Drug Shortage Management on Swiss Hospital Wards – Current Practices and Optimization Strategies

R-LOG-2

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BACKGROUND

Drug shortages present a significant challenge for hospitals and require extensive management to preserve the continuity of care. This process is complex, prone to errors and varies across institutions.

While **strategies for effective drug shortage management** have been discussed in the literature, there is currently a lack of systematic research on this topic within acute care settings.

Further, **research so far** has largely focused on processes confined to the hospital pharmacy, and little is known about how ward practice has been affected and consequently adapted due to drug shortages.

OBJECTIVES

Record and evaluate practices currently in place in Swiss hospital institutions related to the management of drug shortages on wards by means of an online survey and use the collected data to identify issues and areas for improvement.

METHODS

Literature Review

Drug shortage management strategies within the inpatient setting were identified and summarized through a scoping review in PubMed and EMBASE (2019 – 2024).

Practical Insights

Tours of five health care institutions across Switzerland offered specialized knowledge in the management of drug shortages within the hospital sector, with a focus on pharmaceutical ward management (PWM).

Online Survey

An online survey using Findmind® was developed in collaboration with the GSASA PWM working party and distributed to 63 chief hospital pharmacists in Switzerland. The data was collected between 18 April and 7 May 2024. The survey contained 59 questions related to PWM and other ward related activities impacted by drug shortages, with focus on General Internal Medicine- or Geriatrics wards.

RESULTS

Demographics

A total of **33 institutions (55%)** completed the survey, with Regional Hospitals comprising the majority of respondents.
The size of the institutions ranged predominantly between 0 and 499 beds (n=19|67.8%) **(Fig. 1)**.

Communication of Drug Shortages

The two most utilized channels for the communication of drug shortage information to physicians and nursing staff were **e-mail and intranet- and/or homepage**.

Institutions predominantly used **info-sheets and/or tables** to display information.

The electronic prescription system served primarily as a passive communication tool, being reprogrammed to guide physicians in the prescribing process. This included introducing **visual aids or pop-up warnings** to medication affected by a shortage **(Fig. 2).**

Management of Returned Medication

Criteria for the acceptance of medication returns (solid form in blister packs) to the pharmacy remained unchanged in the majority of institutions.
Only 26% (8/31) relaxed certain criteria, with "expiration date" being the popular choice **(Fig. 3)**.

Ward Management

The majority stored substitute products in the same place on the wards as the medication they replaced.
They were not made visually recognizable from the rest of the stock **(Fig. 4).**

Medication on the wards was predominantly ordered via an electronic path (e.g., with a pharmacy barcode scanner or through a web-shop). In response to how this process was adapted to facilitate the ordering of substitutes in place of the missing standard product, the majority opted for reprogramming the system **(Fig.5).**

Issues and Suggestions for Improvement

Biggest challenges:
- communication,
- knowledge of current ward supply and
- maintaining an overview of all drug shortages.

Improvement options:
- better electronic support to enable "right place, right time, right information" communication,
- summary tables for a better overview of all drug shortages and substitutes **(Fig. 6)**.

