



# Insights from electronic hand hygiene monitoring

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## Introduction

Hand hygiene is considered the single most important intervention in the prevention of healthcare-associated infections. However, despite decades of effort, hand hygiene compliance, i.e. performing hand disinfection correctly and at the right moment, is still a global problem. Electronic monitoring tools could provide new insights into healthcare worker behaviour by allowing every hand disinfection to be recorded 24 hours a day, 7 days a week, without an omnipresent observer to influence behaviour.

Together with GWA Hygiene GmbH, the HARTMANN SCIENCE CENTER analysed a large number of disinfections recorded with the NosoEx<sup>®</sup> monitoring system to determine how often hands are disinfected, how much disinfectant is used and where dispensers are used.

## Methods

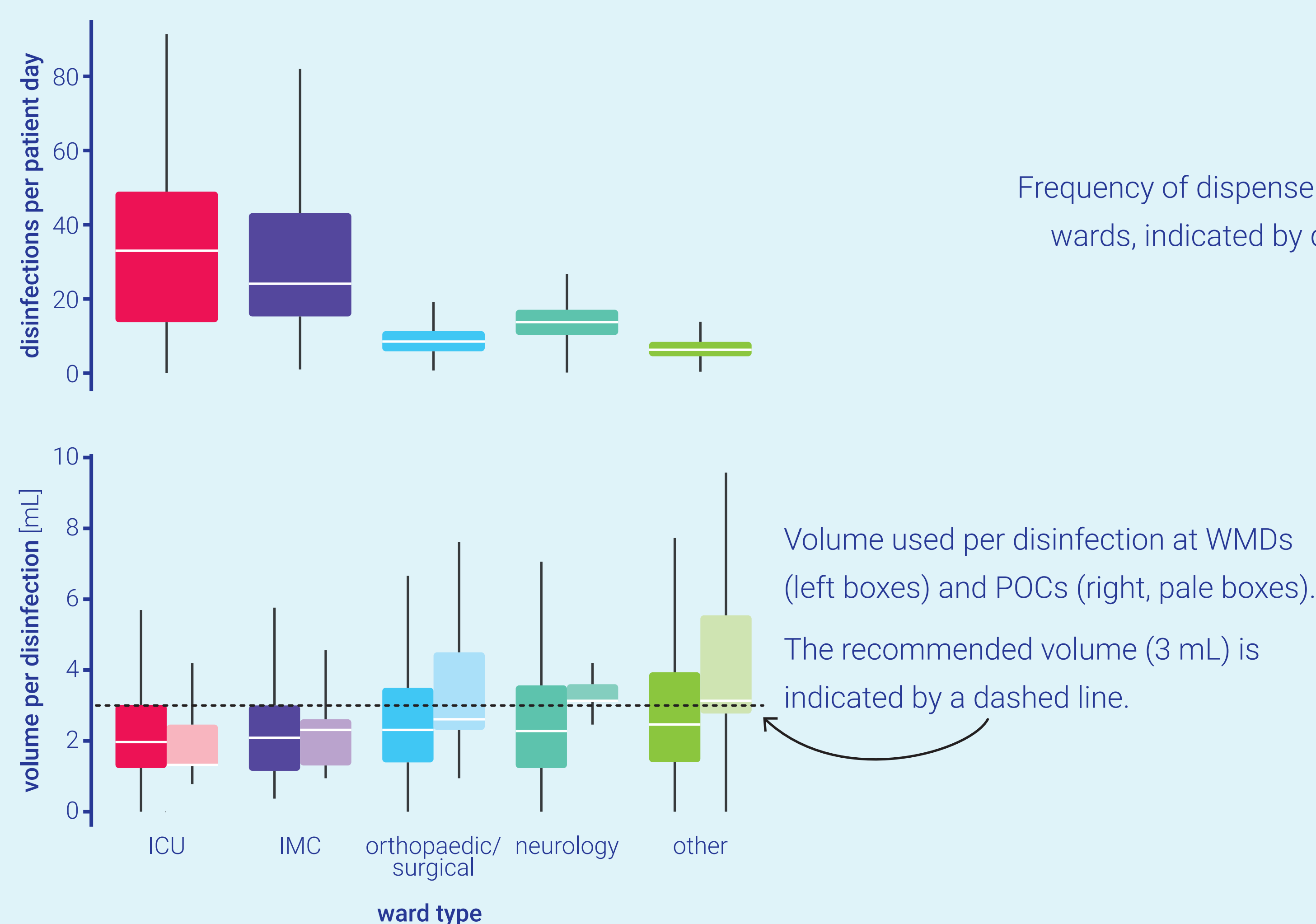
In this retrospective study, hand disinfections on wall-mounted dispensers (WMDs) and point-of-care dispensers (POCs) were recorded with NosoEx<sup>®</sup>.

