

# Review of the hospital high-alert medications list using hospital and international data

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## What was done?

- The hospital list of high-alert medications (HAM) was comprehensively updated and
- The hospital specific medications not yet present on HAM lists were identified
- By joining: international HAM data + data from the hospital (supported by medication error (ME) reports and expert opinion) + ME reporting system

## Why was it done?

- In University Medical Centre Ljubljana (UMCL) a HAM list was created in 2008 and has not been significantly changed since then
- Our aim was to introduce a systematic strategy to review the HAM list by including local data

## How was it done?

1. 390 MEs submitted to the hospital ME reporting system (2016-2018) were analysed (Fig. 1)

2. We compared the HAM list from Institute for Safe Medication Practices (ISMP) and the UMCL HAM list

• The criteria such as frequency of the reported ME, severity of harm for the patient, affected population, novelty, etc, were used to identify potential HAM

3. The probability of the ME report for the individual medications was calculated from the reported MEs and the hospital medication consumption data

- for the medications involved in 3 or more reported MEs (Tynismaa et al, 2017)
- for the medications involved in MEs which caused harm to the patient

## What has been achieved ?

- The comparison of HAM lists and reported MEs showed that several other medications could be added to the UMCL HAM list, e.g. : individualised parenteral nutrition for the paediatric population, oral sedation agents for children, dialysis solutions, lidocaine IV, methadone, bupivacaine and nusinersen
- The probability-based HAM identifying method supported our previous suggestions to extend the UMCL HAM list
- Additionally, the method unexpectedly revealed medications with a high probability of ME and/or harm for the patients, that are not included in any HAM list (ISMP, UMCL), such as romiplostim, parenteral iron preparations, ampicillin with sulbactam, and others

## What next ?

- We plan to develop a paediatric specific HAM list based on the same strategy; i.e. considering international suggestions and analysing paediatric ME reports in UMCL

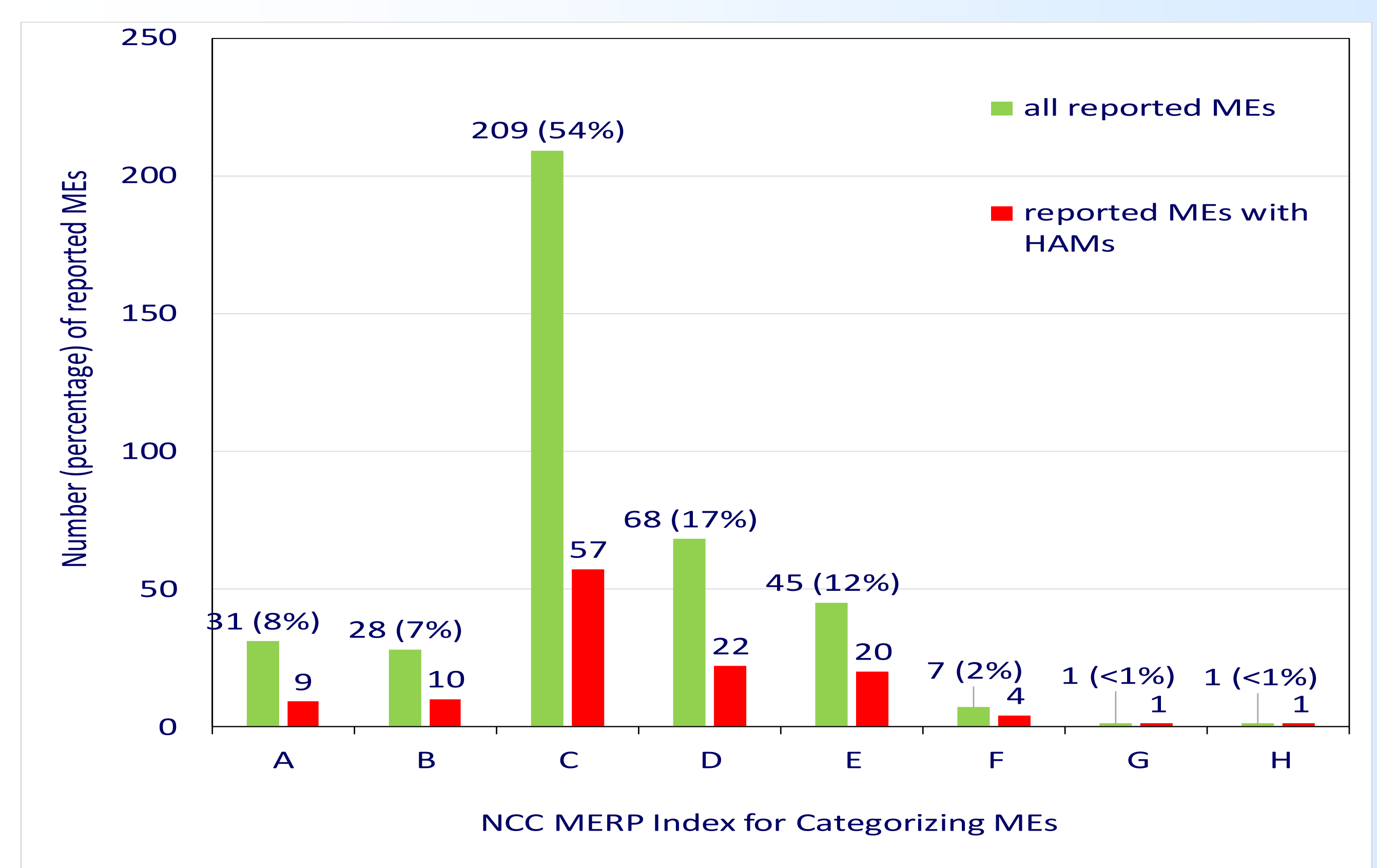


Fig 1. Reported MEs classified according to severity of the outcome.



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