Philipps Universität Marburg

5PSQ-033

Klinikum Fulda

Positive Impact of an Implemented Ward Pharmacist in a Multiprofessional Cancer Care Team in Germany

S.Dierkes[1,2], A.Freidank[1], C.Culmsee[2], R.Radziwill[1]
[1]Klinikum Fulda gAG, Germany
[2]Philipps-Universität Marburg, Germany

Background and Importance

A high number of newly diagnosed cancer patients and the growing complexity of new chemotherapeutics results in an increasing demand for better management of these patients.[1] Pharmacists are able to ensure the patient's safety and quality of life.[2]

Aim and Objectives

The objective of this intervention study is to evaluate the benefit of a pharmacist embedded in a multiprofessional cancer care team on an oncology ward of a maximum care hospital with >1000 beds in Germany.

Methods

Study Design

- single centered & controlled
- retrospective & prospective phases
- intervention study

Study Phases

- P_0: control phase
- P_1 & P_2: ward pharmacist determined, documented, and solved medication errors (MEs) as part of the daily work
- P_2: more structured environment due to standards

Data Collection

- $P_{0,1,2}$: two clinical pharmacists independently identified all MEs which they detected retrospectively after the phases
- classification as clinically relevant ME in accordance with oncologist

Results

Patient Characterization

Tab. 1| Characterization of the study population. AM = arithmetic mean, SD = standard deviation

Patient characteristics	P_0 [n = 52]	P_1 [n = 46]	P_2 [n = 50]	p-value
Gender [% female]	51.9	54.3	50.0	0.913
Age ± SD	64.5 ± 11.5	64.6 ± 10.1	65.7 ± 14.3	0.704
Haematological tumor [%]	63.5	56.5	60.0	0.782
Solid tumor [%]	36.5	43.5	40.0	0.782
Number of Medication Lines [AM ± SD]	96.3 ± 82.9	89.6 ± 83.0	131.5 ± 98.8	0.158
Number of Drugs at Admission [AM ± SD]	5.7 ± 3.8	5.2 ± 4.2	5.7 ± 4.6	0.696
Number of Drugs at Discharge [AM ± SD]	7.2 ± 3.5	8.1 ± 4.9	8.7 ± 5.0	0.372
Duration of Stay [d ± SD]	9.4 ± 5.5	10 ± 6.2	10.5 ± 6.2	0.567

Medication Errors

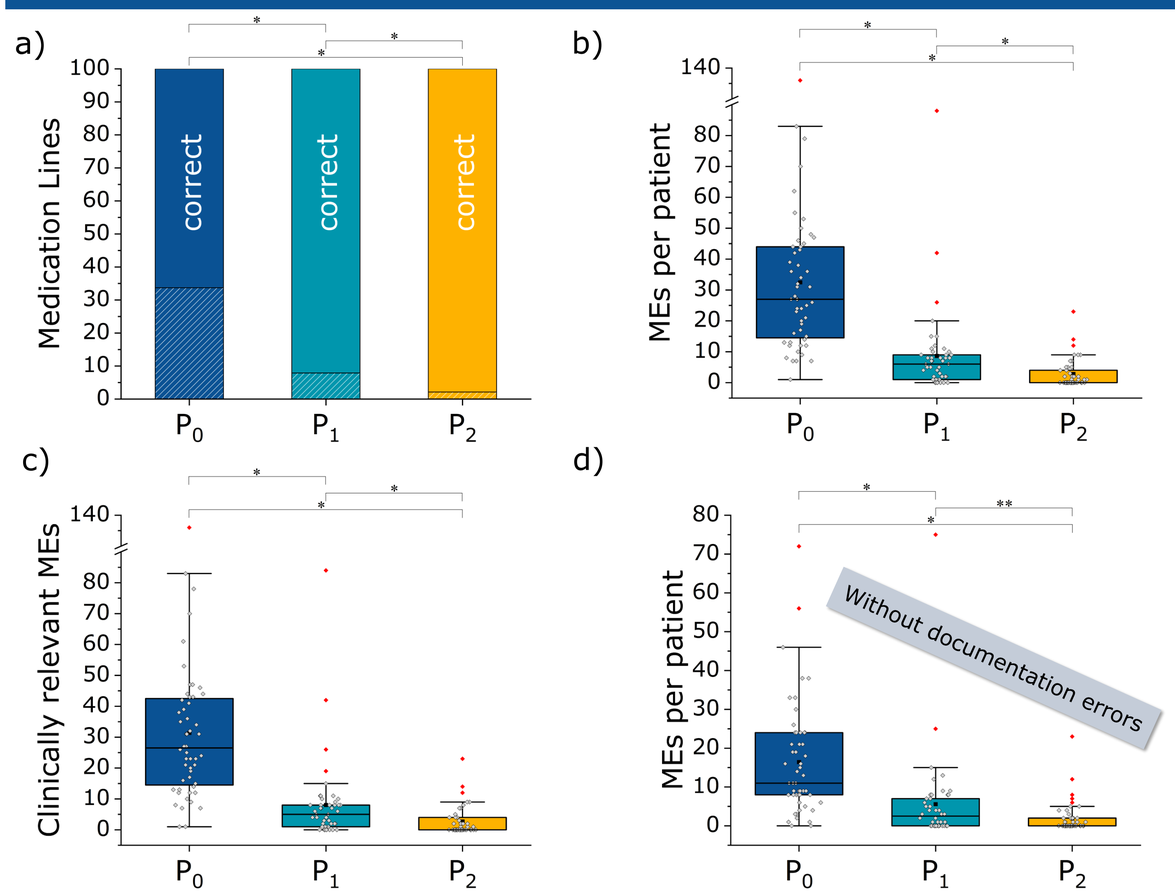

Fig. 1| a) Correct medication lines versus incorrect medication lines throughout all phases depicted as bar charts. P_0 (dark blue bar), P_1 (turquoise bar), P_2 (orange bar). One medication line corresponds to one drug per day. b) MEs per patient and phase depicted as boxplots. P_0 (dark blue box), P_1 (turquoise box), P_2 (orange box). c) Clinically relevant MEs per patient and phase depicted as boxplots. Color code as described in b). d) MEs without category "documenting errors" per patient and phase depicted as boxplots. Color code as described in b). * p-value = < 0.05. ** p-value = 0.05

Conclusion and Relevance

The implementation of a ward pharmacist had a significant impact on the reduction of MEs consequently increasing the patient's medication safety. Although these results cannot be easily transferred to other disciplines, the present study shows the benefit of a ward pharmacist in oncology together with oncology related services, e.g., preparation of cytostatics, offered by the hospital pharmacy.

References [1] A. Delpeuch, *et al*. Anticancer Res., 2015, 35, 457-460. [2] E. M Segal, *et al*. J. Oncol. Pharm. Pract., 2019, 1-23.

eahp european association of hospital pharmacists

Correspondence
Hospital Pharmacy, Klinikum Fulda
Pacelliallee 4, 36043 Fulda
Svenja Dierkes | svenja.dierkes@klinikum-fulda.de