

# Stationsapotheker:in NRW

## Clinical Pharmacist in North Rhine-Westphalia

Engaging clinical pharmacists as part of an interprofessional team to optimize medication therapy safety

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### Purpose:

This joint project, a collaborative initiative between the North Rhine-Westphalia Chambers of Pharmacists and Physicians, the North Rhine-Westphalia Hospital Association, and the ADKA North Rhine-Westphalia Regional Association, examines the implementation of clinical pharmacists in hospitals. The study focuses on the current supply of clinical pharmacists and interprofessional collaboration between clinical pharmacists and physicians in hospitals in North Rhine-Westphalia.

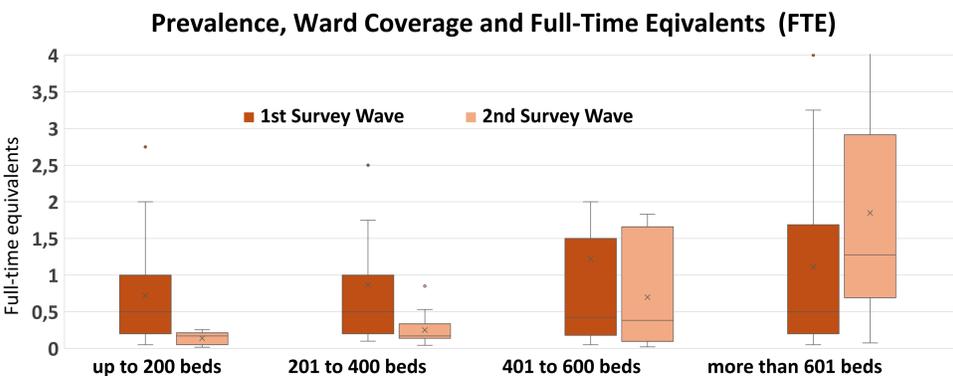
### What are clinical pharmacists?

Pharmacists on wards provide individual medication-related care to hospital patients and advise physicians and nursing staff on inpatient treatment [1].

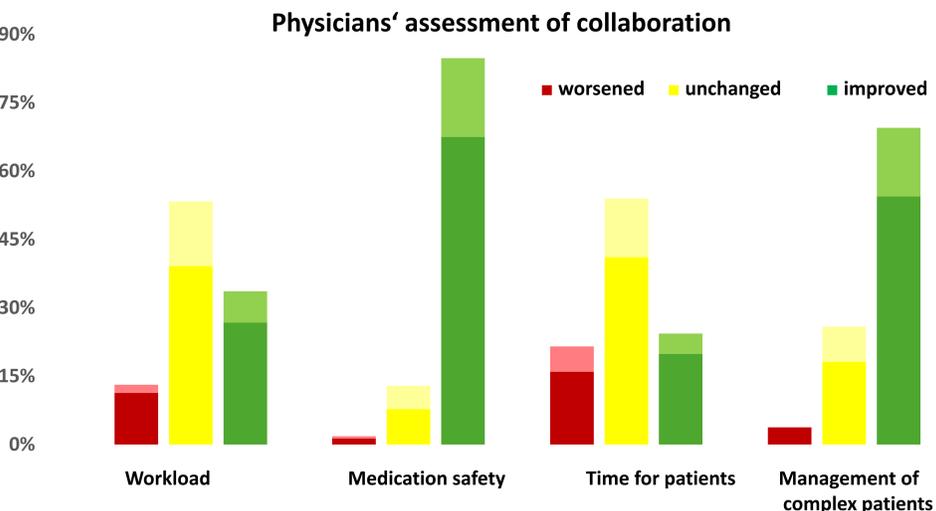
### Results:

**1st Survey Wave:** Data was collected from 203 hospital sites, involving 141 pharmacy directors, 228 clinical pharmacists, and 411 physicians.

**2nd Survey Wave:** Included 126 sites, with participation from 84 pharmacy directors, 129 clinical pharmacists, and 127 physicians.



**Figure 1:** On average, 55% of hospital sites had clinical pharmacists. Within these sites, approximately half of the wards were supported by them. The available full-time equivalents (FTEs) of clinical pharmacists varied by site size (measured by number of beds), with an overall mean of about 0.9 FTE per site.



**Figure 3:** Physicians' overall assessment of the impact of interprofessional collaboration with clinical pharmacists, presented as stacked bar charts for survey waves I and II. Wave II results are shown in transparent colors.

### Qualitative Interviews:

The results demonstrate that a shared commitment to patient safety is the primary driver of the interprofessional collaboration. The success of this interaction stems from the interplay of different professional perspectives, fostering an environment of mutual enrichment, significant added value for patient care, and a tangible reduction in workload for all involved. To illustrate the core themes, selected anchor examples are presented below. These quotes were chosen as they are particularly concise and representative of the experiences shared by many participants.



