



## KEY POINT SUMMARY

### OBJECTIVES

To examine whether hospitals and healthcare facilities actually value the specific LEED certification criteria that have a direct influence on the health of patients and their recovery periods.

## Analysis of credits earned by LEED healthcare-certified facilities

Golbazi, M., & Aktas, C. B. 2016 | *Procedia Engineering* Volume 145, Pages 203-210

### Key Concepts/Context

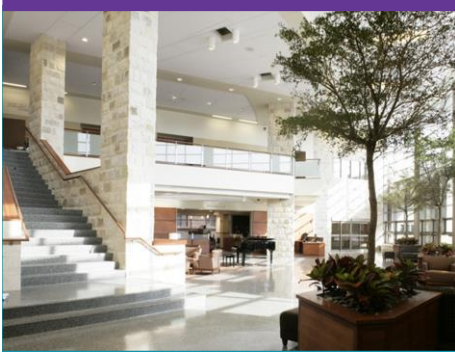
Green buildings have garnered widespread public support due to the positive impacts they are perceived to have on the environment, the economy, and society as a whole. The concept of green building design appeals to institutions because of its potential benefit for the indoor and outdoor environment as well as its potential for improving public image. As a result, there may be hospitals that become certified by the Leadership in Energy and Environmental Design (LEED) rating system but aren't actually providing a green healthcare environment that positively influences patients and their periods of recovery. This is an important distinction since the core purpose of healthcare facilities is to improve the conditions of the sick and vulnerable, as well as society overall.

### Methods

100 LEED scorecards for certified institutions were obtained from the USGBC website and reviewed to determine which specific credits these institutions received during their certification process. Nineteen of these were from USGBC's "Healthcare" category, and 81 were from the "New Construction" category. Institutions were evaluated in two ways: as a green building according to their total score, and as a green healthcare environment. More specifically, the credits analyzed by the authors for both the Healthcare and New Construction categories fell under the following criteria: sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environment quality.

### Findings

Of the 19 Healthcare category institutions, six were "certified," four received "silver" certification, six received "gold" certification, and two received "platinum" certification. Since these credits were related to the nature of the indoor environment, the authors have correlated them with the well-being of patients at these institutions. The authors state that statistical analysis of the Healthcare



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category reveals that about half of these hospitals should consider increasing their attention to credits that are relevant to the well-being of patients. Analysis of the New Construction category revealed that there is a very low correlation between buildings that receive high total scores in their certifications while having high healthcare specific points as well. This implies that there can be LEED certification granted while adequate green healthcare environment criteria may not be met.

### Design Implications

Green building design should consider equally its external environmental impact as well as its impact on its own internal environment; in other words, LEED-certifiable qualities that contribute to better healthcare environments and subsequently higher levels of patient well-being should not be overshadowed by an attempt to solely gain LEED certification through the other, more environmentally-minded green building design criteria.

### Limitations

All data from this study are derived from publicly available online scorecards; no field research was conducted to actually investigate the well-being of patients within the institutions evaluated. The researchers selected the certification categories they deemed most relevant to patient well-being and recovery time. They then used statistical results showing higher or lower levels of these credits to suggest that certain institutions might need to improve their overall quality of patient care. These could be considered somewhat broad conclusions to draw from statistical analysis of online data.