

IDENTIFICATION OF HIGH ALERT MEDICATION FOR PEDIATRIC PATIENTS IN A CENTRAL HOSPITAL



Liliana Calixto¹, Ana Mirco^{1,2}, Fátima Falcão^{1,2}

¹Centro Hospitalar de Lisboa Ocidental, Hospital de Santa Cruz, Pharmaceutical Services, Lisbon, Portugal

²Faculty of Pharmacy, University of Lisbon, Lisbon, Portugal

5PSQ-116

Background

High-alert medications (HAM) are medicines that have a heightened risk of causing significant patient harm when used in error. Errors associated with HAM are not the most frequent, but their consequences tend to be more serious, leading to permanent injuries or death. Questionnaires to define a HAM list based on health professionals (HP) opinion have been used focusing attention on risk management programs related to HAM. However, available knowledge about pediatric HAM is limited. Because children are particularly susceptible to medication errors, a specific pediatric HAM list may help developing effective strategies to prevent patient harm.

Purpose

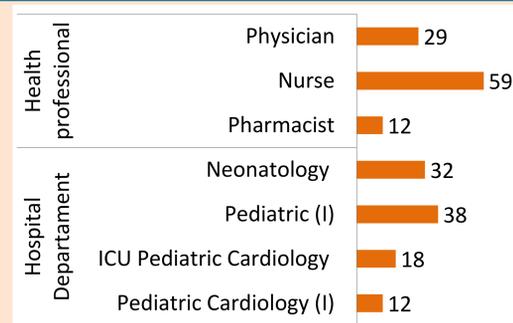
To identify specific pediatric HAM, create a list and identify safety measures to be used in CHLO pediatric inpatient wards, based on HP opinion.

Material and methods

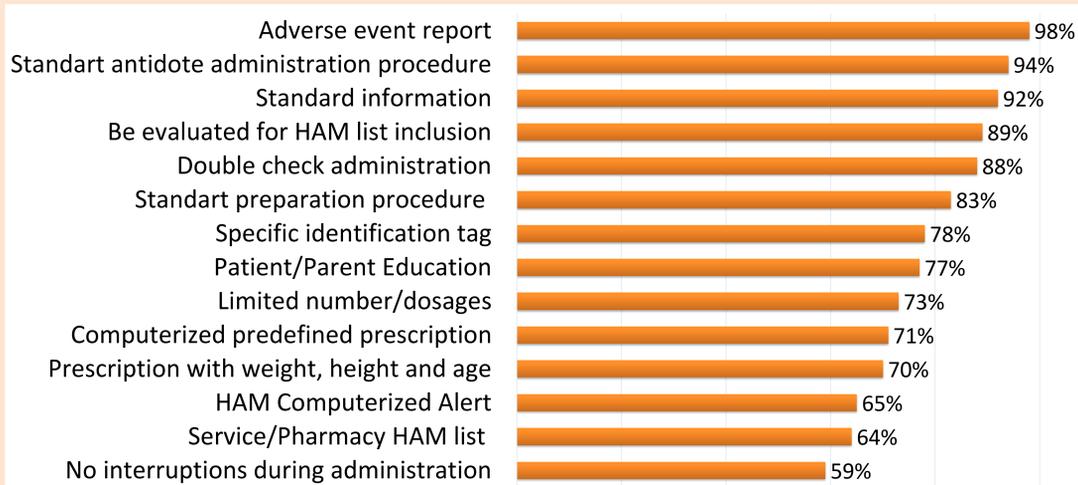
Observational study, with questionnaire application to physicians, nurses and pharmacists from hospital pediatric services, between June-September 2016. SPSS 23.0 statistical software was used for statistical descriptive analysis with a level of significance of 5%.

Results

Population: Questionnaires were answered by 66 HP (29% physicians, 59% nurses and 12% pharmacists), 70% from Pediatric ward - Neonatology and Infirmary (I) - and 30% from Pediatric Cardiology (ICU and infirmary).



Graphic 1: HP distribution by type and Hospital department



Graphic 2: Safety measures by importance according to HP opinion

Safety Measures: For HP, the most important safety measures to implement for HAM were: report of all HAM adverse events(98%), having for each HAM an antidote administration procedure (94%), prescribing/administration standard information and double check administration (92%)

Drug/Drug Class	% HP
Potassium chloride concentrate for infusion	95%
Opioids Analgesics	91%
Adrenergic Agonists (IV)	86%
Antiarrhythmics IV	85%
Anticoagulants	80%
Antiepileptics and anticonvulsants ¥	77%
Hypertonic sodium chloride (20%) (IV)	77%
Insulins (SC and IV)	77%
Inotropics (IV)	76%
General Anesthetics (Inhalation and IV)	73%
Hypertonic glucose (20% or higher) injectable	68%
Neuromuscular Blockers	68%
Sedatives of moderate action	67%
Adrenergic Antagonists (IV)	64%
Magnesium Sulphate (IV)	61%
Antiinfectives ¥	55%
Parenteral Nutrition Solutions	52%
Epidural or Intrathecal Medications	52%
Analgesics Non-Opioids ¥	50%

¥ Drugs not usually included in HAM lists

HAM List: An extensive bibliographic review was carried out to define the criteria for the drugs to be included in the final list of HAM. Medicines perceived as HAM by more than 50% HP were included in HAM List.

Discussion/Conclusion

Pediatric HAM list revealed some differences compared to published lists for general population. Drugs not usually included were identified by pediatric HP as pediatric HAM namely anticonvulsants/antiepileptics, anti-infectives and non-opioid analgesics. Questionnaire use, in addition to literature review, allowed the elaboration of a specific pediatric HAM list and to identify the most important safety measures to be used in CHLO pediatric inpatient wards, based on HP opinion.