



KEY POINT SUMMARY

OBJECTIVES

This study examined the impact of daylight and window views on patient pain levels, length of stay, staff errors, absenteeism, and vacancy rates.

DESIGN IMPLICATIONS

Window views and lighting should be incorporated into the design of patient rooms, but should include blinds that may be controlled to avoid glare and contrast as desired by occupants.

The Impact of Daylight and Views on ICU Patients and Staff

Shepley, M. M., Gerbi, R. P., Watson, A. E., Imgrund, S., Sagha-Zadeh, R. 2012 | *The Health Environments Research and Design Journal (HERD)* Volume 5, Issue 2, Pages 46-60

Key Concepts/Context

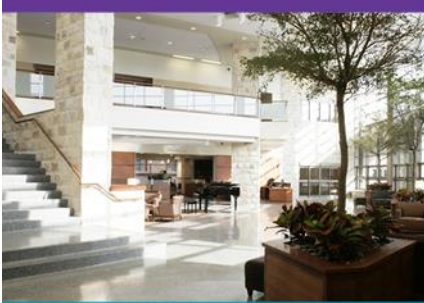
The physical environment has been found to have a significant impact on patient, family, and staff outcomes in healthcare settings. The impact of the design of intensive care units (ICUs) may be particularly significant in light of the levels of stress experienced by staff and the vulnerability of families and patients.

Methods

Using a pre-test/post-test quasi-experimental study to compare an old ICU with a new ICU that had more window views and daylight. Both ICUs were located in the same New Hampshire hospital and attended by the same staff.

Findings

Although the views in the new unit included more nature content, light levels were actually lower for most patients in spite of the fact that the new unit had 10,419.7 lux overall, and the old unit had 6,156.5 lux. Patient's average pain levels were 1.55 and 2.08 in the old and new units, respectively. Despite the lack of statistical significance ($p = .389$) between light level and length of stay, data trends in the old unit suggested the higher the light levels, the shorter the length of stay. In spite of the decrease in errors in the new unit, the reduction in errors was not statistically significant ($p = .598$). The mean of absenteeism per person decreased from 38 hours to 23 hours from the old unit to the new, which was statistically significant ($p = 0.05$). The average vacancy rate decreased by 25 percent (from 10.12 to 7.49 percent) for staff openings per year in the old and new units, which was also statistically significant ($p = 0.04$).



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Limitations

If views of the sky were included as in the view of nature calculation, there would have been no difference between the old and new ICU configurations. The precision of the scale used to assess patient perceptions of pain was questioned due to the number of patients indicating no pain. The generalizability of outcomes are limited because this was a pilot study as well as the number of confounding staffing, protocol, and environmental variables introduced by field conditions.