

Low-value prescriptions for injury hospitalisations: a cohort study

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Background

Low-value practices are tests and treatments that are not supported by evidence, and which may expose patients to unnecessary risk. They mobilize up to 30% of health resources. Reducing the use of these practices is seen as the most promising way to rationalize limited resources while improving patient outcomes. Timely actions, multiple prescribers, medications requiring special precautions, frequent multi-organ failures, are all reasons why trauma is a fertile ground for low-value prescriptions. Recent studies have identified multiple low value prescriptions in the context of acute trauma care. However, information on the incidence of these prescriptions and the impact on patient outcomes and resource use is scarce, mainly because of difficulties obtaining data on the intra-hospital use of drugs.

We aimed to evaluate the adherence to clinical practice guidelines recommendations in a level I trauma center.

Methods

We identified low-value prescriptions from internationally recognized clinical practice guidelines and an expert consensus study. We conducted a retrospective cohort study among adults hospitalised for injury between April 2017 and March 2020. We developed algorithms to identify low-value prescriptions iteratively with content experts. To evaluate the adherence to recommendations, we then calculated incidences using data on clinical diagnoses and outcomes from the Quebec trauma registry and data on intra-hospital drug prescriptions from a hospital information system.

Results

We developed algorithms for 10 low-value prescriptions. Drugs included corticosteroids, antiseizures and analgesics. 5716 patients were included of which 735 had traumatic brain injuries and 173 had spinal cord injuries. Incidences of low-value prescriptions ranged from 0% to 25%.

Conclusions

We observed high variation in adherence to clinical practice guidelines recommendations. While some recommendations seem to be well implemented, others represent opportunities to improve the quality of care. Hereafter, we will evaluate the impact of these low-value prescriptions on patient outcomes and resource use.