Evaluation of medication discrepancies identified through medication reconciliation in community pharmacy settings

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Background Medication discrepancies are reported as a high risk for drug-related problems, especially at hospital admission and at discharge. However, medication discrepancies could also occur outside the hospitalisation period.
Purpose Identification, categorization and characterization of medication discrepancies in the community pharmacy outside the hospitalisation period.
Method Fifth-year pharmacy students from the University of Basel performed one medication review (MR) with regular community pharmacy customers under the supervision of a pharmacist during their internship in community pharmacies in Switzerland between January - August 2017. Patients with ? 4 drugs taken for > 3 months, with ?1 drug from ATC group C (cardiovascular system) and with ?1 generic drug were eligible. A best possible medication history (B PMH) of the prescribed medicines was generated during the type 2a MR, based on the medication history and the patient interview. The medication history was derived from the patient?s record, which is mandatory for all patients fi lling a prescription in Swiss community pharmacies. Each medication of the BMPH was compared with the latest prescription in the pharmacy patient record. All discrepancies were documented as free text on a predefined reconciliation form by the students and afterwards classified independently by two researcher using MedTax, a classification system for medication discrepancies(Almanasreh E. et al.).
Findings A total of 131 pharmacy students performed 131 MRs in 105 different community pharmacies, and identified 372 medication discrepancies [2.8 ± 2.4 per patient]. The mean age was 73 years [49-91 years] with an average of 9.9 ± 4.0 medicines per patient. The majority of the patients (88.5%) fill their prescriptions always in the same community pharmacy, 6.9% mostly in the same and in 4.6% at the physician. The most frequent specific medication discrepancies were ?Discrepancy in the strength and/or frequency and/or number of units of dosage form and/or total daily dose? (43%), ?Discrepancy in the name of the drug? (13%) and ?Discrepancy in the time of drug administration? (9%), while 27% of edication discrepancies were categorised to ?other?. The most often documented ATC groups causing medication disc repancies within this patient population (with ?1 drug from ATC group C) were C10AA (HMG CoA reductase in hibitors), A02BC (Proton pump inhibitors), C07AB (Beta blocking agents, selective), C03CA (Sulfonamides, plain), and C09AA (ACE inhibitors, plain).
Conclusion A medication reconciliation performed in the community pharmacy outside the hospitalisation period is an essential activity at each filling of a new prescription to identify medication discrepancies and therefore prevent potential drug-related problems.