

# Clinical Pharmacy Practice in Swiss Hospitals 2013

Messerli Markus<sup>1,2</sup>, Maes Karen<sup>1,2</sup>, Hersberger Kurt E.<sup>1</sup>, Lampert Markus L.<sup>1,2</sup>

<sup>1</sup> Pharmaceutical Care Research Group, University of Basel, Switzerland

<sup>2</sup> Clinical Pharmacy, Kantonsspital Baselland, Bruderholz, Switzerland

## Introduction

In 2011, the Swiss Society of Public Health Administration and Hospital pharmacists (GSASA) approved a national definition for clinical pharmacy. A structured postgraduate education program was approved by the Swiss Pharmacy Federation in 2008.

Our objectives were to map the Clinical Pharmacy Services (CPS) provided in Swiss hospitals and to discuss the development focusing on different culture areas and various healthcare systems.

## Methods

In a cross-sectional study, we enrolled all GSASA affiliated chief hospital pharmacists (n=47) for a 58-item online survey using FlexiForm 2.6.9.

The GSASA definition of clinical pharmacy formed the basis for this approach:

*„Clinical pharmacy is an area of pharmacy aimed at developing and promoting an appropriate, safe and cost-effective use of therapeutic products. In the hospital setting, clinical pharmacy includes direct patient oriented pharmaceutical activities, implemented on patient care wards in collaboration with other health care professionals.“ [1]*

We asked the pharmacists to describe in a structured way the nature and extent of CPS (patient-, therapy-, or process-oriented perspectives), structural organisation (extent of ward contact), and available human resources (Full Time Equivalent (FTE)).

We used Microsoft Excel 2013® and the add-in GeoFlow® to visualize our results from a three dimensional perspective.

## Results

The survey took place from 21st March to 25th April 2013 and the index day was set on 1st January 2013. The survey was completed by 44 chief hospital pharmacists (94%) from 6 institutions affiliated to a university, 21 general hospitals, 7 specialised hospitals and 10 hospital networks. Number of beds varied from <200 to 2000+.

### Structural organisation of ward contact

Thirty-three hospitals offer regular CPS (75%) and 7 planned to do so (16%). In 4 institutions (12%), pharmacists worked >50% of their time on the ward. Twenty-six hospitals mentioned part time activities in contact with the patient, while 3 institutions declined presence on the wards.

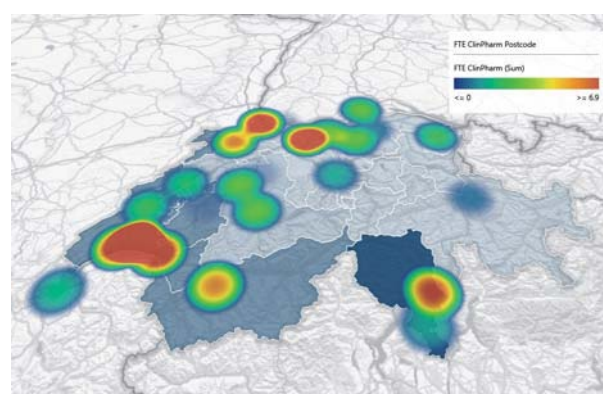


Figure 1: Extend of CPS in the various language areas (french, german, italian).

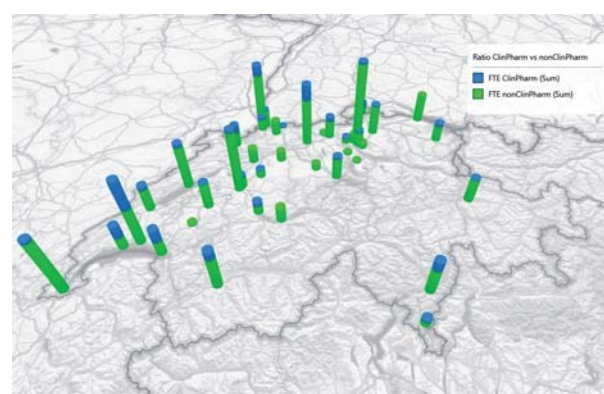


Figure 2: Ratio of clinical pharmacy practice vs other pharmaceutical activities (hospital networks were mapped as one institution).

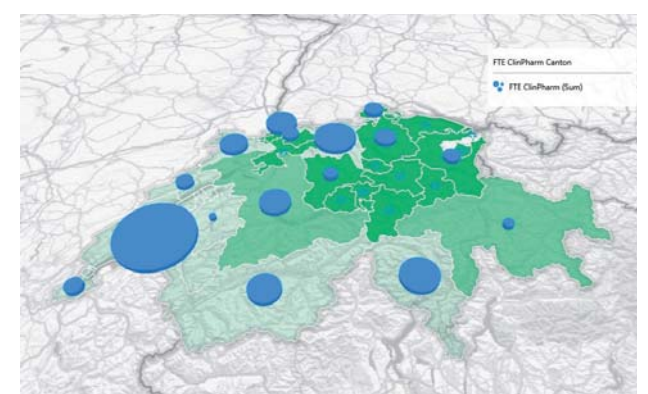


Figure 3: Extend of CPS in parts without (light green), partial (green) and unrestricted drug dispensing by physicians (dark green).

### Human resources to provide clinical pharmacy services

In the French part of Switzerland (11 hospitals) 23.2% of the of the pharmacist's activities were clinical services (19.10 of 82.40 FTE), in the German part (31 hospitals) 9.9% (14.50 of 146.15 FTE) and in the Italian part (2 hospitals) 27.4% (2.90 of 10.60 FTE) (Figures 1 and 2).