„Patient safety should always be at the center of our work. And the interaction between these two professional groups is, in my view, of immense importance because we mutually enrich each other.“ (Team 11, Physician)

„I think that the doctor, pharmacist, and nurse each have a different perspective on medication. And it's precisely this interplay, and perhaps also questioning processes from every angle. Where are the pitfalls?... I think that's what it's all about.“ (Team 4, Pharmacist)



„...I learn an incredible amount from our doctors, I must honestly say, and am also very grateful for it and in return, I also give a little something back from my side.“ (Team 1, Pharmacist)

„I am very grateful that we have a hospital pharmacy. (...) I believe that it provides significant added value for patient safety and patient care, as well as the reduction in our workload that results from it.“ (Team 9, Physician)



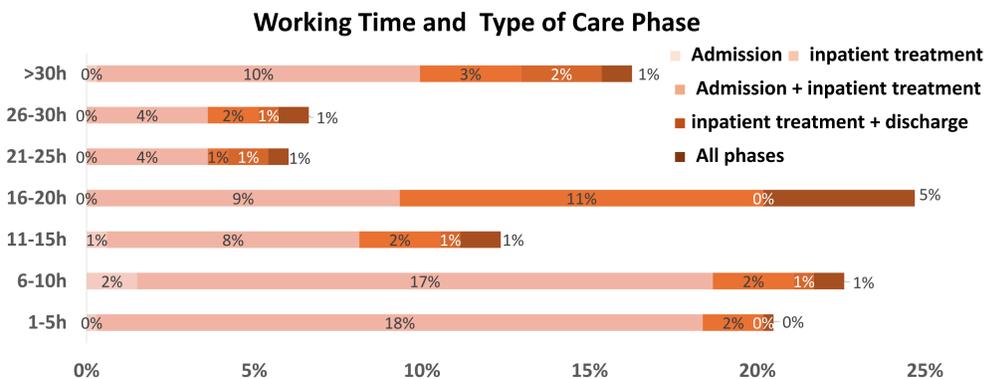
### Method:

**Design:** A sequential explanatory mixed-methods approach was chosen

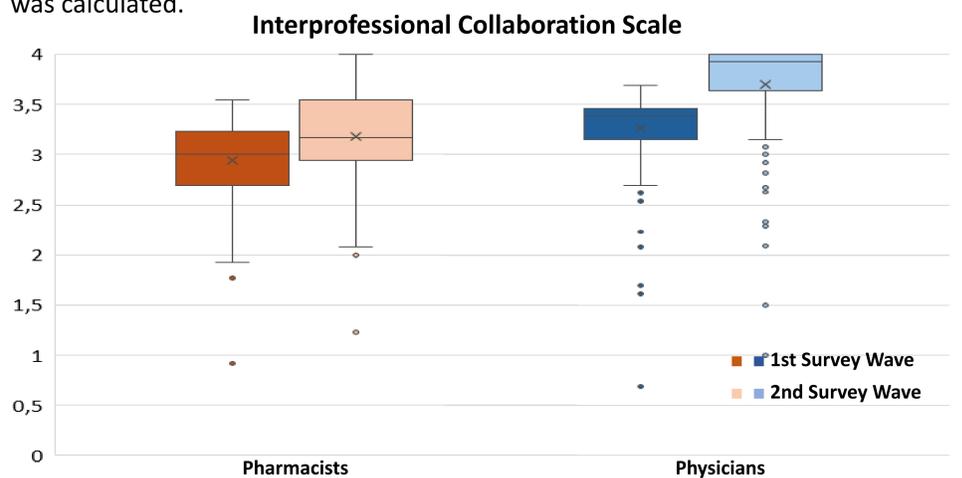
**Quantitative Phase:** Two online surveys were deployed 12 months apart (t0, t1). Participants included Managers of pharmacies supplying hospitals and hospital pharmacies, clinical pharmacists and physicians from hospitals in NRW. The surveys assessed the scope of clinical pharmacy activities, structural data, and the quality of interprofessional collaboration (IPC Scale [2]).

**Qualitative Phase:** To elaborate on survey findings, 13 pharmacist-physician teams were recruited for semi-structured interviews (~60 min).

**Data Analysis:** Quantitative data were analyzed descriptively using SPSS, while qualitative data underwent a focused content analysis according to Kuckartz [3] with MAXQDA



**Figure 2:** Distribution of pharmacists' clinical working time by number and type of care phases provided, representing the combined percentage distribution of all participants from both survey waves. Based on pharmacists' reports of the number of wards they covered and their clinical working time, an average coverage of 0.09 FTE per ward was calculated.



**Figure 4:** Scores on the Interprofessional Collaboration Scale [2] were very high for both professional groups at both survey waves. Assessment of collaboration improved for both professions in wave 2. Physicians consistently provided higher ratings (M = 3.26 Wave 1, M = 3.69 Wave 2) than pharmacists (M = 2.94 Wave 1, M = 3.18 Wave 2).

### Conclusion:

Clinical pharmacists have arrived in hospitals in North Rhine-Westphalia. They work in various departments, at all sizes of hospitals, and have a wide range of tasks, highly heterogeneous working hours, and number of wards to look after. A central and consistent finding from the interviews is the pronounced appreciation and recognition of professional expertise between the groups.



Kontakt WIVA

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[1] Bundesapothekerkammer. Unterlagen zur Weiterbildung im Bereich „Medikationsmanagement im Krankenhaus“. Accessed Oct 23 2024). [2] Kenaszchuk C, Reeves S, Nicholas D, Zwarenstein M. Validity and reliability of a multiple-group measurement scale for interprofessional collaboration. BMC Health Serv Res. 2010 Mar 30;10:83. [3] Kuckartz U, Rädiker S(2024). Fokussierte Interviewanalyse mit MAXQDA. Schritt für Schritt 2. Auflage – Springer VS ISBN 978-3-658-40211-2