



KEY POINT SUMMARY

OBJECTIVES

This article describes and tests a new methodology for optimizing and evaluating wayfinding systems before they are implemented.

A user-centered approach to evaluating wayfinding systems in healthcare

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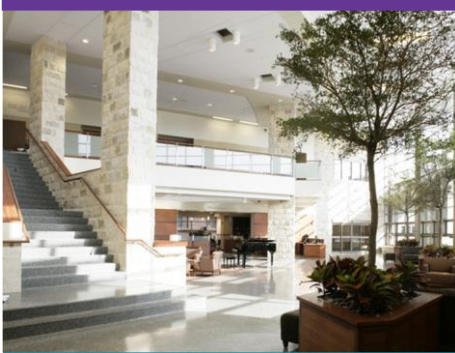
Key Concepts/Context

Wayfinding systems play an important role in the efficacy of hospitals; when implemented effectively, they can help reduce visitor and staff anxiety while ensuring that care is administered and received in a timelier manner. Previous studies note that hospitals are inherently large, unfamiliar, and complex environments that sometimes neglect to consider effective wayfinding systems during early design phases. This study proposes a new process for developing and analyzing wayfinding systems that may help designers avoid common pitfalls.

Methods

The authors first describe the steps that healthcare designers might take to formulate their own evaluations for proposed wayfinding systems. These steps are as follows: a 'planning stage,' where designers should identify general evaluation questions that work to address relevant wayfinding issues (e.g., "Are the signs in question visible with respect to text size, placement, and contrast?"), identify key routes throughout the building, develop different testing scenarios, create debriefing questions and additional measures to follow up on any challenges experienced during testing, recruit and schedule test participants, and, finally, printing the wayfinding signs and materials. 'Setup' involves mounting all proposed signage while covering existing signage to minimize confusion. 'Running the session' entails introductions and expectation reviews between evaluators and participants, and may include the 'talk aloud method,' where participants voice their thoughts, questions, and concerns in real time as they complete each scenario. Lastly, there is a 'debriefing' session.

The authors used this methodology to evaluate signage and small maps found within a 45-bed emergency department. Nine "patient/visitor" participants took place in the evaluation, in which three problematic routes were tested: triage to intake, intake to washroom, and washroom to the exit. As outlined in the aforementioned planning stage, new signs were posted throughout the department



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while existing signage was covered by white paper to reduce confusion, and the authors gathered thoughts and opinions from the participants before the debriefing assessment.

Findings

The authors were unable to pilot test their evaluation with someone unaffiliated with the research team prior to involving other participants, which they believe would have further improved the methodology. The authors also found that emergency department staff, while being excluded from the evaluation process itself, were able to provide valuable insights through informal conversations separate from this study.

Some of the key findings from the authors' example evaluation help illustrate the forms of helpful feedback that other designers might receive after using a similar methodology. Examples of this feedback include:

- Signs placed at inconsistent heights were distracting; eye-level height was preferred to ceiling-level height.
- Signs located above doors were easier to overlook, while signs located too closely to one another created a sense of information overload.
- Some signs featured terms that might be unclear to visitors, such as “intake,” “rapid assessment zone,” and “diagnostic imaging.”
- Nearly all participants missed the “washroom” sign, which featured only an icon with no other descriptive words.
- It was noted that the font sizes of nearly all of the signs could have been increased for improved legibility, especially from a distance.
- Modifying the color scheme of the signage to increase contrast between the signs and the department itself proved effective in increasing visibility.

Limitations

The authors note that the methodology described in this article is best suited for a single department or unit rather than for generalized use across an entire facility. The authors also note that financial demands associated with producing high quality wayfinding prototypes and recruiting participants may prevent some facilities from considering these evaluations. Lastly, recruiting a sample of participants that accurately represent real-life hospital visitors can be challenging, and the experience of visiting a new hospital in real life contexts may be difficult to replicate.



Design Implications

Designers responsible for implementing wayfinding signage within healthcare environments might consider utilizing preliminary evaluations like the one outlined in this article to help ensure that the most effective possible signage is implemented.

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