



## KEY POINT SUMMARY

### OBJECTIVES

The objective of this study was to explore the use of the built environment by clinicians to assure safe communication in an ICU.

## Creating spaces in intensive care for safe communication: A video-reflexive ethnographic study

Hor, S. Y., Iedema, R., & Manias, E. 2014 | *BMJ Quality & Safety*. Volume 23, Issue 12, Pages 1007-1013

### Key Concepts/Context

According to the authors, the design of the built environment is a relatively recent foray for patient safety research. They refer to different research studies that report that the physical environment of healthcare facilities affects patient safety. Some of these studies also indicate that the staff had to sometimes manipulate their environment to ensure safety and a smooth communication. For this research, two general intensive care units (ICUs) were examined for the impact of physical design on safety and communication in such units. This was part of a larger study that examined space, safety, and communication issues in healthcare. The study findings highlight the importance of design in creating an ICU environment conducive for safety and communication.

### Methods

This research involved video-reflexive ethnography (VRE), an interventionist research method. It was part of a larger study that examined space, safety, and communication in healthcare. In a VRE study, participants are shadowed, observed, interviewed, and videotaped by the researcher as the former go about their work. Clips of the video are then shown to a focus group (that includes the shadowed participants) to aid discussion. This study took place in two overlapping phases in two general ICUs. In the first phase, 40 semi-structured interviews were conducted with the staff members, ICU spaces were observed and mapped for five weeks, and interviews and notes transcribed and data analyzed. This data analysis formed the basis for the second phase. Spaces and activities considered as important in phase 1 were videotaped and then screened for four reflexive focus groups.



## DESIGN IMPLICATIONS

This study suggests a clear of line of sight to patients and peers was considered crucial to both safety and communication in ICU wards.

Additionally it suggests having rooms in ICU wards for meetings and consultations with patient families, and private waiting areas for the latter.

## Findings

Phase 1 of the study found that clinicians manipulated spaces to ensure that safety and communication were not compromised in the process of imparting care. The ICUs mainly had open wards with patient beds around a central nurses' station. This openness had advantages and shortcomings.

Maximizing accessibility for safety:

- Navigating through the spaces and moving beds and equipment through the corridors was a challenge – equipment and cords would be arranged around patients' bed so that there would be clear access.
- Staff considered a clear line of sight to be crucial for
  - Communication with and access to their peers
  - Patient monitoring

Dealing with interruptions:

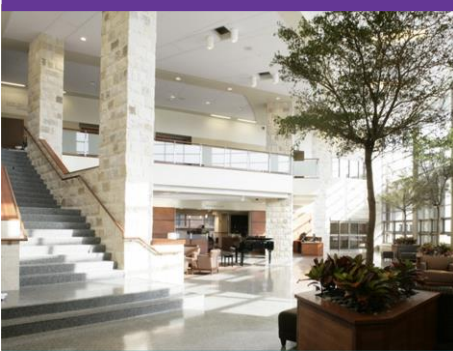
- The openness of the ward allowed for staff to see and approach senior staff, who are not present on the wards at all times.
- This accessibility also created opportunities for interruptions, which was a safety issue.

Managing accessibility using temporary protected spaces:

- Meeting rooms in the wards were used as consult rooms for patients' families and private waiting space in addition to their use for meetings and education.
- Curtains were used around patient beds for privacy during examinations.
- In the non-availability of single rooms, colored duct tape was put on the floor around patients infected multi-resistant organisms; clinicians would wear a colored gown to indicate their presence in an infected patient's bed space.
- Daily handovers between senior nurses did not take place at the nurses' station, but with both nurses moving from patient to patient.

In phase 2, focus group participants developed two resolutions to tackle interruptions in a safe manner in two specific area of the units:

- During drug preparation at the controlled drugs cupboard – suggested changing policy of the number of people and number of drugs that can be removed at the same time from the cupboard.



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- During the doctors' daily X-ray rounds at one end of the nurses' work station – suggested moving X-ray rounds to a meeting room (that was undergoing renovations).

### Limitations

The authors identified the following as limitations to their study:

- The study was conducted in two ICU wards in one hospital; as such, the findings may not be generalizable.
- Follow-up was not done to assess whether the suggested solutions had been carried out and if they had been effective.

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