



## KEY POINT SUMMARY

### OBJECTIVES

This study investigates the extent to which green hospital building design and EBD affect employee performance, patient outcomes, satisfaction, and overall utilities in a women's oncology unit.

### DESIGN IMPLICATIONS

Designers hired a staff nurse to help with the oncology unit's new floor layout, resulting in a significant increase in employee satisfaction; this shows how multidisciplinary teams can help enhance the impact of design decisions. Additional windows within the unit generated a significant increase in satisfaction with lighting among staff members, implying that natural lighting can positively impact internal environments.

## Understanding green building design and healthcare outcomes: Evidence-based design analysis of an oncology unit

Campion, N., Thiel, C. L., Focareta, J., & Bilec, M. M. 2016 | *Journal of Architectural Engineering* Volume 22, Issue 3, Pages 04016009-1-11

### Key Concepts/Context

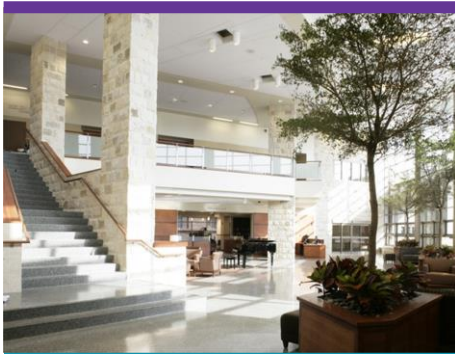
The United States healthcare industry is a major part of the economy as well as a significant contributor to carbon dioxide emissions and other environmental issues. Green building design (GBD) attempts to offset environmental impacts of buildings, and recently designers have been combining GBD with evidence-based design (EBD) in order to create facilities that positively impact both the external and internal environment.

### Methods

Forty-five different metrics from a single women's oncology unit were analyzed across a three-year period, both before and after GBD features were implemented. Additionally, a survey was distributed to assess staff and patient satisfaction and perceptiveness of the new GBD and EBD features.

### Findings

Patients responded positively to all EBD features, especially the quietness of the new oncology unit, which resulted from newly installed acoustic panels. Staff members voiced the most satisfaction with improved lighting quality, the new workspace layout, and the addition of a meditation room. Staff productivity levels remained unchanged before and after the implementation of GBD and EBD. GBD features resulted in a general downward trend in utilities per patient bed, while expenses increased due to a shift in patient cases (more patients on average).



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Limitations

The patient mix may have impacted results more than the authors anticipated. The authors also did not receive as many staff satisfaction survey responses as they had hoped, and also noted that the survey questions themselves were rather difficult to answer. Lastly, a single 28-bed oncology unit is a relatively small sample size.

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