



## KEY POINT SUMMARY

### OBJECTIVES

This study sought to identify performance obstacles in intensive care work environments.

## Performance Obstacles of Intensive Care Nurses

Gurses, A. P., Carayon, P.  
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### Key Concepts/Context

There is little research about how the work environment of intensive care nurses impacts nursing outcomes and patient safety. Yet performance obstacles hinder intensive care nurses' ability to perform their jobs.

### Methods

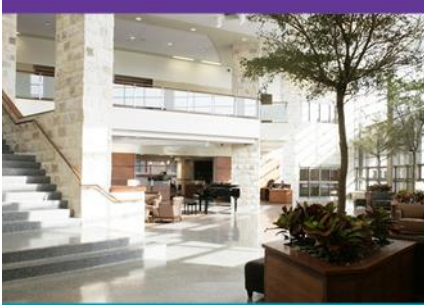
Researchers used a cross-sectional study design. They collected data from intensive care nurses using an anonymous questionnaire. The unit of analysis was the nurse over a shift, so as to identify the performance obstacles that the ICU nurses experienced during a particular shift.

The survey response rate was 75% (272 out of 364 ICU nurses, who were invited to participate, completed the survey).

### Findings

The authors report that the most frequently experienced performance obstacles were: noisy work environment (46%), distractions from families (42%), hectic (40%) and crowded work environments (37%), delay in getting medications from pharmacy (36%), spending considerable amount of time teaching families (34%), equipment not being available/someone else using it (32%), patient rooms not well-stocked (32%), insufficient workspace for completing paperwork (26%), looking for supplies (24%) or patients' charts (23%), receiving many phone calls from families (23%), delay in seeing new medical orders (21%), and misplaced equipment (20%).

The authors recommend that future research should investigate the impact of performance obstacles on nursing workload, quality of working life, and quality and safety of care, as well as the impact of interventions aimed at redesigning the work system of ICU nurses to minimize performance obstacles.



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## Limitations

The authors note that a limitation of the study was the use of a single data-collection method (a self-administered questionnaire), which may have biased the results. For example, by filling out the survey at the end of a 12-hour shift, nurses may have perceived more obstacles than there really were. Also, what might be seen as an obstacle by one nurse, may not be seen as so by another. Participants who completed the survey during busy shifts (high patient acuity and load) could also perceive more obstacles than they actually encountered. However, the researchers designed the questionnaire to ask about performance obstacles as objectively as possible to minimize biases due to individual or emotional variables.

There is also the potential for nonresponse bias. Nurses across 17 ICUs volunteered to participate in the study. Participants could have different perceptions of the ICU work environment and performance obstacles as compared to nonparticipants.

Another limitation, state the authors, is that one of them periodically visited the units to ask about questionnaire completion, and this may have affected participants' responses. However, the researchers used two strategies to minimize the intrusion: (1) the researcher waited outside the study units for most of the time during data collection and (2) when she was in the units, she stayed far away from the nurses who were filling out the survey and was not able to see the responses to the questionnaire.

The sample included ICU nurses working in seven hospitals in Wisconsin. The results cannot be generalized outside the study region.

## Design Implications

This study explored the role of the physical elements of the environment, along with organizational elements, on obstacles created for nurses. What designers should take away from this article is the need to examine the built environment along with the other factors of their work system such as technology and tools, tasks and, more broadly, the larger organization. In this study, approximately a quarter of the participating nurses reported having insufficient workspace in the unit to sit down and do paperwork. This result emphasizes the importance of the physical environment in ICU nurses' work. While, the impact of physical workspace design on nurses was examined in only a limited number of studies, almost all of the key findings were impacted by the designed environment.