



CHILD-FRIENDLY PATIENT ROOM

Patient and Family-Centered Environment that Empowers the Patients & Family

RESEARCH SUMMARY

FAMILY-CENTERED CARE

The patient room should provide a meaningful experience for everyone involved—patients, families, physicians and nurses (Nagappan & Chandler, 2013).

- The goal is to combine social and physical space to create an experience that is meaningful to people (Ruga, 2008).
- The patient room should be designed to extend the daily life of the patient, with a full range of communication tools (Nagappan & Chandler, 2013).

CONSIDERATIONS FOR THE PATIENT ROOM

- “**Ergonomics** come into everything which involves people,” according to the British Ergonomics Society (Kopec, 2009).
- The physical environment in a patient room should adapt to patients, staff and family members rather than vice versa (Kopec, 2009).
- **Incorporation of art** helps reduce stress, facilitates positive feelings, supports efforts of staff and encourages spiritual and **therapeutic** wellness. (Miller, Swenson & Robinson, 2012)
- The built environment should be created to afford more than one function, according to Gibson’s **affordances** theory (Greeno, 1994).
- Larger patient rooms will be needed because of the shift from being a monitoring place to an operating place (Silvis, 2014).

TECHNOLOGY

According to the 2014 Healthcare Facilities Symposium & Expo Event Guide, sensory technologies allow care providers to:

- synthesize multiple pieces of patient data
- connect with campuses and experts across the globe via telemedicine
- review medical information in ultra high resolution
- transform passive presentation into synthesizing experiences

Although today’s health system focuses on efficiency and scientific mastery that technology can achieve, the power of human connections cannot be ignored.

CHILD-FRIENDLY ENVIRONMENT (Kopec, 2009).

- Children have unique physical and biological characteristics that make them especially vulnerable to environmental hazards.
- Children need a rich and educational environment containing a variety of sensory stimuli and activities.



GOALS

Sustainability: To create a safe, hazard-free environment using sustainable materials. To pay attention to the human body, and to apply ergonomic principles to furnishings and technology.

Therapeutics: To create an environment that is therapeutic to patients’ healing and recovery. To design a therapeutic area that is memorable to the family and visitors as well as patients.

Efficiency and safety: To create an environment that is safe for everyone and that maximizes staff efficiency. To design and specify products that satisfy functional needs and design esthetics.

Control and affordance: To create a space that is controlled and empowered by the family members’ positive experience. To integrate technology in a controlled setting.

And finally

Engagement: To design a place to flourish. To foster a positive atmosphere by encouraging family members to participate in activities that promote healing.

CONCEPT: A JOURNEY THROUGH A CHILD-FRIENDLY PATIENT ROOM

A **child-friendly** patient room is a new model to embrace family members’ experience and accommodate their special needs. It is a **cohesive** environment for the adult patient and his/her family. To facilitate a more pleasant healthcare experience, empowerment design features are introduced to the foot wall of the patient zone as well as the family zone of the patient room. Family members can experience a **vivid, inspiring** and **meaningful journey** accompanying the patient during his or her stay. During this journey, patients are able to directly communication and interact with their family, friends and experts through technology, and become part of the community. Patient care is supported by an art program where family members are inspired and stimulated by participating in a positive activity surrounded by a **multi-sensory** environment. It is not “home-like” but it is “**home-feel**”.

Location: These prototype patient rooms are located at the South wing of the existing building which is located in an urban environment. There is a nurse’s station located in the middle of the South wing corridor. On both sides of the corridor are the prototype rooms. The example patient room (above) is a patient room located on the right side of the corridor with its window on the east exterior wall.

Reference

- Greeno, J. (1994). “Gibson’s Affordances.” *Psychological Review*. 1994, Vol.101, pp. 336-342
- Kopec, D. (2009). *Health Sustainability and the built Environment*. New York: Fairchild Books, Inc.
- Miller, R., Swenson, E. and Robinson, T. (2012). *Hospital and Healthcare Facility Design*, London: W.W. Norton & Company, pp. 218-231.
- Nagappan, S., Hartsell, A. and Chandler N. (2013). “Teaching in a Family-Centered Care Model: The Exam Room as the Classroom.” April 15, 2013. <<http://pediatrics.aappublications.org/content/131/5/836.full.html>>
- Ruga, W. (2008). “Your General Practice Environment Can Improve Your Community’s Health.” *British Journal of General Practice*. 58(552), pp. 460-462.
- Silvis, J, Ed. (2014). “Stakes Are High For Patient Room Design.” *Healthcare Design*. Vol: Nov. 2014, pp. 42-52