Fig. 1: Demographic Data

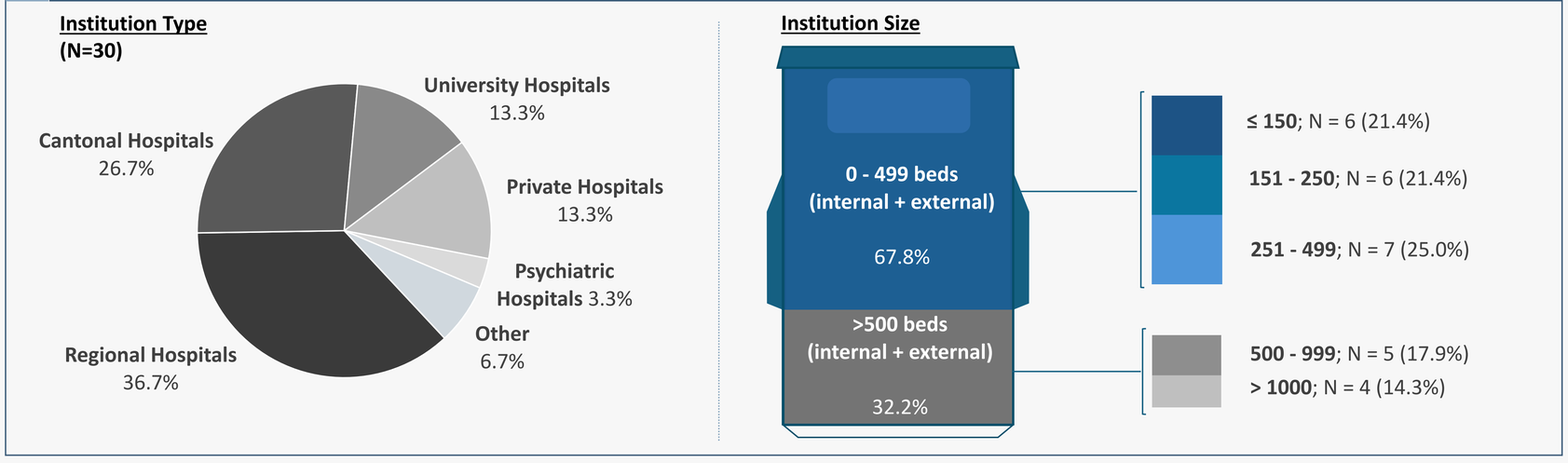


Fig. 2: Means of Communicating Drug Shortage Information

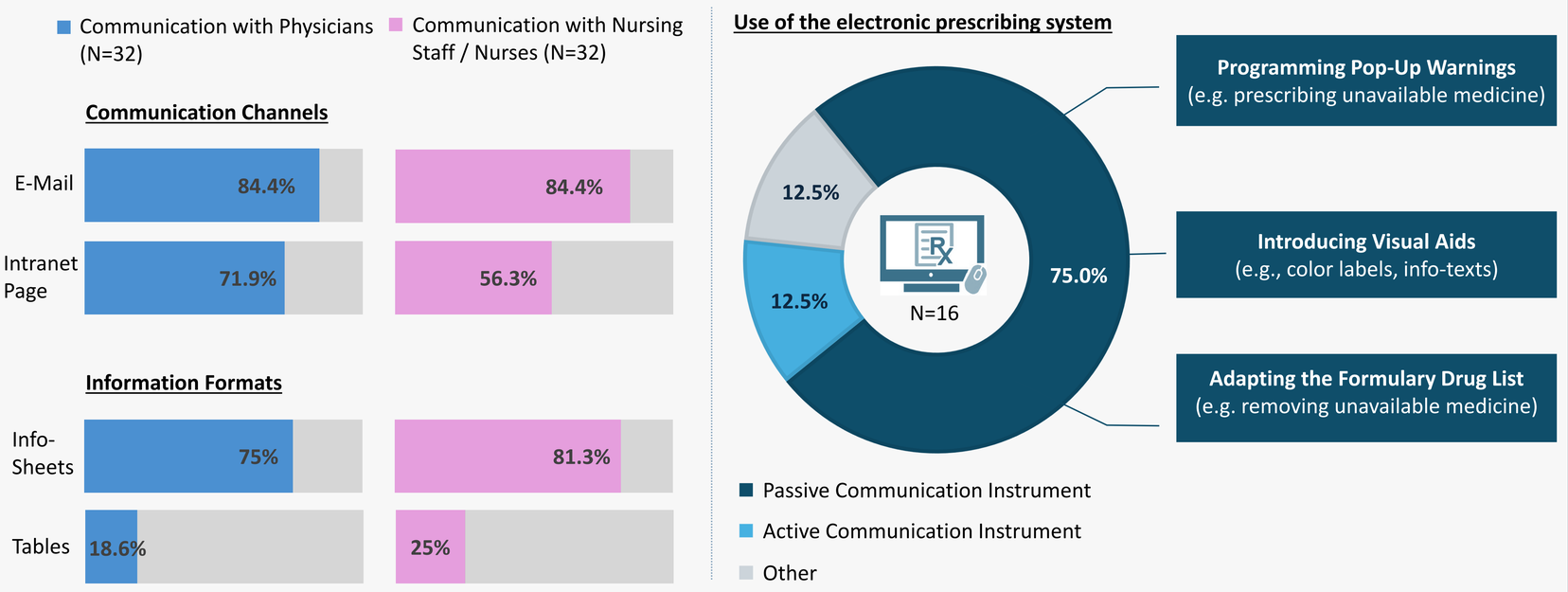


Fig. 3: Management of Returned Medication

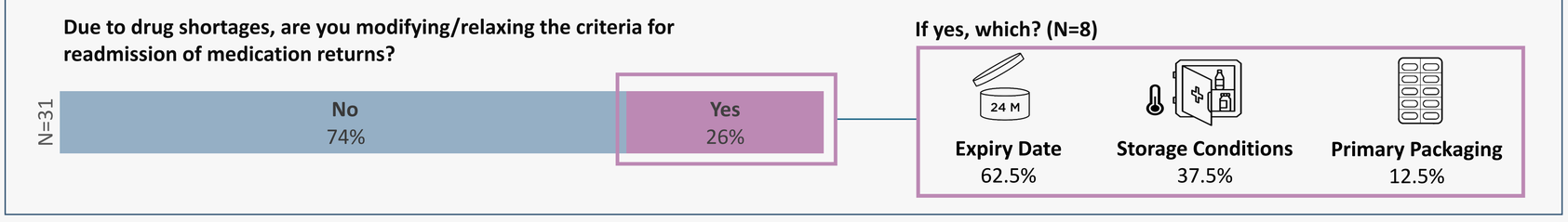


Fig. 4: Storage of Ward Medication

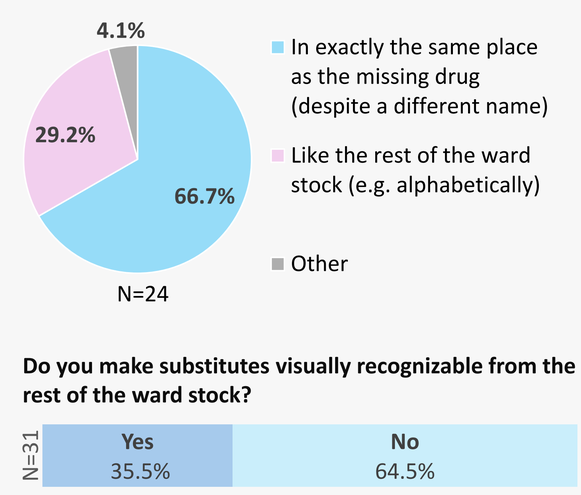


Fig. 5: Management of Medication Orders on the Wards

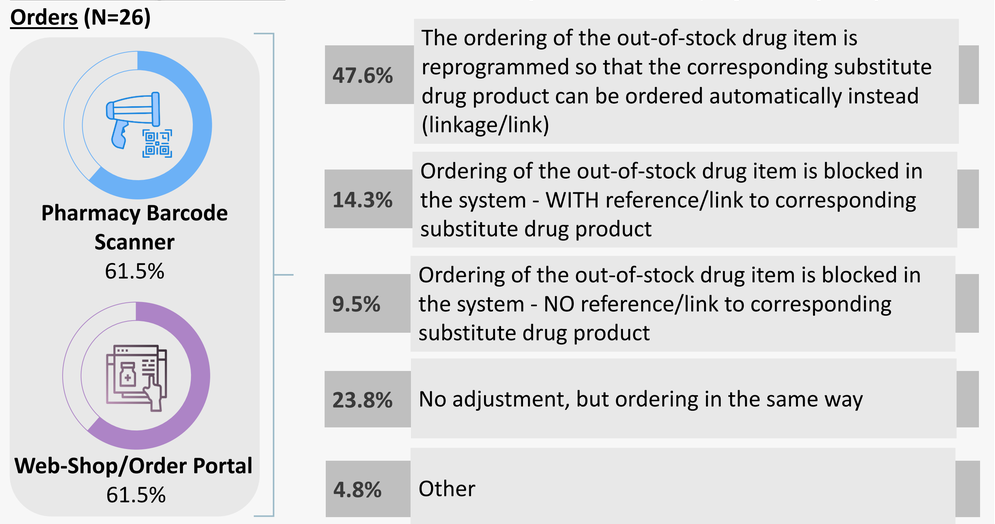
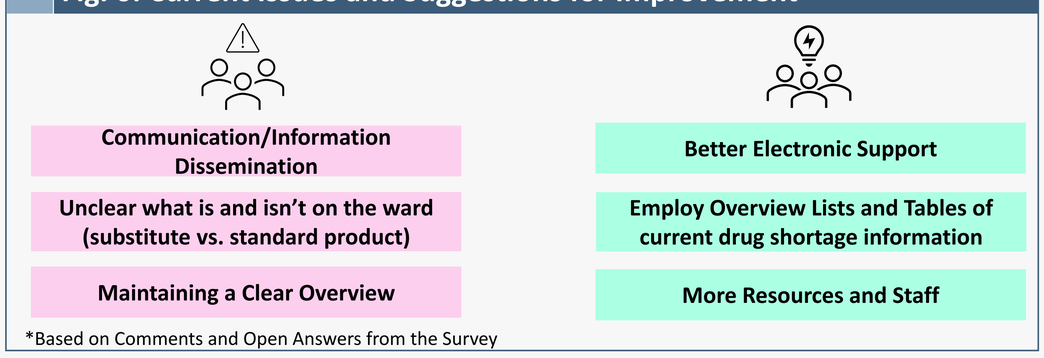


Fig. 6: Current Issues and Suggestions for Improvement*



*Based on Comments and Open Answers from the Survey

CONCLUSION

- The strategies implemented showed a notable consistency, for example within the communication practices and medication return management. However, there were no clear indications for best practice approaches. We suggest the collection of additional data from the perspective of ward personnel to determine the efficacy of the practices currently in place.
- Communication was considered vital in the management of drug shortages. Hospital pharmacists utilize a combination of broad and targeted communication strategies to efficiently disseminate information about drug shortages to ward personnel. Nevertheless, effective drug shortage communication remains a significant challenge for all institutions, requiring a shift in approach.

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