



KEY POINT SUMMARY

OBJECTIVES

To evaluate providers' attitudes and professional performance at a particular children's hospital designed using evidence-based design principles.

Adapting to Family-Centered Hospital Design: Changes in Providers' Attitudes over a Two-Year Period

France, D., Throop, P., Joers, B., Allen, L., Parekh, A., Rickard, D., Deshpande, J. 2009 | *Health Environments Research and Design Journal* Volume 3, Issue 1, Pages 79-96

Key Concepts/Context

Although hospitals are being designed based on evidence-based design principles, it's unclear how working in such an environment influences providers' attitudes and professional performance.

Methods

The same survey was distributed to clinical staff members at the Monroe Carell Children's Hospital at Vanderbilt (VCH) as it went into operation and then two years later. All survey questions are included in the text of the article, as well as the answer options available. The survey was distributed to a convenience clinical and clinical support staff including nurses, nurse practitioners, respiratory/occupational/physical therapists, medical technicians, medical residents, medical receptionists, pharmacists, social workers, and case managers working in the NICU, PCCU, ED, perioperative services, radiology, outpatient clinics and medical-surgical acute care units. Faculty physicians did not participate. In 2004, 264 surveys were filled out; in 2006, 544 were completed. The hospital is described in the text: "an eight-story, 206-inpatient-bed. . . . 616,785-square-foot facility. . . . Sixty-one percent of the square footage of the hospital is allocated to patient care and 9% to patient support and family space. Both the interior and exterior were designed to welcome children instead of causing anxiety. . . . The exterior of the hospital includes colorful signage, children's art and sculptures, and soft-hue lighting. Public interior areas of the hospital feature cheerful, interactive art. . . . Way-finding systems were designed so that even children who could not read could navigate the floors. . . . the hospital offers patients exposure to nature (e.g., rooftop gardens, natural light) . . . ; positive distractions (e.g., interactive art, live performances) . . . and environmental control (e.g., control of lighting, sound,



DESIGN IMPLICATIONS

Develop hospitals using evidence-based design principles.



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temperature). . . . The hospital allocated considerable space to accommodate the families of admitted children. The hospital offers sleeping accommodations in private patient rooms and in hospitality quarters, laundry facilities, common kitchen areas, and family lounges.”

Findings

Between 2004 and 2006 there were statistically significant increases in the proportion of respondents who provided positive ratings of the efficiency of operation of the hospital (for example, the flow of patients and work), frequency with which work is interrupted, workplace adequacy, unit layout’s effect on team communication/patient monitoring/social interaction, daily mental fatigue, and walking burden. There were statistically significant reductions in the proportion of providers who rated noise in their work areas as quiet (the NICU was the only group studied that did not indicate a statistically significant increase in noise) and the accessibility of computers (usually or always available). Although factors other than the physical environment contribute to stress levels, it’s important to note that, “Despite the overall improvements, nearly half of all providers rated their typical stress level as very high or excessive and their exposure to work interruptions as frequent or endless.”

Limitations

Data were collected at only one hospital and physicians did not participate in this study.