Efficiency and Safety

- (A) Prefabricated footwall made of Corian, a solid surface material, has radius corners that reduce hospital-acquired infection, and can be quickly installed. See Footwall Elevation.
- (B) Prefabricated accessible bathroom using Corian by Altor Bathroom. It is located inboard where the IV pump is.
- (C) Mondo rubber flooring, hazard free natural and synthetic material meeting national and international standards.

Therapeutics & Engagement

- (D) Corner garden containing plants with multisensory features. Patient and family can participate in caring for the plants.
- (E) Partition defines personal spaces. In addition, it features interactivity and functionality. See Partition Elevation.
- (F) Acoustical solutions
 - Movable acoustical panels by Baux, attached by magnets.
 - Ecophon Solo acoustical panel, suspended below the soffit with added benefit of absorbing sound on all sides. Akutex finish.
 - Soundlight Comfort Unit is a free-hanging unit with integrated LED luminaires.
- (G) Large windows allowing maximal natural lighting.
- (H) Art activity and display

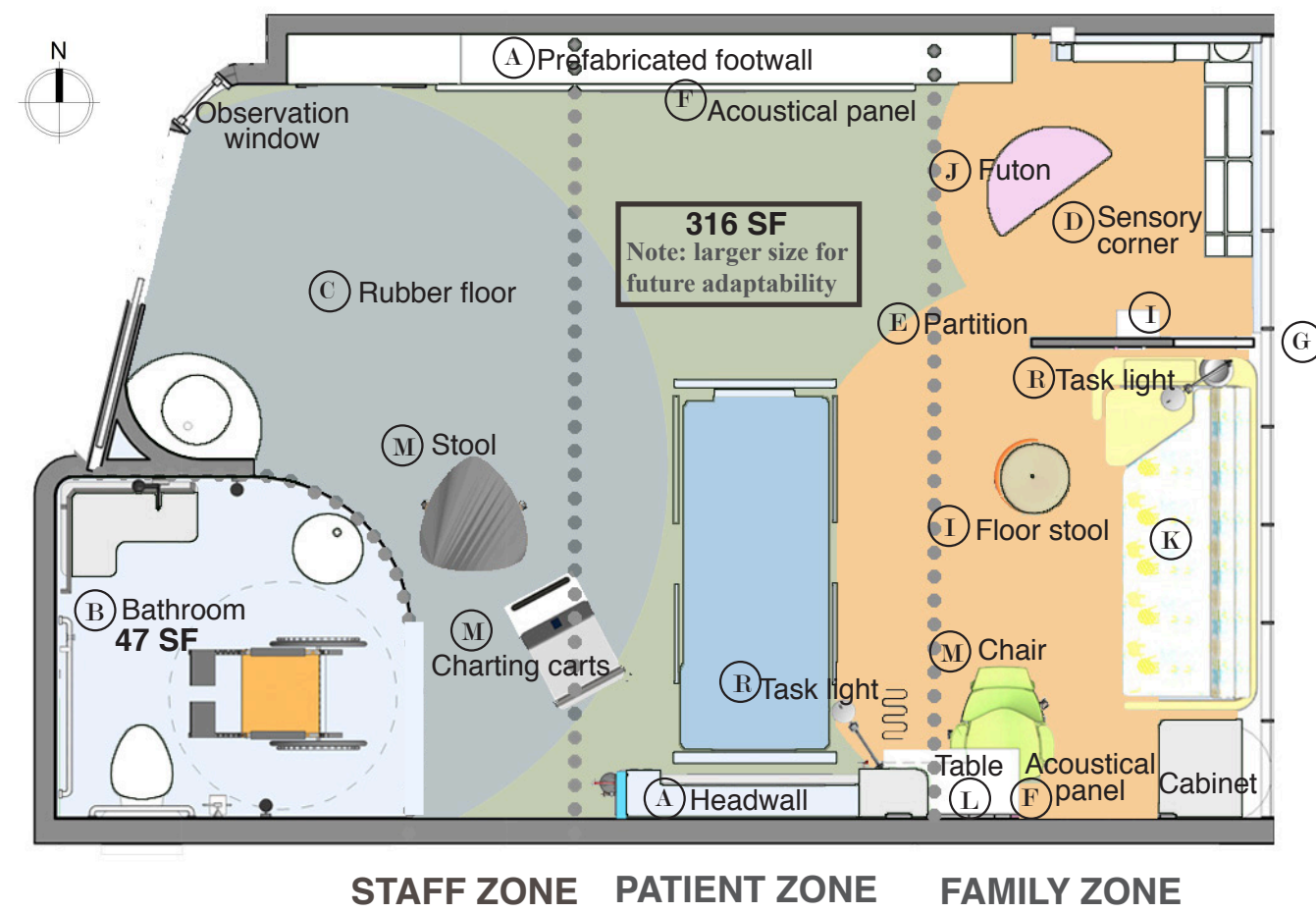
Ergonomics, Affordance & Control

