



## KEY POINT SUMMARY

### OBJECTIVES

The objective of this study was to observe the movement of HCWs in critical care and general wards to understand the most commonly travelled routes and the surfaces touched in the context of hand hygiene compliance.

## Hand hygiene after touching a patient's surroundings: The opportunities most commonly missed

FitzGerald, G., Moore, G., & Wilson, A. P. R. 2013 | *Journal of Hospital Infection*. Volume 84, Issue 1, Pages 27-31

### Key Concepts/Context

When a healthcare worker (HCW) is involved in patient care, there is every possibility of their hands getting contaminated. Unless adequate hand hygiene is carried out between one patient and the next, there is a likelihood of spread of pathogens. Microbes can also be transmitted to different surfaces a HCW may touch. In this study, the routes healthcare workers take when imparting patient care, the surfaces they touch while traveling, and their hand hygiene compliance were observed. The routes that were most frequently taken by the staff were between the patient bed and the equipment trolley and between the patient bed and medical notes trolley. The surfaces touched most frequently included the equipment trolley, computer keyboard, beds, medical notes trolley, and door handles.

### Methods

This was an observational study. Over a period of 17 weeks, the activities of the staff in a medical-surgical intensive care unit (ICU) and a gastrointestinal ward in a teaching hospital were observed. Both units had single-patient rooms, an isolation room, and open bays of varying bed capacity. There was scope for hand sanitization near all beds – sinks, paper towels, and alcohol rubs. A total of 58 90-minute observation sessions were conducted – the observations were not covert. The location of the HCW during a task and hand hygiene opportunities were documented on a map. Link analysis was used to reveal the paths taken by the staff as they imparted patient care. Pivot tables (in Microsoft Excel) were created to reveal the more frequently used routes and more frequently touched surfaces (with or without the necessary hand hygiene compliance).



### DESIGN IMPLICATIONS

Although the study indicates that there is scope to improve hand hygiene compliance among HCWs, it may be noted that hand hygiene compliance was higher when there was an opportunity for hand hygiene at the patient bedside.

### Findings

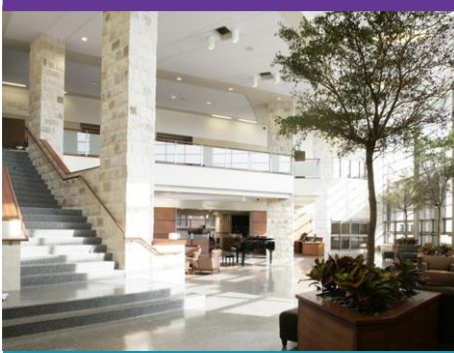
The study yielded the following findings:

Medical-surgical ICU:

- ICU bay:
  - Sites most frequently touched: equipment trolley and computer keyboard
  - Most frequent movements from patient bed to: equipment trolley and computer
  - Hand hygiene compliance: Overall – 60%
    - After contact with surfaces – 40%
    - When moving between
      - Patient and trolley – 11%
      - Trolley and patient – 43%
      - Patient to bedside computer – 14%
- Isolation room:
  - Sites most frequently touched: Inner and outer door handles, equipment trolley, and computer keyboard
  - Most frequent movements from patient bed to: equipment trolley and computer
  - Hand hygiene compliance: Overall – 62%
    - When moving between:
      - Trolley and patient – 68%
      - Patient and trolley – 29%
      - Patient to bedside computer – 22%

Gastrointestinal ward

- Open bay:
  - Sites most frequently touched: bed and medical notes trolley
  - Hand hygiene compliance: Overall – 34%



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- Most frequent movements: between patients and outside the patient zone. Other movements included between patient bed and patient shower/ toilet.
- Isolation room
  - Sites most frequently touched: Inner and outer door handles
  - Hand hygiene compliance – 37.5%

### Limitations

The authors do not specify limitations to their study but mention that the gastrointestinal ward had fewer staff and a lower level of activity, which resulted in a lower data count. They also mention that the staff may have changed their behavior as they were aware of the observations. Lastly, they concede that manual documentation of observed behavior can be hindered by obstacles in the line of sight.

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