To estimate the impact of smart pump implementation in a pediatric intensive care unit in terms of number and type of administration errors intercepted” Manrique-Rodríguez et al (2016).

Abstract:

OBJECTIVES: To estimate the impact of smart pump implementation in a pediatric intensive care unit in terms of number and type of administration errors intercepted.

DESIGN: Observational, prospective study carried out from January 2010 to March 2015 with syringe and great volumen infusion pumps available in the hospital.

PARTICIPANTS: Infusions delivered with infusion pumps in all pediatric intensive care unit patients.

INTERVENTIONS: Design of a drug library with safety limits for all intravenous drugs prescribed.
MAIN VARIABLES: Users’ compliance with drug library as well as number and type of errors prevented were analyzed.

RESULTS: Two hundred and eighty-three errors were intercepted during 62 months of study. A high risk drug was involved in 58% of prevented errors, such as adrenergic agonists and antagonists, sedatives, analgesics, neuromuscular blockers, opioids, potassium and insulin. Users’ average compliance with the safety software was 84%.

CONCLUSIONS: Smart pumps implementation has proven effective in intercepting high risk drugs programming errors. These results might be exportable to other critical care units, involving pediatric or adult patients. Interdisciplinary collaboration is key to succeed in this process.

Reference:


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