- (I) Mukula floor cushions which can be attached to the wall when not in use. Mukula includes cushions of different shapes and heights.
- (J) Karup Baby Nest futon, 0.75x1.50m. Two of these can make a round bed.
- (K) Flop Sofa by Nemschoff with multi-use features including light, built-in spill-proof power and USB.
- (L) Steelcase customised table, movable. Can be used as writing desk and bedside table.
- (M) Human scale ergonomic products
 - Chair, adjustable
 - T7 TouchPoint charting carts, easily adjustable and maneuverable
 - Saddle Stool
- (N) VersaCare® Med Surg Bed by Hill form.
- (O) Patient Companion (PCU) NXT, flippable over-bed table with tablet on one surface, charging surface, magazine pocket and waste basket.
- (P) Staff ergonomic zone, see Side Headwall Elevation.

Sustainability

- Mondo rubber flooring, 100% recyclable up to the end of its lifecycle.
- "Green" finishing and material. The ceiling above family zone is local recycled or reclaimed wood.
- Ecophon Solo acoustical panel, 70% recycled raw material. Baux acoustical panel made of recycled material
- Crypton Green® Fabric, environmentally preferable fiber content.

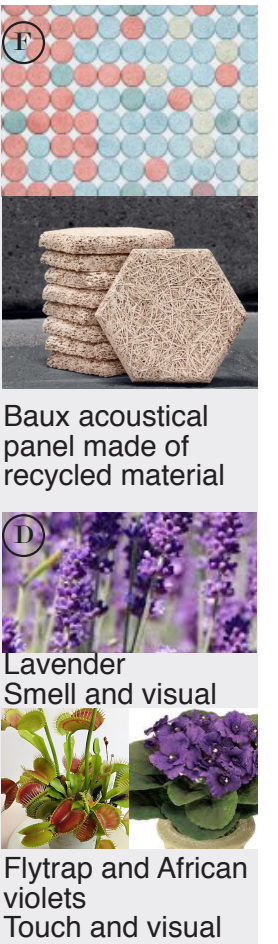
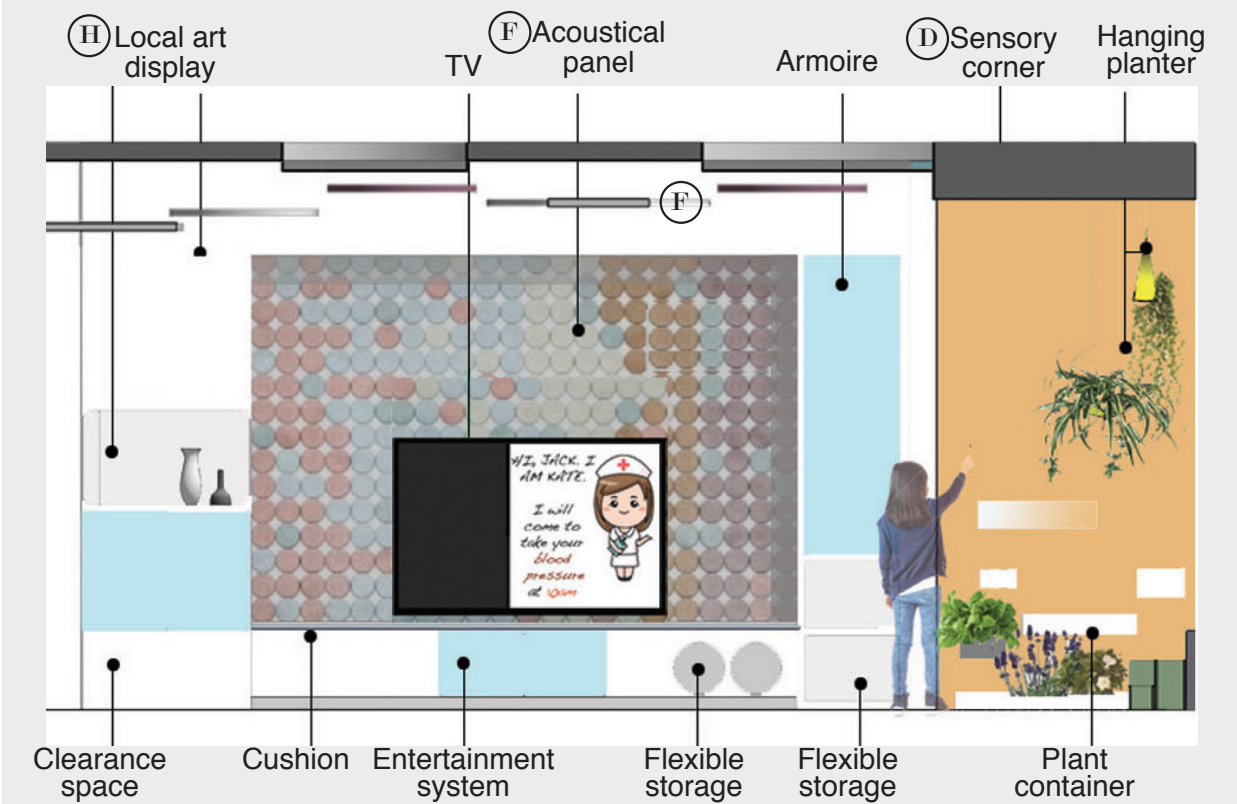
FURNITURE FLOOR PLAN 1/36" Scale



