



Designing Better Physical Environments for Today's Nurses

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Just as nursing alters professional practice through new data based on nursing research, so do today's architects in designing new hospital spaces. This new movement, known as evidence-based design, is changing the paradigms by which architects create new healthcare environments that correlate positive patient outcomes with decreasing the physical stresses of nursing.

One significant study, "The Role of the Physical Environment in the Hospital of the 21st Century: A Once-in-a-lifetime Opportunity," was funded by the Robert Wood Johnson Foundation and produced by the Center for Health Care Design. The project brought together research teams from Texas A&M University and the Georgia Institute of Technology. Their review of more than 600 published, peer-reviewed journals revealed how specific elements of hospital design can significantly affect both patient and staff outcomes.

Noise Levels

Noise levels are one aspect that demonstrates the link between the physical environment and patient and staff outcomes. The Center for Health Design's research has demonstrated that nurses perceive higher sound levels as stressful, leading to emotional exhaustion and burnout. The study has prompted design experts to examine more closely the ceiling, floor and wall surfaces that will absorb noise in hospital departments. Noiseless paging systems have become an increasingly popular option used by nurses to communicate with the nursing station while maintaining a more soothing atmosphere for patients.

Infection Control

Transmission of infection, both airborne and through contact with others, is affected by healthcare design. It is well established that the hands of nursing and other healthcare workers are the principle cause of transmission of infection. The Center for Health Design identified six studies that demonstrate that hand-washing compliance improves by increasing the number of sinks and hand-cleaner dispensers available to healthcare providers.

The research team also acknowledged the distinct advantage that single-bed rooms possess over multi-bed rooms in controlling the transmission of infection. Their research cited at least 16 studies that collectively provide strong evidence that infection rates are usually lower in single-bed rooms. In addition to the clear advantage of single-bed rooms in reducing the number of airborne pathogens, the team noted that single-bed rooms are easier to thoroughly decontaminate after a patient is discharged.

The Center for American Nurses is a professional association whose mission is to create a community of nursing organizations that serve individual, non-union nurses by providing programs, tools and policies that address challenges and opportunities in their practice environments.



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Physical Stressors for Nursing

According to the Joint Commission of Accreditation of Healthcare Organizations, (JCAHO), by 2010 the average age of registered nurses in the United States will be 50 years. In their 2002 report, "HealthCare at the Crossroads: Strategies for Addressing the Evolving Nursing Crisis," surveys of nursing found that physical working conditions are a key contributor to nursing burnout and turnover.

Finding innovative and authentic ways to decrease the physical stressors in nursing will play a significant role in keeping the aging nursing population healthy. To that end, nursing stations are now being redesigned to decrease physical demands on the caregiver. Increasingly popular is the conversion of traditional nursing stations to individual patient alcoves.

Alcoves, located outside patient rooms, are now being designed to house medications as well as supplies, thus eliminating numerous trips down the hallway for the nurse. With this design, supplies are readily available to nurses just outside the patient's door. Patient medications are delivered directly to the bedside by the pharmacy, thus eliminating the traditional medication cart.

Opportunities to Help Nursing

Hospitals undergoing new construction have excellent opportunities to create departments that are more healthful for nurses. Custom-made hospital designs that renovate outdated nursing processes can exert a significant influence on the manner in which nursing is performed in a healthcare organization. Improvements in medication administration, supply acquisition and decreasing physical demands on nurses can be significantly enhanced by good architectural design.

The architectural design phase is critical to determining which processes can be improved. The voice of the direct caregiver is vitally important during the very early design phases of any healthcare construction, and hospital administrators are now finding unique and creative ways to listen to nurses during the design phase.

Listening to Nurses

St. Joseph's Hospital in West Bend, Wis., is one example of a healthcare organization whose administrators listened intently to nurses before designing their new hospital. Before construction began on the hospital's new inpatient rooms, two mock-up rooms were constructed so that nurses could see the design of a future patient room in physical space.

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Sue McCullough, R.N., director of critical care services at St. Joseph's, was one of the primary nursing administrators involved in the project. "Nurses were encouraged to critically evaluate the rooms and were given "post-it" notes to write comments. They placed their suggestions all over the mock-up room." The staff critiqued everything from lighting design to furniture layout. Their comments were taken to a multidisciplinary design team, following which their suggestions resulted in changes and modifications of the patient rooms.

Getting Involved

Nurses around the country will concur that the design of their work environment matters. Looking beyond aesthetically pleasing designs, they want healthcare spaces that help them provide quality care to their patients. Becoming a design advocate means acquiring a knowledge base from literature and Web sites focused on evidence-based design. The Center for American Nurses offers information on numerous Web sites addressing physical design that serve as excellent databases for information and advocacy.

Conclusion

When nurses get involved in design, they can play an instrumental role in designing the best environment possible to enhance their ability to care for their patients.



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