Institutions in regions with no drug dispensing by physicians (n=20) rather employed pharmacists assigned with clinical activities (22.0% of 135.25 FTE) than in regions with partial (n=8, 6.7% of 35.8 FTE) or unrestricted drug dispensing by physicians (n=16, 6.3% of 68.1 FTE) (Figure 3).

### Nature and extend of implemented CPS

In 73% of all hospitals with implemented CPS, interdisciplinary ward rounds with pharmacists, nurses and physicians take place weekly, whereas in 18.2% pharmacists assess medication histories at admission at least weekly and in 9.1% medicines are reconciled at discharge daily (Diagramm 1-3).

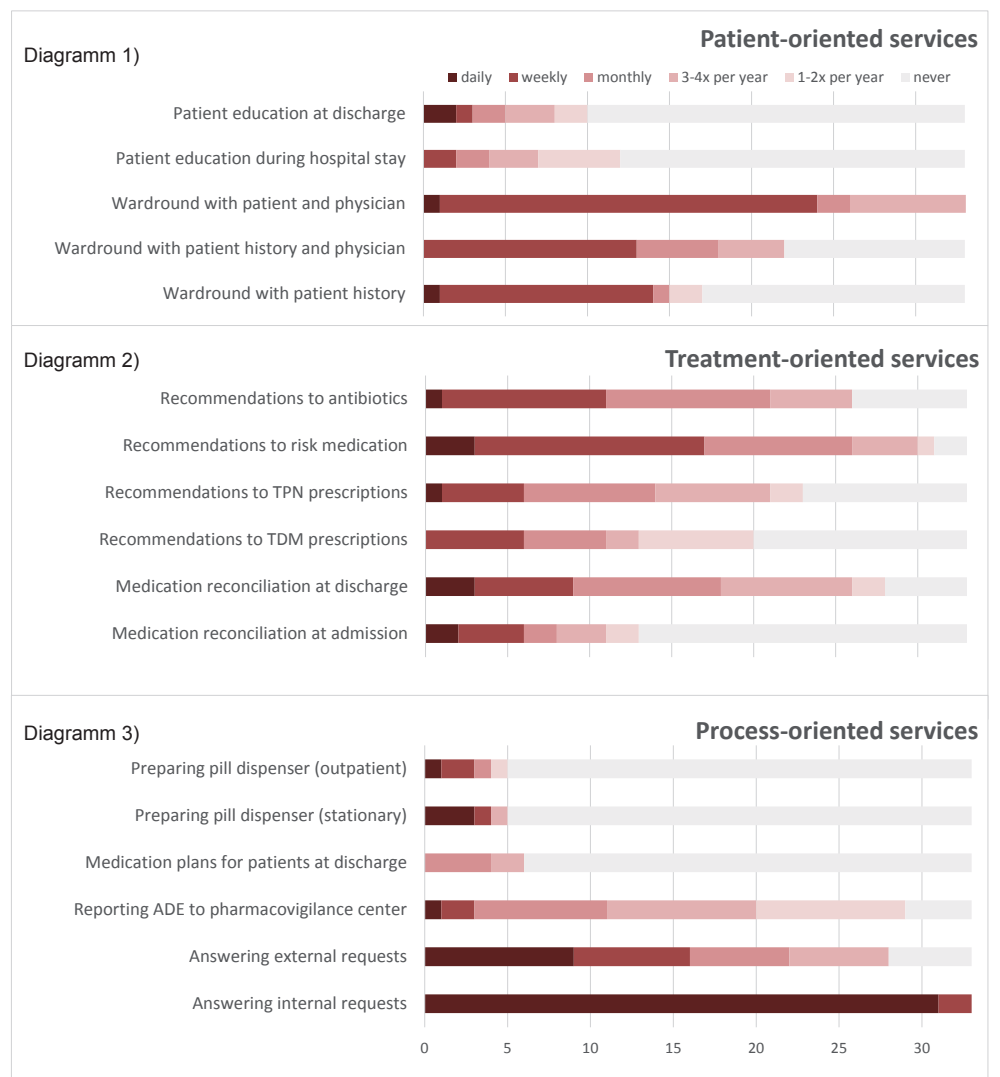


Diagramm 1-3: Clinical pharmacy services were structured into patient-oriented (1), treatment-oriented (2) and process-oriented activities (3). Only responses from the institutions that provide clinical pharmacy activities were taken into account (n=33).

## Discussion / Conclusion

To our knowledge, this is the first comprehensive national survey of clinical pharmacy practice in Switzerland. Our data show important regional differences in the implementation and pattern of CPS and striking correlation to drug dispensing by physicians and other cultural differences. While interdisciplinary ward rounds are performed at least periodically, seamless care activities by clinical pharmacists remain insufficiently established.

Compared to Europe, Switzerland offers a similar spread of implemented CPS and corresponding gaps in patient-centered care. [2]

## References

- [1] Definition of Clinical Pharmacy, V.1 11/2011, GSASA, www.gsasa.ch (last accessed: 26.11.2013)
- [2] Frontini R., EAHF survey 2010 on hospital pharmacy in Europe, Eur J Hosp Pharm 2013;20:69-73

### Corresponding author:



markus.messerli@unibas.ch  
Pharmaceutical Care Research Group, University of Basel  
Klingelbergstrasse 50, CH-4056 Basel, Switzerland  
www.pharmacare.unibas.ch



Swiss Association of Public Health Administration  
and Hospital Pharmacists, GSASA  
Journées Franco-Suissees de Pharmacie Hospitalière  
28<sup>th</sup> to 29<sup>th</sup> November 2013, Montreux, Switzerland