- 211 days
- 9 German hospitals
- 17 wards
  - 6 intensive care units (ICU)
  - 3 intermediate care units (IMC)
  - 3 orthopaedic and general surgery
  - 2 neurology
  - 3 'other'
- 931,446 disinfections

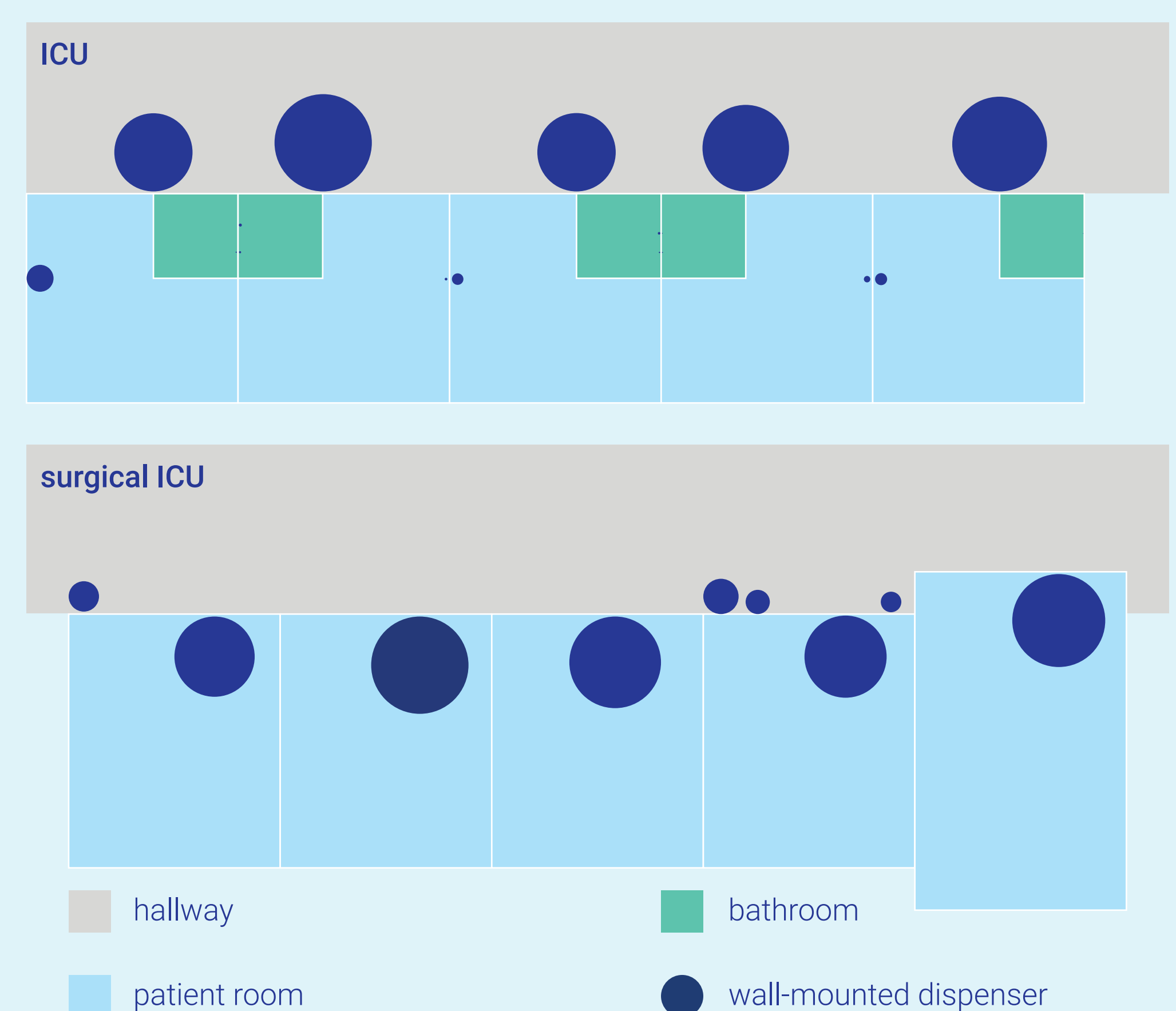


## Results

While the highest numbers of disinfections per patient day were observed on ICU and IMC wards, these wards also used the lowest volume of disinfectant per disinfection. In general, larger amounts of disinfectant were used per disinfection in the POC dispensers.



Frequency of dispenser use on wards, indicated by dot size.



In normal ICUs, dispensers are most commonly used in hallways, and in surgical ICUs they are more commonly used in patient rooms. Hand rub dispensers in corridors can be conveniently used on the go, and frequent hand disinfection in patient rooms in surgical ICUs may be due to intensive care activities, such as contact with open wounds.

## Conclusion

Our analysis of hand disinfections recorded by NosoEx<sup>®</sup> showed that dispenser use is influenced by ward type and workflow. While hand disinfection is most frequent in ICU and IMC wards, these wards also use the least amount of disinfectant per disinfection. Where wound care or other aseptic procedures are a primary activity, dispensers should be located close to the patient.

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