Pharmacist-detected inappropriate medicines and recommendations made regarding a change of medicines in emergency ward

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Background
Emergency departments have serious medication safety concerns. Inappropriate medications are common. Physicians and nurses may not have enough time to review medication charts regularly.

Purpose
- To evaluate the inappropriate medications in emergency ward based on pharmacist’s medication chart review.
- To review the physicians’ acceptance rate of pharmacist’s recommendations regarding a change on medication regimen in emergency ward.

Materials and Methods
Medication charts of all emergency ward patients were reviewed by a pharmacist prospectively for five months from April to August 2011. Pharmacist made oral or written recommendations to physicians regarding a change of medication.

Recommendations were made on:
- drug interactions
- inappropriate drug dosages
- inappropriate duration of drug treatments
- wrong medications
- missing medications
- duplications

Results

I
855 admissions were reviewed. The most common inappropriate medications detected by pharmacist were NSAID’s, SSRI’s, benzodiazepines and warfarin.

94 recommendations regarding 67 admissions were made for:
- 38 drug interactions (40.4%),
- 26 inappropriate drug dosages (27.7%),
- 10 inappropriate duration of drug treatments (10.6%),
- 8 wrong medications (8.5%),
- 6 missing medications (6.4%) and
- 6 duplications (6.4%).

II
The total physicians’ acceptance rate for all pharmacist’s recommendations were 62% (n:58). Recommendations regarding 20 of 38 (52.6%) drug interactions, 14 of 26 (54%) inappropriate drug dosages, 8 of 10 (80%) inappropriate duration of drug treatments, 6 of 8 (75%) wrong medications, 4 of 6 (66.7%) missing medications and all 6 duplications were accepted by physicians.

Conclusions
- Pharmacist was able to detect important inappropriate medications by reviewing medication charts of emergency ward patients.
- Many pharmacist’s recommendations leading to a change in medication regimen were accepted by the physicians.
- Pharmacists can provide significant contributions to patient safety in emergency wards.

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