Where is the Data? Underreporting of Exogenous Intoxications in A Brazilian Public Database and It's Impacts in Public Health and Epidemiological Surveys

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Abstract

This paper highlights the challenges encountered in obtaining data of exogenous intoxication in a public Brazilian database, the Sistema de Informação de Agravos de Notificação (SINAN). Inadequate and incomplete notifications hinder data reliability, affecting scientific research and the development of public health policies. Established in the 1990s, SINAN is crucial for epidemiological surveillance in the country, but frequent errors in documentationsuch as missing patient information and inaccurate diagnosescompromise data quality. Aseveral causes may be involved in underreporting, including overwhelming demands on health care workers, particularly in resource-poor settings. Strengthening SINAN is essential for effective public health interventions, as reliable data are vital for identifying health trends, allocating resources, and implementing preventive measures. Improving reporting practices is crucial to provide complete and trustworthy epidemiological data, what can be attenuated by training and streamlined processes that facilitate adherence to the notification practice.

Opinion

The development of this work arose from our experience in a study on poisoning by toxic plants, based on data extracted from the SINAN. During the analysis, we encountered a recurring problem that directly affects the reliability of the results: inadequate or incomplete filling out of notification forms. Since intoxications can increase the risk of morbidity and mortality, this challenge impacts not only for scientific research but also accurate knowledge about epidemiological indicators, which in turn are crucial to public policies development and the management of collective health in Brazil [1].

The SINAN was gradually created and implemented in the 1990s, being an essential platform for monitoring cases of compulsory notification throughout the country [2]. This database gathers a wide range of diseases and conditions data, from infectious diseases to events such as exogenous poisonings and work-related accidents. Such information is crucial for epidemiological surveillance, enabling health managers and researchers to identify incidence patterns, propose interventions, and monitor the effectiveness of preventive and control measures [3,4].

However, we have observed reports of incorrectly or incompletely filled out notification forms, and other studies have highlighted the omission of sociodemographic data, accurate diagnosis, date of onset of symptoms or location of occurrence, among other information that significantly affects the analysis of the data collected. The lack of these data impairs the capacity for epidemiological analysis and decision-making on the management and prevention of reported diseases, as strategic decisions may be based on insufficient or incorrect data [5,6].

In the field of poisoning records, this data is extremely important for assessing the level of sanitary control and safety in the use of products such as pesticides, chemical reagents or even everyday agents such as medicines, medicinal plants, food, etc. In Brazil, each of these products has specific regulations for sale, handling and disposal, which also serve to limit improper use or accidental exposure. However, it is known that the Brazilian territory is quite large and the level of sanitary control is quite precarious in some regions. Therefore, surveys on the situations and profile of exogenous poisonings can be very useful for preventing undesirable events, especially by enabling an understanding of the affected public and the exposure factors.

For this, accurate and complete records are essential.The responsibility for filling out notification forms lies with various health professionals working on the front lines of the Unified Health System. Doctors, nurses, and other health professionals are overwhelmed by the increasing demand for care, especially in densely populated areas

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and regions with limited resources. The overload on the public health system can lead to errors in filling out forms or omissions of information considered non-priority during care [1].This scenario reveals an urgent need for continuous training and capacity-building of health professionals regarding the importance of correctly filling out notification forms.

Additionally, it is essential to create mechanisms that make the notification process more agile and less bureaucratic, aiming to reduce error margins without increasing the workload of professionals. More efficient digital tools and a system of supervision and feedback could also improve the quality of the recorded information [1,7].

Conclusion

The data from SINAN are not just numbers; they represent lives affected by health issues that, if properly notified, could receive the necessary attention to prevent further occurrences. In the case of issues like exogenous poisoning, for instance, the lack of accurate data complicates the identification of regional risk patterns and the creation of educational and preventive campaigns, in addition to interfering with the allocation of resources for treatment and prevention. The absence of reliable epidemiological analysis creates a cycle in which the health system reacts too late or ineffectively to the real needs of the population.

In conclusion, the problem of inadequate filling out of notification forms in SINAN is a critical issue that needs to be addressed with theseriousness it deserves. Solutions such as streamlining the process, investing in technology, and continuing education for health professionals are fundamental to ensuring data integrity and, consequently, the quality of public health in Brazil. It is important to emphasize that the importance of reporting health problems correctly and completely is necessary not only in Brazil, but throughout the world, especially in underdeveloped or developing countries. In many of these countries, public policies are incipient and can be better defined based on robust data, which can come from the recording and monitoring of data generated by the services provided to the population.

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