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in close collaboration with the GSASA PSM Working Group  
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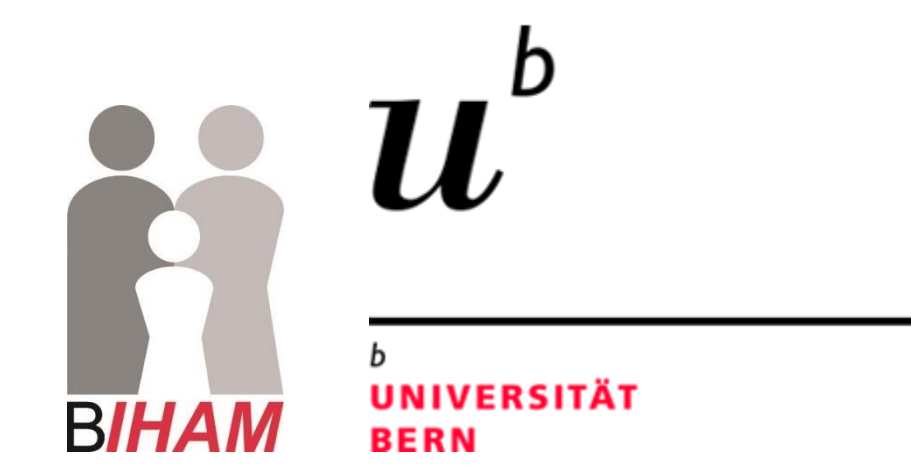
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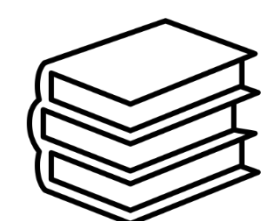
## BACKGROUND

Hospital pharmacy is increasingly taking on tasks on hospital wards, called “pharmaceutical ward management” (PSM), thereby supporting drug supply and improving medication safety. The PSM Working Group of the Swiss Association of Public Health Administration and Hospital Pharmacists GSASA serves as an exchange platform to coordinate and support various activities in order to promote PSM.

## OBJECTIVES

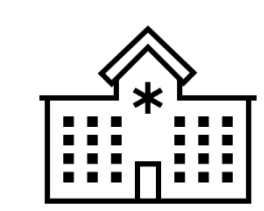
The aim of this master’s thesis was to record the development of PSM since 2017, its current status and development potential in Switzerland through a structured online survey, to collect and analyze the activities of different hospitals.

## METHODS



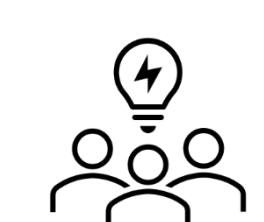
### 1. Scoping review

in PubMed and Embase databases, searching for articles addressing the activities of pharmacy staff on the wards.



### 2. Practical experiences

through five hospital visits in Switzerland.

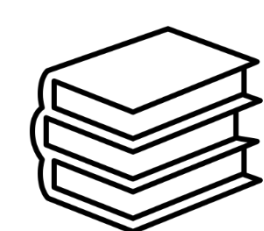


**3. Online survey** (using Findmind®) compiled based on a comparable survey from 2017, extended and optimized with the expertise and experience of the members of the Swiss Society of Health System and Hospital Pharmacists (GSASA) PSM Working Group and addressed to all 68 hospital pharmacies in Switzerland.

## Acknowledgments

We would like to thank our GSASA colleagues for generously offering insight and sharing their expertise!

## Results

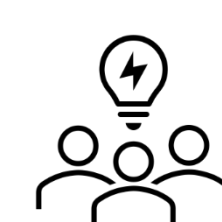


### Scoping literature review

- Articles for screening: title 1714 – abstract 316 – fulltext 60
- Articles included: 16 publications
- Origin: 8 countries  
United Kingdom (6 articles), United States (3), Australia (2), Canada, Denmark, France, Netherlands, New Zealand (1)
- Types of publication: 6 (author-reported)  
observational study (4), survey (3), quantitative study (2), interventional study (2), mixed methods study (2), report (2), qualitative study (1)
- 7 articles published during the last three years

Services on the wards	Number of publications
Medication Reconciliation	2
Best possible medication history	2
<b>Prescription double-check</b>	<b>4</b>
Supporting pharmacists	3
<b>Logistical ward management</b>	<b>6</b>
Delivery preparation	2
<b>Tech-check-tech</b>	<b>6</b>
Delivery	2
<b>Medication administration</b>	<b>4</b>

Table 1: Most common ward-based services by technicians



### Online survey

Response rate: 40/68 institutions (58%)

Demographics: 58% regional & cantonal hospitals

Ø internal beds: 424 (n=39 hospitals)

Median 258, 19 hospitals <250 beds

Ø external beds: 425 (n=9 hospitals)

