard not only aids in the prevention of occupational diseases and work accidents but also serves as a basis for

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claiming rights and compensation in cases of exposure to unhealthy conditions (EZAIAS *et al*., 2021).

Workers face different levels of exposure to biological risks, depending on the activities or services they perform. In this context, Regulatory Standard 32 (NR-32) emerges as a fundamental piece to guarantee occupational safety. Specifically designed to protect workers from various risks, including exposure to biological material, NR-32 outlines the necessary measures to protect the health and integrity of workers (ROTTA *et al*., 2018).

The Notifiable Diseases Information System (SINAN) of the Ministry of Health is an essential source of data, recording the occurrence of injuries regardless of employment status, covering public servants, formal and informal workers. SINAN, operating continuously, is a fundamental tool for the epidemiological surveillance system, dedicated to the collection, transmission, and dissemination of information on diseases and injuries subject to compulsory notification (MANGUALDE, 2019).

The objective of this study is to analyze the profile of occupational accidents with exposure to biological material recorded in the Notifiable Diseases Information System (SINAN), focusing on workers from two health regions of Ceres-GO, in order to identify patterns of occurrence and propose preventive measures.

## METHODOLOGY

This is a descriptive and quantitative research, based on the analysis of secondary data on notifications of occupational accidents with exposure to biological material. Data from the Informatics Department of the Ministry of Health (DataSUS) and the Notifiable Diseases Information System (SINAN), made available by the Municipal Health Department of Ceres, Goiás, will be used. Data from two health regions, São Patrício I and São Patrício II, which encompass 28 municipalities with a total population of 352,318 inhabitants, will be extracted.

## RESULTS

Workplace safety is an issue of extreme importance, not only because it directly affects the health and lives of workers, but also due to the economic and social impact of accidents. The prevention of occupational accidents should be a priority for all

organizations, regardless of their size or sector of activity. Implementing a positive safety culture is essential to reduce risks and promote a safe working environment (CHAGAS *et al*., 2019).

Occurrences in the work environment involving exposure to biological material are defined as situations in which workers from various professional areas come into direct or indirect contact with human or animal organic fluids, which can be potentially infectious. These fluids include blood, sweat, sputum, saliva, nasal secretion, tears, urine, vomit, feces, sexual secretions, cerebrospinal fluid, and various types of body fluids, such as peritoneal, pleural, synovial, pericardial, and amniotic fluids. It is crucial that these incidents are mandatorily reported to the Notifiable Diseases Information System (SINAN) (BRASIL, 2023).

Since 2004, Ministry of Health Ordinance No. 777 has established the technical procedures for the compulsory notification of occupational health injuries in sentinel services of the Unified Health System (SUS), including the list of injuries that must be mandatorily reported (VALIM et al., 2019). The compulsory notification of occupational accidents is the responsibility of the professional who attends to the worker and must be carried out through SINAN. This system includes a list of injuries that must be reported to the Ministry of Health and the Ministry of Labor. Furthermore, the worker must report any accident or occupational disease to the Hospital Unit Management Center so that the National Social Security Institute (INSS) is informed through the Work Accident Communication (CAT) (SOARES *et al*., 2019).

Epidemiological monitoring allows for tracking the incidence and prevalence of accidents, identifying patterns and risk groups. With this information, it is possible to implement preventive measures, develop protocols and safety policies in the work environment, aiming to reduce accidents. Furthermore, it guarantees assistance to the worker, with access to prophylactic treatments and adequate medical follow-up, minimizing the impact of occupational exposures (VALIM *et al*., 2019).

## CONCLUSION

Studies show that healthcare professionals are frequently exposed to risk situations, either due to accidents with sharp objects or the inadequate use of Personal Protective Equipment (PPE), such as gloves. Furthermore, they highlight the lack of

awareness about the severity of accidents involving biological material and the stigma associated with communicable diseases. The high incidence of these accidents, evidenced by the literature, exposes workers to significant risks of contamination by pathogens, resulting in serious health consequences. Understanding the epidemiological profile of occupational accidents with exposure to biological material in the Vale do São Patrício region is essential to improve prevention strategies and promote a safer work environment. The analysis of this data will allow the development of more effective actions, contributing to the reduction of injuries and ensuring the well-being of workers.

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