

Background and importance

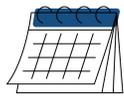
Insulin is a **high-alert medication** frequently involved in hospital prescribing errors and associated with poor glycaemic control and adverse patient outcomes.

Prescribing errors were identified during routine pharmaceutical analysis of medical prescriptions and confirmed by the multidisciplinary diabetology team.

Aim and objectives

- To **identify** and classify the most frequent insulin prescribing errors
- To **develop** safer prescribing protocols and improve pharmacists' insulin knowledge.

Materials and methods



4-week retrospective review (February–March 2025)



Adult medical wards (excluding ICU and paediatrics)
Electronic prescribing software (DxCare)



10–15 insulin prescriptions analysed daily



Prescribing errors classified into three categories

Results

18.5%

≈ 1 in 5 prescriptions

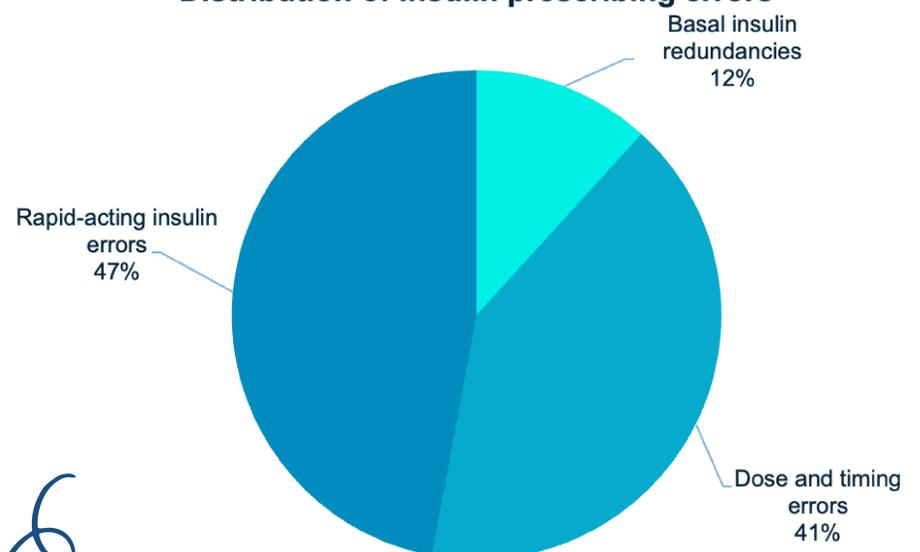


contained **≥1 prescribing error**



N = **275** prescriptions analysed

Distribution of insulin prescribing errors



Rapid-acting insulin accounted for most prescribing errors

Clinical examples

Rapid-acting insulin

Aspart ↔ Faster aspart
n = 19 (**79%**)
Risk: poor glycaemic control (different onset of action)

Dose & timing

Inappropriate prolonged use of corrective insulin alone
n = 13 (**62%**)
Risk: poor glycaemic control

Basal insulin

Co-prescription of human insulin via an electric syringe pump with insulin glargine
n = 5 (**83%**)
Risk: hypoglycaemia

Co-developed protocols (pharmacists & diabetologists)



Identification of inadequate use of correction insulin alone in patients on prandial insulin

➔ Development of two **new standardised protocols**:

- ✓ **Protocol 1** : Meal insulin protocol (rapid-acting insulin with dose adaptation to capillary glucose)
- ✓ **Protocol 2** : Correction insulin protocol, restricted to acute situations with a strict 48-hour limit



Targeted pharmacist training developed

Co-developed with diabetologists and based on prescribing errors, the training included:

- Overview of insulin therapy regimens
- Presentation and implementation of the new standardised protocols
- Interactive clinical cases based on real prescribing errors

Conclusion

Nearly **one in five insulin** prescriptions analysed contained a prescribing error.

Pharmacist-led prescription review and standardised tools improve insulin safety and are transferable to other hospitals.

