SHARING DRUG INFORMATION TO OPTIMISE PRESCRIBING AND ADMINISTRATION OF MEDICINES FOR HOSPITALISED PATIENTS: from theory to daily practice

Sandrina von Winckelmann, Jeroen Staessen, Astrid Vantrappen, Freija Verbiest, Véronique Verheyen
Pharmacy Department, Imelda Hospital Bonheiden, Imeldalaan 9, 2820 Bonheiden, Belgium
contact: sandrina.von.winckelmann@imelda.be

BACKGROUND & OBJECTIVES

Forty-nine percent of adverse drug events are due to ordering and prescribing errors. Pharmacists – as the drug specialists in the hospital – play a key role in providing relevant drug information to other health care providers in order to reduce adverse drug events and improve patient safety.

Our objective is to analyze pharmacist’s interventions during drug order validation after implementation of standardized drug information in a computerized physician order entry system (CPOE).

METHODS

- Integration of structured and standardized drug information in a CPOE system and on the hospital’s intranet of a 500-beds regional hospital.
- Systematic drug order validation prior to dispensing by trained hospital pharmacists.
- Analysis of pharmacist’s interventions (e.g. number, reason intervention, acceptance rate).

RESULTS

Guided prescribing in CPOE system
- Predefined drug orders of multiple drugs in relation to specific procedure or diagnosis (eg CABG, …) - Figure 1
- Schemes for intravenous drugs (including correct infusion bag and duration of administration) - Figure 2,3,4
- Drug-specific reminder possibility IV-oral switch - Figure 5

CONCLUSIONS

Integration of standardized drug information in existing computerized systems in combination with patient-tailored advises by the hospital pharmacist, improves quality and safety of drug orders and administrations for hospitalised patients. Analysis of pharmacist’s interventions provides valuable information to continuously improve our drug information service.

Reason intervention | Frequency
--- | ---
Inappropriate drug dose/frequency | 31%
Documented drug allergy for prescribed drug | 21%
Inappropriate IV drug administration | 16%
Duplicate therapy | 16%
Interaction LMWH-NOAC | 8%

Over a 4-month period, 119 interventions were registered. Overall acceptance rate was 88%.