



KEY POINT SUMMARY

OBJECTIVES

The research described the nurse workflow during caring for precaution patients and non-precaution patients and explained how the care delivery pattern differed.

Understanding nurses' workflow: Batching care and potential opportunities for transmission of infectious organisms, a pilot study

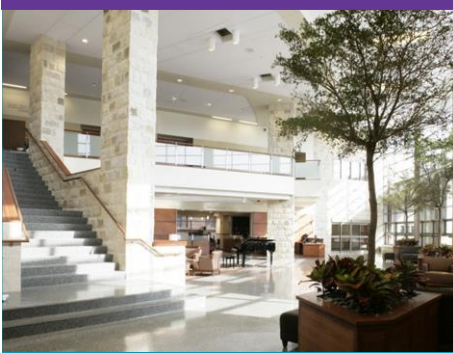
Gregory, L., Weston, L.E., Harrod, M., Meddings, J., Krein, S.L., 2019 | *American Journal of Infection Control*. Volume 47, Issue 10, Page 1213-1218

Key Concepts/Context

Hand hygiene and personal protective equipment (PPE) strategies are employed to prevent disease transmission in the contact precaution room. Studies revealed that precautionary measures perceived as overwhelming required more time in patient care and required changes in workflow. Potential issues related to patient care are less known; this study aims to better understand how nurses deliver care in the contact precaution room.

Methods

This qualitative study adopted observational data by shadowing four individual nurses and documenting their actions, behaviors, interaction, movement, and conversations while providing care to both kinds of patients. The data collection processes focused on understanding better real-time PPE use, including hand hygiene practices for patients in contact precautions. This study was conducted in two general medical-surgical units at a tertiary care university medical center. Unstructured field notes included everything that the observers saw and heard while shadowing. The data collection process involved preparation and usage of equipment, supplies, movement in and out of the patient room, surfaces touched, PPE utilization method, and interactions. Care delivery patterns and nurses' workflow in contact precaution and non-precaution rooms are compared using a descriptive method and visual depiction. Researchers also examined the length and number of tasks accomplished on each room entry. Finally, the authors determined movement patterns and recognized when a hygiene moment (hand hygiene or glove change) should occur based on the World Health Organization recommendations and institutional policy.



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Findings

Nurses' task patterns, task durations, and movement patterns varied between precaution and non-precaution rooms. The researchers observed that nurses structured their tasks differently in contact precaution rooms than non-precaution rooms. Compared to non-precaution rooms, nurses spent more time and performed more tasks per room entry in precaution rooms. Additionally, nurses were inclined to switch between tasks or contact the environment in contact precaution rooms without practicing the recommended hand hygiene. The nurse in non-precaution rooms was entering and exiting several times during the 45-minute time of care. The same nurse remained in the one contact precaution room for 28 minutes and completed 10 tasks before leaving.

Nurses' duties in contact precaution rooms frequently required them to move from clean to dirty spaces as they performed multiple tasks during each room visit. The movement in contact precaution rooms also was less organized than in non-precaution rooms, as nurses frequently switched from one task to another. During providing care in the non-precaution room, hand hygiene was performed before entering the room, environmental contact, clean contact, or completing an examination. However, hand hygiene was performed after a dirty contact and before the examination. No specific "dirty" points were noted in the contact precaution room, but multiple environmental contacts were made, and there was no evidence of hand hygiene observed moments after room entry. The findings revealed that nurses adopted batching care, had more interaction with patients, performed more tasks, and paid less attention to hand hygiene between tasks.

Limitations

Researchers acknowledge several limitations; for example, they did not consider the differences in patients' acuity level between precautions and non-precaution rooms; they could not measure hours spent and task completion in both types of rooms throughout an entire shift. Additionally, because the shadowing observation was limited to just two nursing units and four nurses, that could not account for potential limitations such as the observer's ability to document and recall all details. As with any observational study, there may have been a Hawthorne effect.



Design Implications

In contact precaution rooms, nurses may structure their work in ways that potentially increase the risk of transmission. The study suggests opportunities for collaboration in developing strategies for improving prevention practices by taking workflow into account.

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