



Investigation to define a minimum standard on alcohol-based handrub dispensers

The study investigated the number and location of alcohol-based handrub dispensers (ABHR-dispensers) in hospitals in Switzerland, participating in the Swissnoso National Surveillance Network. Data were compared with handrub-consumption and hand hygiene compliance (HHC).

Survey study in Swiss hospitals

STUDY RESULTS

Number of dispensers per bed

The documented mean number of ABHR-Ds was 2.4 per patient bed in large acute care hospitals

2.38

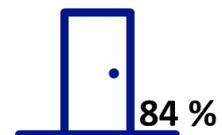
dispensers per bed

2-4x

higher compared to current recommendations

Location of ABHR-dispensers

ABHR-dispensers in most hospitals are placed at the entrance of the room (84 %), followed by near the sink (74 %) and near or at the bed (47 %).



STUDY DESIGN

Anonymous, standardized questionnaire survey among acute care hospitals in Switzerland



178 hospitals were surveyed
110 hospitals provided data

STUDY PERIOD



July – September 2019

MEASUREMENTS

Outcome parameter



Number of ABHR dispensers and pocket bottles per bed and room



Location of ABHR dispenser



Correlation between number of dispenser and ABHR consumption



BACKGROUND

It is well known that hand hygiene using alcohol-based handrub is the most effective measure in the prevention of HAIs (Healthcare-Associated Infections). So far, only the German Robert Koch Institute (RKI) has issued recommendations on the number of alcohol-based handrub dispensers (ABHR-dispensers): 1 dispenser per bed in intensive care units, 0.5 dispensers per bed in general wards. Neither WHO* nor CDC** or ECDC*** have made such recommendations in the respective guidelines.

GOAL

The aim of the study was to evaluate the number and location of ABHR-dispensers in hospitals in Switzerland.

DESIGN AND METHODS

Anonymized and standardized questionnaires were sent to all 178 hospitals belonging to the Swissnos National Surveillance Network between July and September 2019. The questionnaire was adapted to the one used in the PROHIBIT study (Prevention of Hospital Infections by Intervention and Training). The following items were asked:

- number of dispensers per bed
- location of the dispensers
- ABHR consumption

The questionnaire was addressed to board-certified infection control practitioners and hospital epidemiologists. An electronic as well as paper-based tool was used for the survey (TeleForm, Electric Paper (Schweiz) GmbH, Lachen, Switzerland).

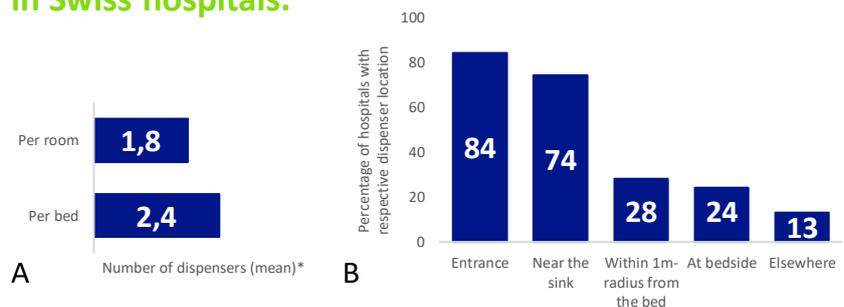
110 of 178 (62%) participating hospitals provided data of about 20,000 acute care hospital beds in Switzerland.

* WHO = World Health Organization
 ** CDC = Centres for Disease Control and Prevention
 *** ECDC = European Centre for Disease Prevention and Control

RESULTS

The mean number of ABHR-dispensers offered per patient bed is 2.4 (figure 1A), which is 2–4 times higher than the number recommended by the RKI. Most hospitals (n = 92, 84 %) have ABHR-dispensers located at the entrance of the room, followed by dispensers near the sink (n = 81, 74 %) (figure 1B). Taken together, 47 % of hospitals had dispensers located near or at the bed (n = 52). In 75 % of the participating hospitals, wall-mounted dispensers were the dominant type. Only 25 % of hospitals mainly offered pocket bottles. Still, in 97 % of hospitals pocket bottles (100 mL) were available. In general, the number of ABHR-dispensers did not correlate with handrub consumption. Only in large hospitals with > 500 beds, a significant correlation between handrub consumption and number of dispensers per patient bed was observed.

Figure 1: Number (A) and location (B) of dispensers in Swiss hospitals.



*In contrast to the number of dispensers per room, the mean number of dispensers per bed refers to the overall number of beds and dispensers within the hospitals, not just in patient rooms.

CONCLUSION

The average 2.4 ABHR-dispensers in Swiss acute care hospitals are much more than the number recommended by the RKI. In large hospitals with more than 500 beds, there was a correlation between the number of ABHR-dispensers and the use of ABHRs, suggesting improved HH compliance with the number of dispensers available. These data can provide a guidance for developing a minimal standard for ABHR-dispensers per patient beds.