IDEC Student Competition 2014-2015

Pediatric Patient Room

Patient Care + Family

Concept Statement:

This pediatric patient room creates a healing environment through the encouragement of collaborative care between hospital staff, family members, and patients, the integration of technology, and the use of positive distractions to promote stress reduction and healing through aesthetics. This space provides families with their own place of refuge while aiding in the care of their recovering child. Patients will experience an exciting interactive environment through the integration of technological systems that ease fears and anxieties associated with hospitalization. Similarly, this technology allows hospital staff to provide more individualized patient care while decreasing the possibility of medical errors.

Design Goals:

1. Boost patient healing through integrating a family friendly environment to encourage more frequent and longer family visits while promoting a collaborative relationship between staff and family to provide further support.
2. Create a more functional and safe environment for both the patient and the staff through the integration of technology.
3. Use technology to create a patient controlled environment for individualized comfort and safety.
4. Design a safe and convenient patient room in order to decrease medical errors and increase efficiency by optimizing circulation and layout, nurse sight lines and consistency, and ADA compliancy and technology.
5. Construct a stimulating and playful environment to aid in alleviating stress and create a more comfortable and familiar setting to promote healing.

Reserach Summary:

There are five main design applications that enhance outcomes for pediatric patients: family zones, positive distractions, communication technology, medical technology, and storage (Vickery, 1). First, the family zone provides adult guests with both private work and sleeping areas so they can complete routine tasks without feeling pressured to leave their child (1). Studies show that by providing a designated family zone, both visitation frequency and longevity are increased which improves healing times and patient well-being (Kimmelman, 2). Second, pediatric patient rooms should be engaging and stimulating for children ranging from preschool-age to adolescence (Vickery, 1). This can be attained through the use of interactive lighting, music, projected imagery, and artwork in order to create positive distractions for patients (Poulin, 258-259). Also, ceilings, footwalls, and floors are a great opportunity for the incorporation of these positive design features (Vickery, 1). Third, rooms should integrate appropriate technologies such as digital screens, Wi-Fi, and video technology for patients to communicate with friends, classmates, and siblings during their stay (1). This also allows patients to communicate directly and efficiently with hospital staff, which helps reduce the risk of medical errors while providing more personalized care (Kimmelman, 5). Fourth, medical technology should be present yet concealed to reduce anxiety in young patients, while still allowing convenient access to medical staff (Anshen, 8). This can be accomplished through the application of customized casework to conceal gases and other medical equipment to create a patient care control center for caregivers with a hospitality feel (Poulin, 259). Last, pediatric patients with longer hospital stays may bring toys, books, and other personal items to make their rooms feel more like home (Vickery, 1). Therefore, rooms should accommodate areas for extra storage to provide additional comfort to patients and their families (1). In conclusion, the interior design of a pediatric healthcare facility takes many aspects into consideration to create a positive, healing environment for patients, family, and hospital staff (Poulin, 260).

Sources:

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Poulin, Cherise. "Interior Design for Healthcare." Designing Hospitals of the Future. N.p.: n.p., n.d. 247-60. Perkins Eastman, 1 Aug. 2012. Web. 22 Sept. 2014. <http://www.perkinseastman.com/dynamic/document/week/news/download/3411782/3411782.pdf.>.

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Annotations:

- Family Zone:
  1. Full size bed provides a more comfortable stay and encourages longer and more frequent visits
  2. Storage space for family belongings allows family members to feel more at home
  3. Curved wall provides privacy and creates a sound buffer so the family is not disturbed by nurse rounds during the night
  4. Family zone is located inside the patient room for further convience and helps the children feel more comforted and at home
  5. Secondary family zone located near the patient bed provides space for the family and patient to spend time together comforably
- Technology:
  1. Media wall located on foot wall is controlled through a patient tablet
     - Media wall will be equipped with wifi, calling services, and allow patients to watch TV or movies, listen to music, access medical information, or communicate more effiecienty with doctors and staff
  2. Three tablets, one for the nurse & staff, patient, and family will allow easy yet secure access to patient information, and also allow each individual patient to control their own environment
     - Controllable aspects include: temperature, window treatments/daylighting, lighting, media wall, bed, nurse calling/emergency system. This will allow les unnecessary nurse calls and will allow the patient to feel more comfortable and in control of their own environment
  3. Nurse tablet station located on the foot wall can be projected onto the media wall when needed to allow eas of communiation between staff, patient, and families.
- Convenience:
  1. Entrance door way extends into the hallway slightly to allow for more visibility and sight lines for the nurse and staff to the patient
  2. Hand washing sink is located next to the room entrance and is in patient view
  3. Bathroom is ADA compliant for patient convience
     - Bathroom size and doorway size accomdate patients who may require staff memebers help while in the bathroom
     - Bathroom located behind head wall which decreases the distance from the patient to the bathroom
  4. Nurse tablet station located across from patient bed to allow nurse to access patient information and records easily from room to room
  5. Prescription cubby can be filled from the hallway and accessed from the nurse station inside the room
  6. Rooms all face the same direction to prevent medical erros and allow for a streamlined efficient process
  7. Storage located under curved sofa and casework framing the patient bed
- Aesthetics:
  1. Large windows maximize daylight levels, which are controlled by the patient for comfort
  2. Bright colors are used to create a vibrant and stimulating atmostphere to provide positive distractions
  3. Unconventional shapes, furniture, walls, and decor add to the vibrant and playful atmostphere
  4. Colored lighting affects create a fun and constantly changing environment that is controlled by the individual patient based on their mood or need
- Sustainability:
  1. LED lighting will decrease energy use
  2. Use of daylight to decrease the need to artificial light
  3. Low flow toilets and sinks
  4. LEED materials

Lighting Concept:

The lighting concept for this pediatric patient room includes three main focuses: natural light, color, and aesthetics.

Natural Light:

Large windows are located in the patient area and family zone to provide a connection to the outdoors, provide natural light,and to help lower energy costs that would otherwise increase due to excess use of artificial lighting. The patient room is programmed to correspond with a daylight sensor that will dim or intensify artificial light sources depending on daylight levels. Also, each space will be equipped with vacancy sensors to conserve energy by automatically turning off light fixtures when each area is no longer occupied. Each type of light source, including recessed fixtures, task lighting, and window treatments to manage daylight levels, will be individually controllable through both patient and family tablets to provide optimum comfort.

Color:

Because the primary users of this space are children, lighting design is a unique way to create an exciting, playful, a stimulating environment that is flexible for each patient. Each of the circular ceiling fixtures incorporates LED lighting and is controlled through the patient's bedside tablet. Each patient can customize the lighting effect through color selection and transitions. These fixtures also serve as way-finding from room to room and can be dimmed to function as a nightlight. There is also a setting to enhance the brightness and color temperature to that of a standard light source when needed.

Aesthetics:

Aesthetics is a crucial aspect of creating a sustainable environment. Applying lighting techniques such as color and daylighing create a stimulating environment that will create positive distractions to decrease patient anxiety. The customizable controls allow the individual patient to create their own unique atmosphere, adding visual interest and prolonged comfort.

Materials:

Upholstery
Textiles are stain repellant, scrubbable, and are treated with anti-microbial finish
Wal Coverings
Low VOC adhesive, scrubble and treated with anti-microbial finish
Flooring
Commercial grade vinyl composition tile
3Form Partition
Varia Ecoresin full circle product