



KEY POINT SUMMARY

OBJECTIVES

The objective of this study was twofold: the first was to explore and describe the perceptions of nurses of their personal safety and security within the ICU environment, and the second was to understand how ICU nurses perceived design features as contributory to their assessment of safety and security for themselves and their patients.

Safety and Security Concerns of Nurses Working in the Intensive Care Unit. A Qualitative Study

Keys, Y. & Stichler, J.F. 2018 | *Critical Care Nursing Quarterly*, Volume 41, Issue 1, Pages 68-75

Key Concepts/Context

Vulnerability, instability, and complexity define most patients requiring intensive care. The intensive care unit, or ICU, setting hence has two primary roles, according to the authors – to offer a dedicated space for such patients to be cared for by clinicians and to offer a supportive environment for effective and efficient caregiving. Studies so far have focused on activities within the ICU, operating on the premise that ICUs are safe places. This by itself, the authors surmise, necessitated a study to examine if ICUs are safe spaces. Structured interviews were conducted with 10 ICU nurses by telephone, followed by an online survey to cross check the interview findings. Analysis of the interview transcripts yielded five themes and 14 elements relevant to safety and security within an ICU.

Methods

This was a qualitative study, where 10 ICU nurses were interviewed by telephone. The eight clinical nurses, one nurse manager, and one nurse educator worked in cardiovascular, neurological, trauma, surgical, and medical ICUs in two hospitals in the southern United States. They were asked five questions. The transcripts of the digital recordings of the interviews were analyzed and the responses thematically arranged. These themes were then presented to the participants as an online survey to determine the level of agreement (on a scale of 1-8) with the findings from the interview analyses.



Findings

The analysis of the interview transcripts revealed five categories and 14 elements pertinent to the safety and security in an ICU.

General security design elements – protection from outsiders: The participants mentioned that patients, their families, and staff needed security from outsiders, as there had been instances of threats from gang members and family members. They suggested the following precautionary measures:

- Locked unit
 - Outsiders would need a security badge to access the ICU.
 - Have a remotely-controlled audiovisual system to grant entry into the ICU
- Multiple entry points into the ICU were considered a problem, as they made the unit more accessible.
- Need for multiple emergency panic buttons within the ICU
 - To call for security assistance to manage situations with aggressive intruders and visitors
 - To e-lock the entry into the ICU
- Security cameras at several points in the ICU – all monitored from a centralized security area

Size and configuration of the ICU: Large decentralized units made the participants feel unsafe and isolated from coworkers, especially should they need assistance in aggressive or violent situations. They considered cluster designs, where some rooms are isolated, as an impediment to visibility. They recommend:

- Smaller units with 12-14 beds or rooms
- Visibility of entire unit in the hallway
- Ability to see coworkers and visitors in the hallway
- U-shaped or circular configuration – this would heighten visibility and safety and minimize caregiving steps



- Centralized nursing station with a view of all rooms and decentralized nursing stations for observing the patient
- An emergency exit door from the patient room or the unit into a secure, staff-only-accessible hallway in case of an active shooter

Need for protection of patients: The participants indicated that patients' safety and security necessitates their being completely visible from the hallway. The recommendations:

- Curtains and blinds to ensure privacy
- Low windows in decentralized nursing stations to enable visibility while caregiver was seated
- Foldaway or breakaway glass doors into the unit to
 - Improve visibility
 - Provide quick access to the patient with emergency equipment and carts
- Provision for continuous visual monitoring of patients from a central nurse station to
 - Lessen patient falls
 - Increase security

Need for caregiver protection: The health and security of caregivers in an ICU are potentially at risk. Participants recommended:

- Ceiling-mounted lifts for positioning and movement of patients in beds and from beds to chairs
- Mechanisms to call for coworker help in emergencies – emergency buttons, audiovisual link to central stations, and other devices

Other recommendations:

- Metal detectors and provision for on-site inspection before visitors and outsiders enter the ICU
- Security desks in monitored waiting areas



The findings from the online survey: All items on the survey showed a mean score higher than 4 – the mid-point on a 1-8 scale. Participants did not agree as strongly with the following two items:

- Centralized nursing station with a view of all rooms and decentralized nursing stations for observing the patient (M=5.83)
- Foldaway or breakaway glass doors into the unit (M=5.67)

Limitations

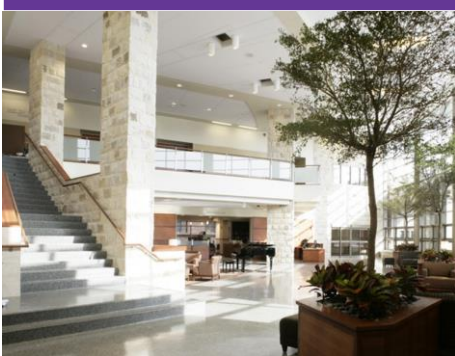
Authors identified their study to have several limitations:

- It was a single-site study. Nurses from other hospital systems may have responded differently.
- The interview was structured; other questions may have elicited different responses.
- There were no follow-up questions to the original five questions.

Design Implications

It may be noted that the study was an exploratory one. The implications for design from the findings of this study include:

- Locked unit with controlled entry access
- Need for multiple emergency panic buttons within the ICU
- Centrally monitored security cameras at several points in the ICU
- Smaller units with 12-14 beds or rooms with ability to see coworkers and visitors in the hallway
- U-shaped or circular configuration to heighten visibility and safety
- Centralized nursing station with a view of all rooms and decentralized nursing stations
- An emergency exit door from the patient room or on the unit into a secure, staff-only-accessible hallway in case of an active shooter
- Low windows in decentralized nursing stations to enable visibility while caregiver was seated
- Foldaway or breakaway glass doors into the unit for better visibility and for quick access to the patient with emergency equipment and carts



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- Ability for continuous monitoring of patients from centralized nurse station
- Ceiling-mounted lifts for positioning and movement of patients to prevent staff injury
- Mechanisms in patient room to call for coworker assistance in emergencies – emergency buttons, audiovisual link to central stations, and other devices
- Metal detectors and provision of site inspection before visitors and outsiders enter the ICU
- Security desks in monitored waiting areas

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