Median 185, 6 hospitals <500 beds

Figure 1: Demographic information of participants

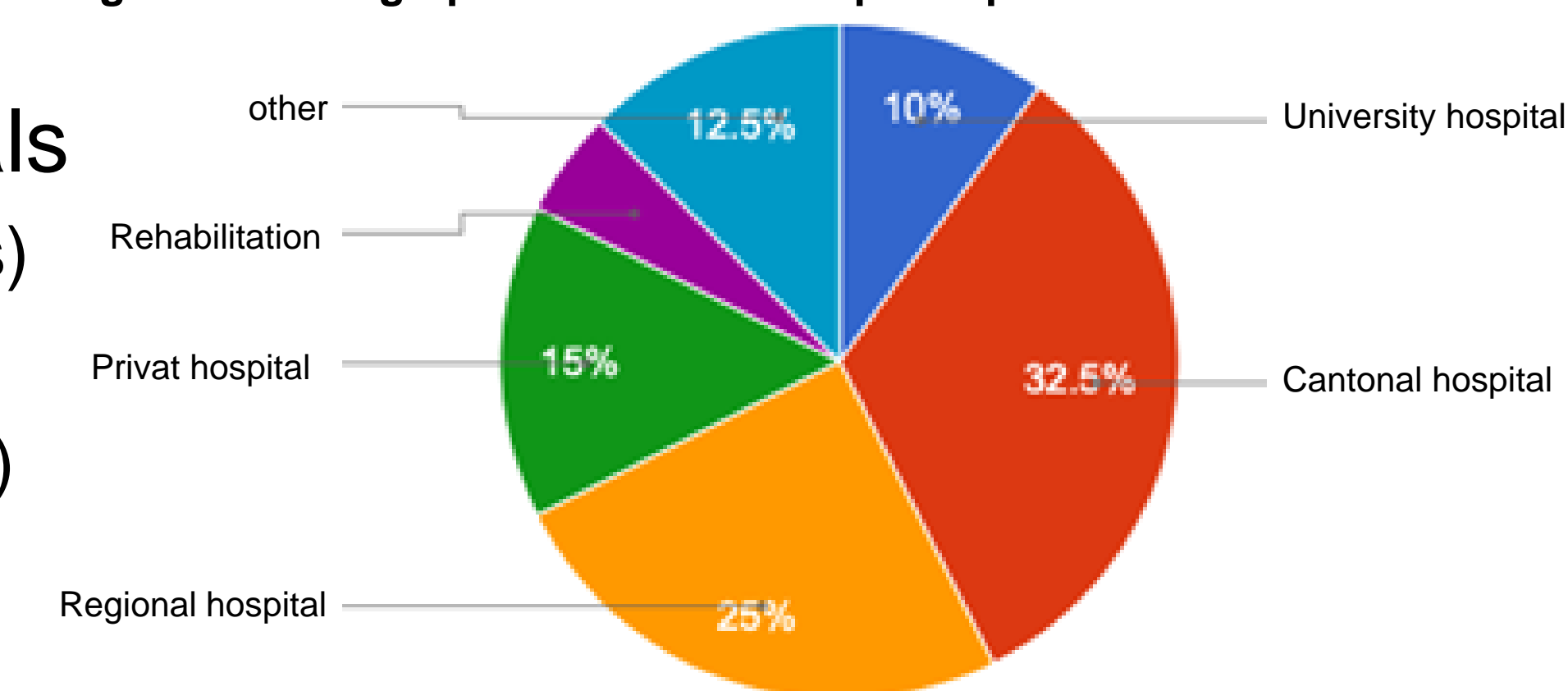


Table 1: Development of ward-based services 2017 - 2022

	Pharmacists	Pharmacy technicians	Logisticians <sup>1</sup>	Other pharmacy personnel
<b>Job percentages per hospital pharmacy [%]</b>	Ø 2017: 260 Ø 2022: <b>598</b> Median 2022: 440	Ø 2017: 330 Ø 2022: <b>835</b> Median 2022: 770	Ø 2017: - Ø 2022: <b>286</b> Median 2022: 200	Ø 2017: 210 Ø 2022: <b>245</b> Median 2022: 280
<b>Job percentages per 100 beds in the hospital network [%]</b>	Ø 2017: 114 Ø 2022: <b>112</b>	Ø 2017: 140 Ø 2022: <b>157</b>	Ø 2017: - Ø 2022: <b>54</b>	Ø 2017: 90 Ø 2022: <b>46</b>

<sup>1</sup> In the 2017 survey, logisticians were counted as “other pharmacy personnel”.

- 73% of the participating hospital pharmacies are active on the wards (2017: 61%).
- In particular, hospital pharmacy is increasingly involved in **taking medication orders, putting away drug deliveries and checking expiry dates** on the ward (plus 20-25% since 2017).
- This has been achieved due to **new buildings** and renovations, digitalization and technical advances, and **improved interprofessional collaboration**.
- Increasing involvement in **medication preparation** by pharmacy technicians. In 10/37 institutions (27%), pharmacy technicians perform patient-specific medication-preparation.
- Double check** of medication prepared by pharmacy technicians is still done **by nurses exclusively**.
- In 86.2% of the institutions, a (partially) **improved integration of the hospital pharmacy into the ward team** was observed due to the expansion of the PSM.
- Most important facilitating factors: **communication**, technology, trust, nursing shortage.
- Stumbling blocks: lack of financial resources, shortage of hospital pharmacy personnel.

## DISCUSSION & CONCLUSIONS

The future of PSM will continue to evolve and change. To be successful, a good interplay of various facilitating factors is central. For support, the PSM working group of the GSASA has developed various tools: a guide for the introduction and expansion of PSM, and a network matrix with experienced contact persons for cross-institutional exchange, accessible to members on [www.gsasa.ch](http://www.gsasa.ch).