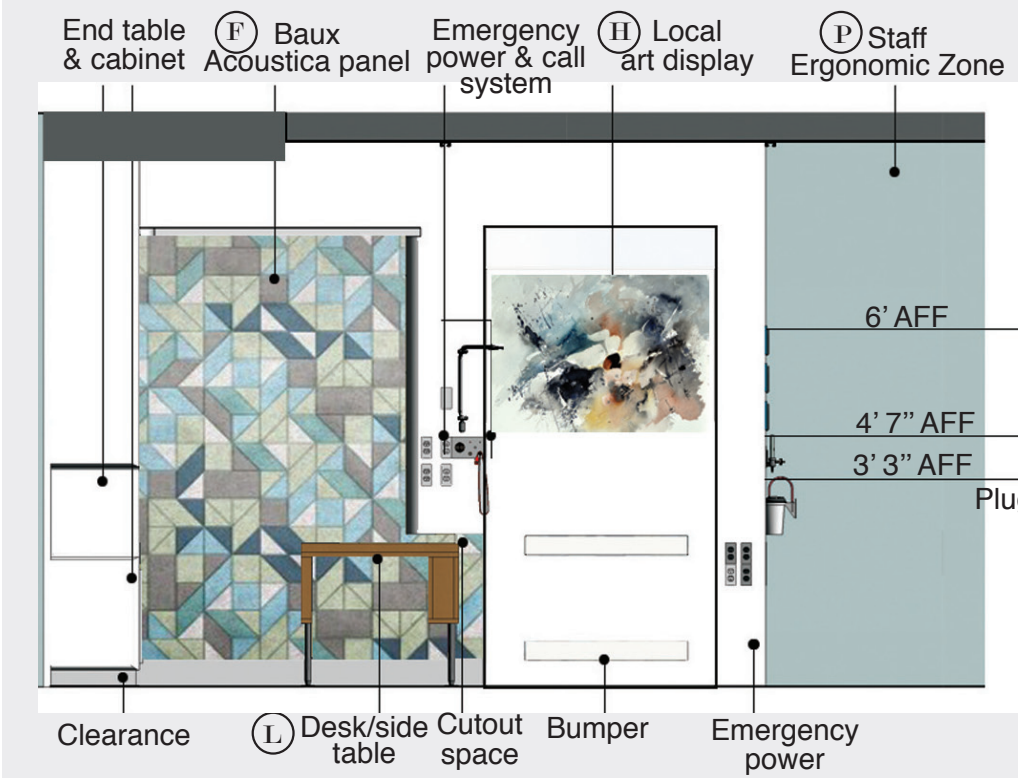
FINISHES AND FURNITURE



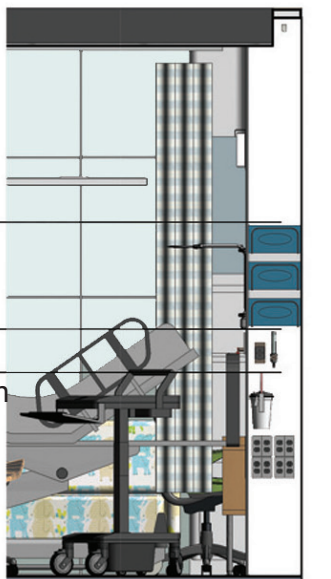
FOOTWALL ELEVATION 1/36" Scale



HEADWALL ELEVATION 1/36" Scale

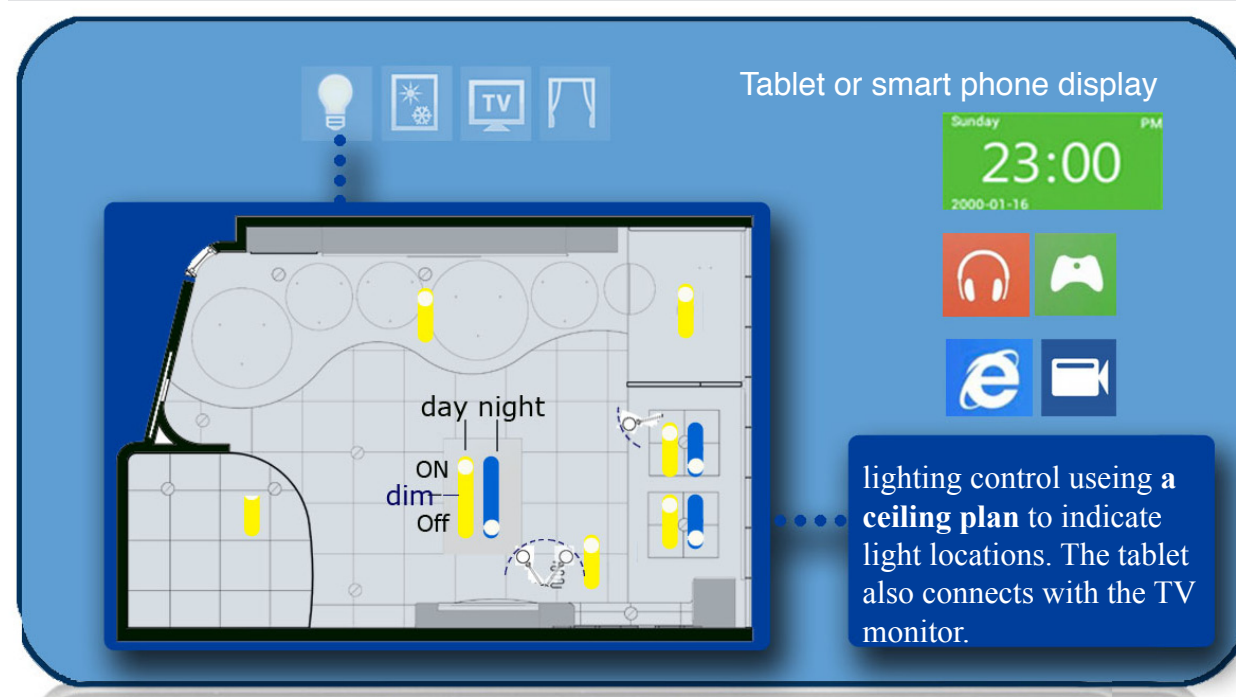


SIDE HEADWALL ELEVATION



LIGHTING CONCEPT & CONTROL

Lighting plays an important role to create a therapeutic environment. This patient room will provide adequate Lighting with features of personal control.



FAMILY ZONE & PARTITION 1/36" Scale

