



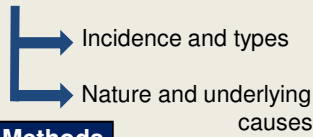
Technology-related medication errors – incidence, nature and causes in a tertiary hospital

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Aims of this study

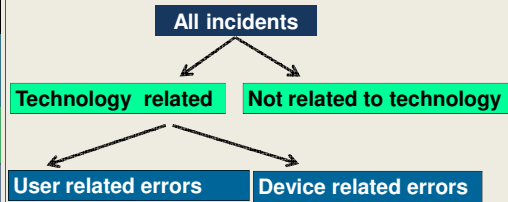
Analysis of technology-related medication errors



Study process

- 1538 incidents were reported during the period of analysis (2006 – 2010)
- All incidents were reviewed by a pharmacist and technology-related incidents were identified as follows

Pathway for incident analysis



Methods

Definitions

Technology-related errors – Any error that involved technologies used in hospitals to reduce medication errors

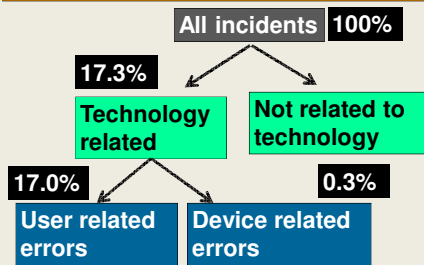
User related errors – Any technology-related error associated with a human failure

Device related errors – Any technology-related error that occurred due to a technical defect of a device

Results

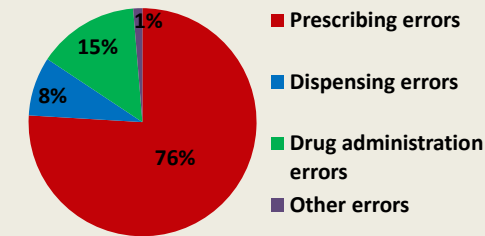
Incidence of technology-related errors

17.3% of all incidents were 'technology-related' and most were due to 'user errors'



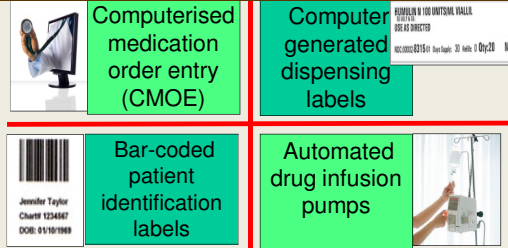
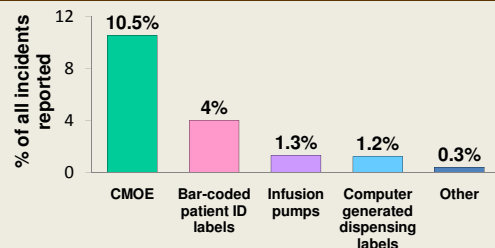
Types of technology-related errors

Most technology-related errors were prescribing errors followed by drug administration and dispensing errors



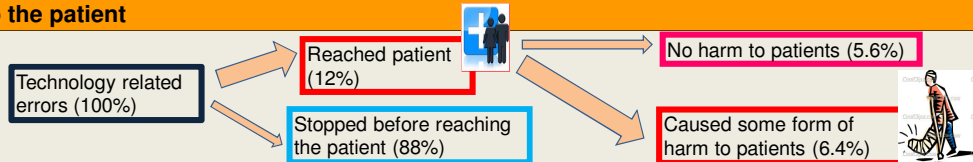
Technologies involved in technology-related errors

Most technology-related errors were related to computerised medication order entry

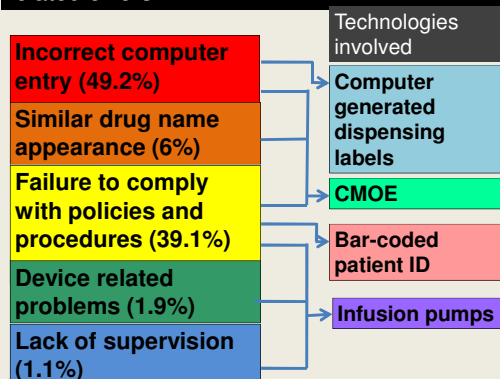


Severity of technology-related errors

12% of technology-related errors reached the patient and 6.4% caused some form of harm to the patient



Most common underlying causes and their % contribution to the occurrence of technology-related errors



Conclusions

- Technologies have a potential to introduce new errors
- Most technology-related errors are related to user errors than technical defects
- Common underlying causes were incorrect computer entry and staff not complying to policies and procedures
- When using technological interventions, systems need to be improved in a way that errors cannot happen
- Staff training and continuous monitoring are also important to minimise technology-related errors