Research Preview: Review of Health Language in LEED
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Introduction

The promotion of health through building design is long-standing shared value within the green building movement. Green building practitioners have shared a belief that features such as daylighting and ventilation can improve occupant comfort. They have also argued and advocated that efforts to reduce energy use and mitigate green house emissions and traditional criteria air pollutants have far-reaching benefits for society.

Recently, we have seen increasing demand for more robust and sophisticated approaches to connect building design and operation with demonstrable public health outcomes. This includes interest in better understanding differences in the language and metrics used to address health issues in the green building and public health professions. Differences in language and metrics are perceived as a barrier to interdisciplinary collaboration and the robust evaluation of project and programmatic outcomes.

This Research Preview describes preliminary findings from a descriptive analysis of the language and metrics used to describe health-related intents and requirements in the LEED® 2009 green building rating system.

Approach

We conducted a systematic review of LEED 2009 documentation including rating systems and reference guides describing 419 prerequisites and credits in seven major rating systems, including LEED for New Construction (NC), Existing Buildings Operations and Maintenance (EBOM), Core and Shell (CS), Commercial Interiors (CI), Healthcare (HC), Schools (S), and Neighborhood Development (ND). We recorded the frequency of terms used to describe health-related issues and outcomes. We then analyzed and compared patterns of variation within and between rating systems.

Preliminary Findings

In this Research Preview, we report on four preliminary findings. We will elaborate on these initial findings in a future publication.

Finding #1. Health related issues are addressed in every LEED credit category. This finding indicates that opportunities to promote health outcomes are found across all aspects of green building practice. However, the terms used to define and describe health-related concepts vary significantly between rating systems. There is also significant variation in the organization of health-related strategies. For example, the majority of health references made in LEED-

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EBOM are found in the Indoor Environmental Quality credit category, while LEED for Healthcare includes many references to health in the Sustainable Sites credit category.

**Finding #2. LEED 2009 uses a wide range of terminology to describe health-related issues.** LEED 2009 includes a large number of health-related terms, and LEED 2009 references and applies these terms many different ways. The use of these terms in rating systems and reference guides is not necessarily consistent with technical definitions and conventional usage in the public health community. This creates a potential barrier to interdisciplinary communication and evaluation.
Finding #3. Specific terminology used to reference health varies significantly across LEED rating systems. For example, criteria in LEED for Existing Buildings Operations and Maintenance (EBOM) make the largest number of references to the term “health”, while LEED for New Construction emphasizes the term “comfort”.

Finding #4. The terminology and framing of health, wellness, and experience vary significantly between the LEED 2009 rating system and reference guide documentation. We found a lack of coordination between health intent statements made within credit intents provided in rating systems and supporting documentation in reference guide (RG) materials. Predictably, reference guides provide more frequent and extensive discussion of health benefits; however, these may not always be explicitly linked to credit intents and requirements found in rating systems.
Preliminary Conclusions

Health, wellness, and occupant experience are expected outcomes from many green building strategies and health-related intentions are common throughout LEED rating systems. Consequently, references to health in LEED 2009 are common; however, we found that the language used to describe these intentions and strategies is diverse, sometimes inconsistent, and potentially difficult to link to public health practice.

The implications of these findings are more than semantic. The inconsistent or idiosyncratic use of health-related terminology makes it difficult to engage with health researchers or connect with established public health surveillance and data collection systems. It also makes it challenging for owners, investors, and other decision makers to clearly specify desired health-related outcomes, understand connections to individual strategies, and rigorously evaluate outcomes.

Overall, our review leaves little double doubt regarding the importance of health promotion as an intended outcome of green building as represented by LEED. Health is an articulated priority and an explicit anticipated benefit or co-benefit of green building design and operations. Our findings suggest specific areas for improvement to strengthen connections between intentions and outcomes. These include opportunities to focus the language used in LEED criteria and utilize specific terminology that aligns more closely with concepts used in the public health community.

Ultimately, these kinds of changes will make it easier to understand and achieve the long-standing aspirations for buildings that promote human health, contribute to physical, emotional and social wellbeing, and provide superior occupant experience.

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