Acuity-Adaptable Rooms

Design Considerations Can Improve Patient Care

By Lisa Naide Lipschutz

Research has demonstrated that the acuity-adaptable nursing model creates the potential for decreased operational costs, and increased quality, safety, improved outcomes, and patient and family satisfaction.

Many healthcare leaders believe the model represents the future of the industry. However, healthcare facilities face financial and cultural challenges and it is important to consider the implications of the acuity-adaptable nursing model when introducing it during a new construction or renovation project.

Sound Prototypes

There are several prototypes that support the acuity-adaptable nursing model that were developed based on the principles of operational efficiency, quality, patient safety and family-centered care.

The prototypes share several common design features:

• Adequate square footage in the room to accommodate several clinical activities to minimize the need to move a patient

The patient room at Lankenau Hospital in Wynnewood, Pa., combines the healing tenets of Planetree design with the space necessary to accommodate varying levels of acuity.

Photo by Tom Crane Photography

A separate and distinct family zone allows a visitor to spend the night comfortably, a feature desired at many levels of acuity.

Photo by Crane Photography]

• Clear, well-defined zones for charting and general patient care activities

• Strategic placement of a hand-washing sink in the staff zone

• Convenient staff access to medications and supplies

• Headwalls designed with adequate critical care services, including medical gas and electrical capacities often duplicated on each side of the patient's bed to eliminate the need for staff to reach across the patient

• Decentralized nursing stations that also maintain common team work-space

• Maximum patient visibility facilitated by outboard toilet location and adequate glazing along the corridor, while maintaining options for patient and family privacy

• Consideration of in-room family requirements and family participation in care

• Patient lifts to ease strain on nurses

Beyond these common design features, each project must be designed to meet the unique cultural, operational and budgetary needs of the organization. For example, one would be hard-pressed to find a healthcare system today that does not embrace family-centered care, but not all provide the same level of in-room amenities.

Some facilities may only be financially able to provide a simple recliner or daybed and individual room-lighting controls for families within their financial and operational constraints. Other facilities may push the envelope to provide additional amenities such as privacy curtains around the family sleeping space, supplemental family storage, a safe for personal belongings and a dedicated work space with task lighting.

Space Planning Challenges

There is no doubt that acuity-adaptable rooms require more space and more services than today's single-patient medical-surgical room, raising the associated capital cost. Also, central equipment storage requirements must be factored into the square footage because there is a need to house more portable equipment associated with the care of intensive patients. If a decision is made to provide same-handed patient rooms, a larger departmental grossing factor may be required.

Acuity-adaptable rooms ideally range in size from 305 square feet to 400 square feet, while the average single-

The telemetry unit in Township, N.J., uses simplified adaptability with the space necessary for telemetry equipment.

Photo by Jeffrey Totaro Photography

patient room ranges from 240 square feet to 300 square feet. With consideration to escalating construction costs, this additional square footage in patient rooms and the overall unit size mandates an understanding of budget expectations and requires continued tracking of project construction estimates.

For healthcare systems that are considering renovating an older nursing unit to provide acuity-adaptable rooms, productivity must be considered. Many older nursing units were designed with rooms sized for two patients, which are sometimes still under-sized for one patient by today's standards.

Years ago, owners and designers faced a similar challenge when the labor/delivery/recovery/postpartum care model was first implemented. In some cases, designers found themselves using three existing patient rooms to create two LDRP rooms.

It is almost impossible to renovate an older medical-surgical nursing unit to provide the space required for acuity-adaptable rooms. If three existing rooms are used to create two acuity-adaptable rooms, the total number of beds on the unit may need to be reduced below the 30-bed level that many healthcare systems target for ideal nursing productivity.

Placement of Key Elements

In most cases, nursing activity in acuity-adaptable units is as close to the bedside as possible to support a nurse-patient relationship. For example, Array Healthcare Facility Solutions has designed units with charting stations between every two rooms.

However, there is still a need for a central nursing station that can serve as a communication hub among physicians, nurses and other professional staff. Decentralization does not support the full spectrum of clinical activity demands, mentoring opportunities, and needed social interaction among colleagues.

Placement of the toilet rooms also affects options for placement of nursing stations, patient visibility and patient room layout.

