



KEY POINT SUMMARY

OBJECTIVES

The objective of this study was to find the extent to which the ICU environment impacts patient and family satisfaction.

DESIGN IMPLICATIONS

The authors recommend designing an ICU with single-patient rooms.

LIMITATIONS

The authors identify the following limitations to this study:

- Potential selection bias
- Staff satisfaction was not taken into consideration.
- The study took place over two seasons – winter and spring – and this may have affected satisfaction ratings.

Effect of intensive care environment on family and patient satisfaction: A before–after study

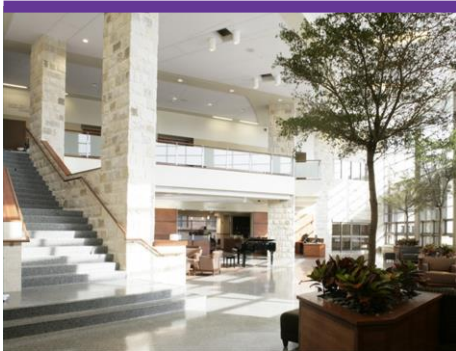
Jongerden, I.P., Slooter, A.J., Peelen, L.M., Wessels, H., Ram, C.M., Kesecioglu, J.,..., van Dijk, D. 2013 | *Intensive Care Medicine*. Volume 39, Issue 9, Pages 1626-1634

Key Concepts/Context

Intensive care units or ICUs are changing from multi-bed units to single-patient room units. According to the authors, these changes may have an impact on family satisfaction. With the patient often in a critical non-communicative position, it falls on family members to make decisions and evaluate satisfaction. When a new ICU with single-patient rooms was inaugurated in a hospital in the Netherlands, it was decided to study the effect of the ICU environment (both the old multi-bed and the single-bed units) on patient and family satisfaction. The authors hypothesized that an ICU with a patient-centered environment would reduce stress and increase satisfaction, and the study showed that environment impacts family and patient satisfaction in critical care settings like ICUs.

Methods

A prospective before-after methodology was implemented to conduct this study. The old ICU consisted of wards, with 10-14 beds per ward, no windows, a bed area of 12 square meters, and a capability to monitor multiple patients at the same time. The new ICU had 36 single-bedded rooms, 25 square meters in area, noise-reduced, large windows, with bedside monitors and a satellite pharmacy. Supplementary questions were added to a standardized survey that was translated into Dutch – for family satisfaction. A shorter version of this survey was developed for patient satisfaction. Both were sent to 617 patients (from both units) 10 weeks following the patients' discharge from the ICU, to be filled out by a family member and the patient respectively. One of the two surveys was completed and returned by 387 patients; 255 patients completed both surveys. Data from the survey were analyzed statistically using t-tests, analysis of variance (ANOVA), Spearman's correlation, and linear regression.



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Findings

The study yielded the following findings:

Family satisfaction:

- There was a significant increase in mean family satisfaction with the overall ICU experience from the multi-bed unit to the single-bed unit ($P=0.02$).
- Mean satisfaction with care also saw a significant rise from the multi-bed to the single-bed ICU ($P<0.01$).
- There was also an increase in mean satisfaction regarding decision-making with the move from the multi-bed to the single-bed ICU, but this difference was not significant.
- Family members rated the new ICU significantly higher for
 - Atmosphere ICU, visiting possibilities, atmosphere waiting room, and facilities waiting room (all $P<0.01$).
 - Emotional support, courtesy toward family, overall experience, questions answered, and amount of care (all $P<0.05$).

Patient satisfaction:

- There was a significant increase in mean patient satisfaction with their overall ICU experience increasing from the multi-bed unit to the single-bed unit ($P=0.02$).
- Mean patient satisfaction with care also saw a significant rise from the multi-bed to the single-bed ICU ($P<0.01$).
- There was also an increase in mean satisfaction regarding decision-making with the move from the single-bed to the multi-bed ICU, but this difference was not significant.
- Patients rated the new ICU significantly higher for
 - Courtesy, atmosphere ICU, silence ICU, and visiting possibilities ($P<0.01$)
 - Pain management, staff recognizable, and overall experience ($P<0.05$)
- Patient satisfaction was found to be significantly related to atmosphere ICU, silence ICU, and visiting possibilities ($P<0.001$)

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