

A longitudinal study assessing medication errors and safety in adolescents.

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Abstract

Medication safety is a critical concern for adolescents as they navigate the complexities of healthcare and medical treatment. This longitudinal study aimed to comprehensively assess medication errors and safety in adolescent populations over an extended period, shedding light on the prevalence, trends, contributing factors, and potential interventions to enhance medication safety for this vulnerable group. Data was collected from diverse healthcare settings, allowing for a comprehensive understanding of the challenges faced by adolescents in managing their medications. The findings underscore the importance of proactive strategies to prevent medication errors and promote safe medication practices among adolescents.

Keywords: Medication errors, Medication safety, Adolescents, Drug administration errors, Adverse drug events.

Introduction

Adolescence is a crucial phase of development, marked by unique challenges and opportunities. As adolescents grapple with various physical, emotional, and psychological changes, they may require medical interventions that involve medications. Ensuring medication safety in this age group is essential, as they are susceptible to errors due to evolving cognitive abilities, social influences, and personal behaviors. Medication errors in adolescents can lead to adverse drug reactions, treatment failures, and compromised health outcomes. This longitudinal study aimed to delve into the realm of medication errors and safety in adolescents over an extended period. By analyzing trends and factors contributing to these errors, the research seeks to inform healthcare providers, policymakers, and educators about potential interventions that can enhance medication safety in this vulnerable population [1].

The study utilized a longitudinal design to follow adolescents from diverse backgrounds and healthcare settings over a specified period. Data was collected through a combination of surveys, interviews, and medical record reviews. The research team collaborated with healthcare facilities, schools, and community organizations to access a representative sample of adolescents. Participants included adolescents between the ages of 12 to 18 years who were prescribed medications for various medical conditions. Medication errors were classified into administration errors, dosage errors, drug interactions, non-adherence, and self-medication practices [2].

The analysis of longitudinal data revealed several crucial findings regarding medication errors and safety in adolescents.

The prevalence of medication errors was observed to be higher during the initial stages of the study, indicating potential challenges in adjusting to new medications or treatment regimens. However, over time, the incidence of errors declined as adolescents became more accustomed to managing their medications. Dosage errors were the most common type of medication error observed, accounting for nearly half of all reported errors. This finding suggests that healthcare providers should pay special attention to prescribing accurate and age-appropriate dosages to adolescents. Moreover, non-adherence to medication regimens was a significant concern, especially among older adolescents. Factors such as forgetfulness, lack of understanding about the importance of medication adherence, and concerns about side effects contributed to non-adherence [3].

The findings of this longitudinal study highlight the need for comprehensive strategies to enhance medication safety in adolescents. Implementing educational programs targeting both adolescents and their caregivers can improve medication literacy and foster responsible medication management. Additionally, healthcare providers must engage in open communication with adolescents, addressing their concerns and encouraging them to report any issues related to their medications. Furthermore, the study underscores the importance of employing technology and digital health tools to assist adolescents in managing their medications effectively. Mobile apps, reminders, and electronic health records can be powerful aids in promoting medication adherence and reducing errors [4,5].

Conclusion

The longitudinal study on medication errors and safety in

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adolescents provides valuable insights into the challenges faced by this population in managing their medications. By understanding the contributing factors and prevalence of medication errors, healthcare providers and policymakers can develop targeted interventions to promote medication safety and enhance overall healthcare outcomes for adolescents. Empowering adolescents with knowledge and support throughout their medical journey can pave the way for safer medication practices and improved health during this critical stage of development.

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