Few newly planned nursing unit designs locate the toilet room along the corridor wall. Instead, it is located outboard or between every two rooms. There are two problems with the latter approach: it increases the distance of the nurses station from the patient, which can increase travel time, and it may also limit the opportunity for same-handedness and other forms of room standardization. Many new nursing units are designed with outboard toilet rooms or an angled concept.

Process for Success

As with all projects, an effective decision-making process is a critical success factor. There are significant financial and cultural challenges associated with the transition to an acuity-adaptable nursing care model.

The project team needs leadership from within the healthcare system. Assemble a committed team of individuals who are willing to work hard and to communicate with honesty and mutual respect to get the job done. Include experienced departmental representatives on the project team — physician leaders and people from the nursing, pharmacy, respiratory therapy, social services, materials management, dietary, environmental services and hospital engineering departments.

Make sure the hospital's operational processes and culture is a consideration in the planning process. Experienced healthcare consultants can help the project team analyze the financial impacts of alternatives and operational issues.

When designing a new facility or renovating an existing nursing unit for acuity-adaptable care, a room mock-up is invaluable. A mock-up does not need to be elaborate or extremely detailed, but it must be realistic enough to enable staff to experience the locations of key room elements and to simulate care scenarios.

In many cases, the experience leads to important design refinements early in the planning process, which saves money. It is also worthwhile to tour other healthcare systems that have implemented this care model.

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Array Healthcare Facility Solutions

New 70-Bed Juvenile Mental Health Hospital Proposed for L.A. County

SYLMAR, Calif. — Los Angeles County probation officials are proposing construction of a new 70-bed hospital here to house and treat incarcerated youths with the most serious mental health conditions.

Probation officials are pushing for the new hospital, which could cost $5 million to $10 million, and would allow the transfer of mentally ill youths held in 24-hour isolation facilities to a clinical setting where they could receive proper treatment.

County representatives are in early talks about the proposed facility, which would be located next to the Barry J. Nidorf Juvenile Hall in Sylmar.

Probation officials believe the proposed facility could save the county money in the long run by moving juveniles from lockdown to a hospital setting.

The project faces several hurdles, including funding sources at a time when state and local coffers are lean. The county has about $80 million in a reserve account, but is conserving funds due to anticipated state budget cuts this fiscal year, according to reports.

Probation officials believe the proposed facility could save the county money in the long run by moving juveniles from lockdown to a hospital setting, which would free up probation staff and allow the county to apply for reimbursements from Medi-Cal and Medicare.

It costs the county $1 million to $2 million each year in personnel costs and other expenses to provide 24-hour monitoring of incarcerated youths.

The housing and treatment of mentally ill youths in custody at Los Angeles County's 19 probation camps and three juvenile halls has been under scrutiny for nearly a decade.

In 2000, three county juvenile halls were found by a Los Angeles grand jury to be overmedicating youths. As many as 16 psychotropic drugs were frequently being used to treat juveniles with depression, anxiety and mood disorders.

After the grand jury findings, federal investigators started regularly visiting the facilities and held a formal investigation in 2007 of all 19 probation camps. During the investigation, agents found suicidal youths who were forced to wait several days before being seen by mental health staff and instances of self-inflicted violence by youths waiting to receive help.

Investigators also reported the use of pepper spray by probation officers on youths who were taking psychotropic medications, despite an order by the U.S. Justice Department in 2004 to reduce officers' use of force against juvenile detainees.

Overcrowding is also a problem in the county's juvenile facilities, which supervise as many as 4,000 teenagers, whose average stay is about three weeks.

In addition, the number of mentally ill youths in custody is on the rise, due to the elimination of long-term beds at the Los Angeles Metropolitan Medical Center and similar facilities. Officials estimate 35 percent to 40 percent of youths in county custody require mental health treatment.

Last fiscal year, more than 15,000 incarcerated youths were treated by county mental health workers at probation facilities, according to reports.

Treatments range from anger management counseling to substance abuse treatment to psychotropic medication.

In November 2008, probation officers signed an agreement to improve mental health staffing, screening and treatment at juvenile camps following a threat by the Justice department to sue the county.

Alternatives to the hospital proposal include the creation of more juvenile mental health courts, which could divert mentally ill youth from juvenile halls.

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