The results of this study will be useful in developing interventions to eliminate errors in the intravenous medication administration process” Schnock et al (2016).

Abstract:

INTRODUCTION: Intravenous medication errors persist despite the use of smart pumps. This suggests the need for a standardised methodology for measuring errors and highlights the importance of identifying issues around smart pump medication administration in order to improve patient safety.

OBJECTIVES: We conducted a multisite study to investigate the types and frequency of intravenous medication errors associated with smart pumps in the USA.

METHODS: 10 hospitals of various sizes using smart pumps from a range of vendors participated. Data were collected using a prospective point prevalence approach to capture errors associated with medications administered via smart pumps and evaluate their potential for harm.
RESULTS: A total of 478 patients and 1164 medication administrations were assessed. Of the observed infusions, 699 (60%) had one or more errors associated with their administration. Identified errors such as labelling errors and bypassing the smart pump and the drug library were predominantly associated with violations of hospital policy. These types of errors can result in medication errors. Errors were classified according to the National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP). 1 error of category E (0.1%), 4 of category D (0.3%) and 492 of category C (excluding deviations of hospital policy) (42%) were identified. Of these, unauthorised medication, bypassing the smart pump and wrong rate were the most frequent errors.

CONCLUSION: We identified a high rate of error in the administration of intravenous medications despite the use of smart pumps. However, relatively few errors were potentially harmful. The results of this study will be useful in developing interventions to eliminate errors in the intravenous medication administration process.

Reference:

Thank you to our partners for supporting IVTEAM