

SYSTEMATIC REVIEW TO CLASSIFY TYPE OF INSULIN ERRORS AFFECTING PEOPLE WITH DIABETES IN ARAB COUNTRIES

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Background

Insulin, a high alert medication (HAM), is associated with errors, but their definition, classification, and causes are unclear, especially in Arab countries, increasing risks to people with diabetes.

Aim

The aim of this review was to provide a comprehensive evaluation of documented insulin errors and classification techniques to address these issues.

Methods

An electronic search was initiated in Ovid, Embase, and adapted for CINAHL, MEDLINE and Google Scholar. All empirical studies in English or Arabic, which described, quantified or evaluated prescriptions related to insulin errors in Arab countries were included. Data were synthesised by narrative description.

Results

Sixteen studies were included in the review, which identified several common causes of insulin errors, with prescribing errors being the most reported. In Saudi Arabia, errors included incorrect frequency and improper dosing of insulin, while in Egypt, lack of knowledge of HAMs, unsatisfactory practices, and low adherence to safety protocols were common. Hyperglycaemia or hypoglycaemia were the main outcomes of insulin errors, which often led to hospitalizations. Studies across countries varied in terms of reported prevalence. For example, in Sudan, there was a 60% prevalence of prescription and dose-related errors, with severe cases in hospitalized patients. In Algeria, over 77% of patients reported missing their insulin injections, and many reused insulin pen needles, raising the risk of lipo-hypertrophy and infection. In Qatar, 80% of patients were kept on Sliding-scale insulin (SSI) for more than 48 hours, with notable rates of both hypoglycaemia and hyperglycaemia.

Conclusion

Insulin errors are a significant issue in healthcare settings in Arab countries, with a high prevalence of errors and complications. This review also uncovers practical and educational gaps among healthcare professionals. To mitigate burden of insulin-related errors, a complex multi-level approach is warranted.