5PSQ-137 WHEN IS A DRUG INTERACTION NOT A DRUG INTERACTION? COMPARISON OF DRUG-DRUG INTERACTIONS-CHECKING DATABASES BETWEEN THE UK AND USA

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Background The drug-drug interaction (DDI)-checking function of an electronic medical record (EMR) is helpful but is also a distraction, firing too many warnings and triggering alert fatigue. Anecdotally, hospital staff ignore warnings in over 50% of cases. Additionally, there are a number of commonly used DDI-checking databases available.

Purpose What is the concordance of DDI databases when evaluating identified high-risk interactions alerts on an EMR system? Can the number of alerts be safely downgraded to alert fatigue?

Material and methods Comparison of DDI-checking databases: Stockley's Drug Interactions in the UK and Lexicomp (Lexi), Micromedex (MDX) and Facts and Comparison (Facts) in the USA.

Based on their review, 477 interactions were recommended to be downgraded to moderate risk. These 477 interactions were further evaluated by a USA-based senior pharmacist utilising the DDI-checking databases of Lexi, MDX and Facts to identify the severity of the interaction. The agreement across all three databases, as well as between each database, was analysed. Descriptive statistics analysed the difference between the ratings and agreement in each database with the Chi square and an alpha set to 0.01.

Results Of the 477 interactions evaluated, Lexi, MDX and Facts, agreed on the rating only 17.8% (85/477) of the time. Of these 85 interactions, 68 (80%) were no interaction/none reported, 2% (2/85) were considered a moderate interaction and 18% (15/85) were considered a major interaction. However, for moderate interaction (4% versus 19%, $p < 0.00001$) and major interactions (23% versus 55%, $p < 0.00001$) MDX had a higher rate of agreement with Lexi compared to Facts. All three databases were significantly different from Stockley's ($p < 0.001$).

Conclusion There are a number of DDI-checking database tools available for the clinician to utilise. The interaction checker in an EMR seems to over-alert what it considers highly significant interactions. Based on common DDI-checking databases (in the UK and USA), the concordance of results is very low. This study highlights the need for checking multiple sources and critically evaluating the impact of the DDI before taking action, either to consider downgrading an alert from the EMR or for managing the individual patient case.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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5PSQ-138 REVIEW OF MEDICATION ERRORS IN A PAEDIATRIC HOSPITAL BASED ON AN INSTITUTIONAL REPORTING SYSTEM

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Background Medication errors occur more frequently and are more concerning in paediatric inpatients compared to adults. The main reasons are the difference in pharmacokinetics and in pharmacodynamics compared to adults and the heterogeneity of the paediatric population that implies a dose adjustment based on patient's age, bodyweight or surface area. A review of medications errors could help us to improve care quality and patient safety.

Purpose To categorise medication errors that occurred in paediatric and neonatology units, and to identify their main causes.

Material and methods A retrospective review of medication errors was carried out based on the data extracted in the institutional reporting system between January 2017 and June 2018. Data were collected and analysed using Microsoft Excel. An Excel spreadsheet developed by the French Society of Clinical Pharmacy to review medication-related errors was used to perform the analysis. Analysis was performed by two pharmacists and a member of the quality and risk management department.

Results Of the 108 events reported in the system, 31 were medication errors that occurred in paediatric (24) and neonatology (seven) units. Medication errors occurred in every stage of the medication process including the logistics part, but 18/31 occurred during medication administration. The nurse was the professional who intercepted the most medication errors (25/31). 22/31 errors were not prevented and reached the patient, but none were life-threatening. However, 11/31 errors were considered as events that should not have occurred, also known as 'never events'. Medications commonly involved in errors were injectable antibiotics (8/31). Main causes were: reading error (12), differences between prescribing and administration (11), lack of control before administration (eight), underestimation of risk factors (seven) and lack of training of the healthcare team (five).

Conclusion Medication errors are often discussed in experience feedback committees but are analysed individually. Our global analysis by using a standardised method has highlighted recurrent causes of errors. Improvement measures have been established and prioritised in order to design a multi-year programme to reduce the occurrence of medication errors. Our first interventions will focus on the training and awareness of medication errors to members of the healthcare team.

REFERENCES AND/OR ACKNOWLEDGEMENTS

<http://sfpc.eu/fr/pratiques-professionnelles/remed.html>

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