

# 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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Universitätsklinikum  
Carl Gustav Carus  
DIE DRESDNER.



Klinik-Apotheke des  
Universitätsklinikums Carl  
Gustav Carus der Technischen  
Universität Dresden (AöR)

R. Borchers<sup>1</sup>, L. Krampe<sup>1</sup>, A. Fischer<sup>1</sup>, C. Thomas<sup>2</sup>, H. Knoth<sup>1</sup>

1 University Hospital Dresden, Hospital Pharmacy, Dresden, Germany

2 University Hospital Dresden, Department of Urology, Dresden, Germany

### 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

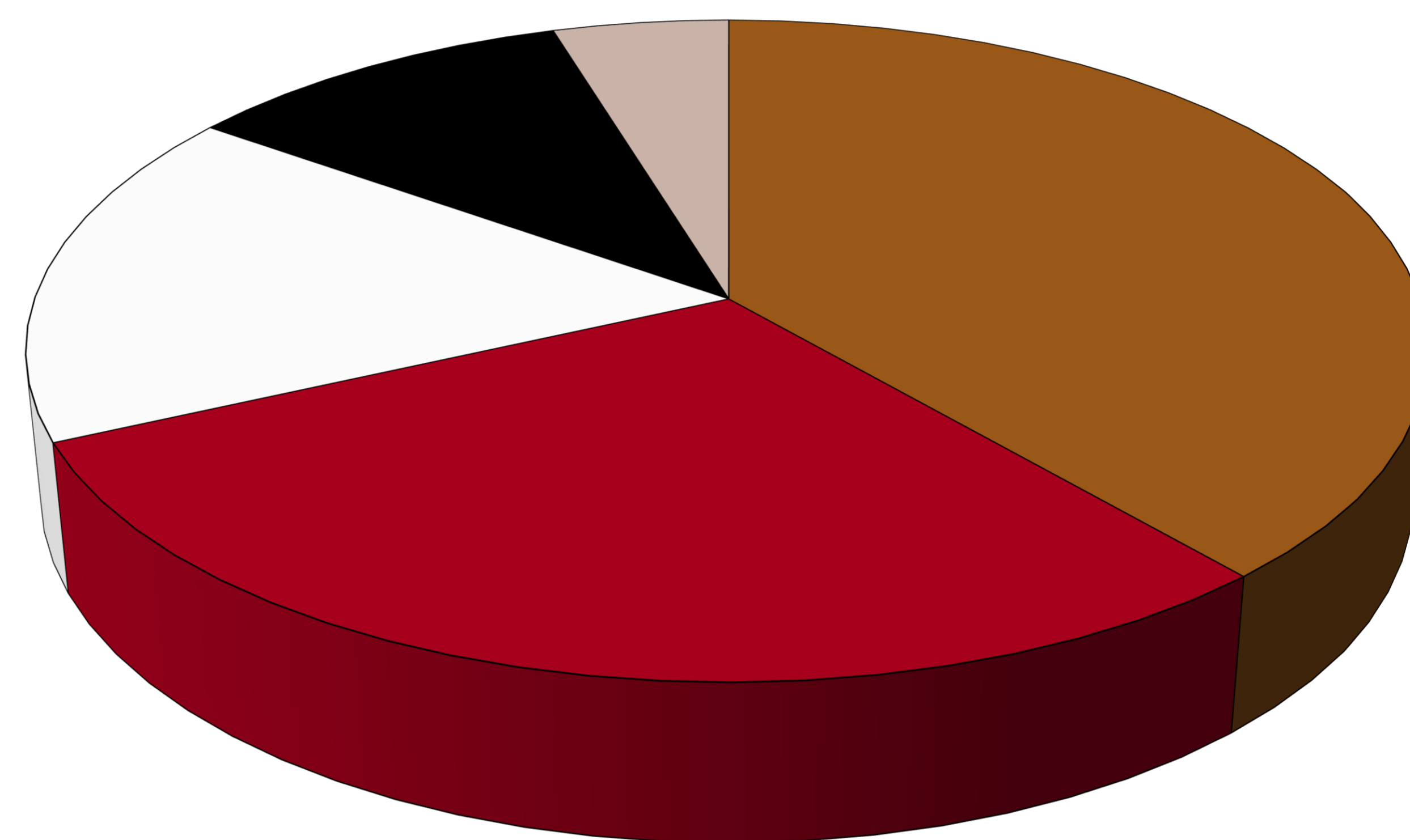
<b>Drug name</b>	Silodosin
<b>Description</b>	Patient medication list: Silodosin 8 mg 1-0-0
<b>Intervention</b>	Silodosin is not available in the clinic, aut simile substitution with Tamsulosin 0,4 mg 1-0-0
<b>Classification</b>	Drug substitution on admission considering local guidelines

#### Example 2: Double medication

<b>Drug name</b>	Amlodipin, Nifedipin
<b>Description</b>	Patient medication list contains Amlodipin and Nifedipin
<b>Intervention</b>	a) Consultation of the patient: he takes both, Amlodipin and Nifedipin b) Discussion of the problem with the pharmacist → physician stops Nifedipin, RR monitoring
<b>Classification</b>	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

Contact: ruth.borchers@ukdd.de