

Evaluation of pharmaceutical interventions documented by a pharmacy technician:

Where do pharmacy technicians have the biggest impact to avoid drug-related problems?

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Background and importance

In the field of clinical pharmacy services there are activities that are suitable for pharmacy technicians under the supervision of a pharmacist.

University Hospital Dresden, department of urology:

- 80 beds; 15-20 admissions per day
- One full-time pharmacist
- One half-time pharmacy technician

Main tasks of the pharmacy technician:

- Medication reconciliation
- Supporting physicians with electronic prescription of the patient medication (since 06/2020)
- Clinical prioritisation by using guidelines (identification of patients who are at high risk for drug-related problems)

Aim and objectives

The aim of this study was to identify the clinical pharmacy services where the integration of pharmacy technicians have the biggest impact to avoid drug-related problems.

Material and methods

- Since 2019 the pharmacy technician is recording the interventions in a categorical excel sheet.
- There are two documentation weeks per quarter
- The categories are

- ❖ Drug name
- ❖ Short description of the drug-related problem
- ❖ Intervention
- ❖ Classification

Example 1: Drug substitution on admission

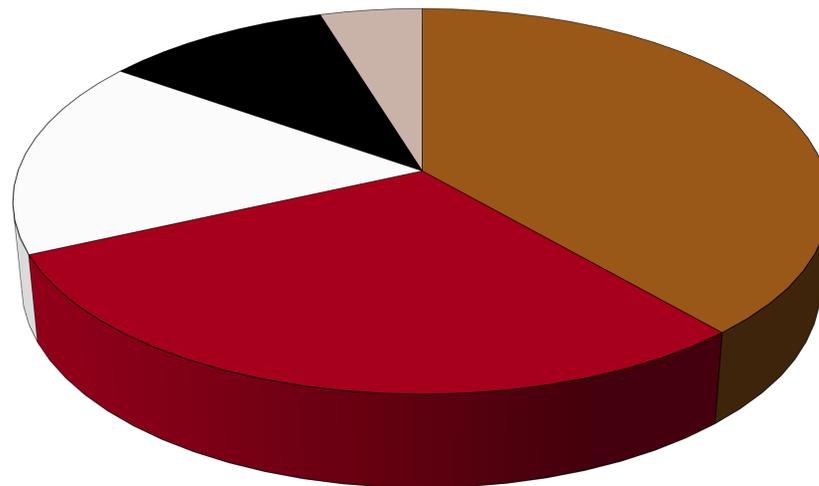
Drug name	Silodosin
Description	Patient medication list: Silodosin 8 mg 1-0-0
Intervention	Silodosin is not available in the clinic, aut simile substitution with Tamsulosin 0,4 mg 1-0-0
Classification	Drug substitution on admission considering local guidelines

Example 2: Double medication

Drug name	Amlodipin, Nifedipin
Description	Patient medication list contains Amlodipin and Nifedipin
Intervention	a) Consultation of the patient: he takes both, Amlodipin and Nifedipin b) Discussion of the problem with the pharmacist → physician stops Nifedipin, RR monitoring
Classification	Other drug-related problems (pharmacy technician acts under the supervision of the pharmacist)

Results

- 22 documentation weeks (01/2019 – 09/2021)
- 468 interventions documented by the pharmacy technician



- Drug substitution on admission (aut idem and aut simile) considering local guidelines: n=181; 39%
- Consultation of the general practitioner because of discrepancies on the medicines list: n=138; 29%
- Consultation of the patient because of discrepancies on the medicines list: n=78; 17%
- Other drug-related problems, discussion of detected problems with the pharmacist, clinical prioritisation: n=49; 10%
- Medication errors from electronic prescription (since 06/2020, 8 documentation weeks): n=22; 5%

Conclusion and relevance

- ✓ Pharmacy technicians can be suitable to prevent drug-related problems, especially in the field of medication reconciliation.
- ✓ Most of the interventions (46%) were consultations of the general practitioner or of the patient because of discrepancies on the medicines list. These are time-intensive interventions and lead to correct and safe medication for the patients.
- ✓ Drug substitution on admission (aut idem and aut simile) considering local guidelines (39%) lead to fewer queries from nurses or physicians.
- ✓ Trained pharmacy technicians are able to detect drug-related problems like for example double medication of dose-related medication errors and to identify patients at high risk for drug-related problems by using guidelines.
- ✓ Please note the reduced medication errors from electronic prescription due to shorter observation period and proactive support from the pharmacy technician.

Reference

Incorporation of pharmacy technicians to support clinical pharmacy services; Krankenhauspharmazie 2021; 42: 414-418

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