



Design Goals

- Embrace a holistic approach in the healing process.
- Allow patient empowerment through control and customization.
- Integrate aspects of nature as part of the healing process.
- Incorporate sustainable methods and materials throughout the room.

Site Specification

Located in Los Angeles, Heart-To-Heart Hospital is a privately owned cardiac speciality hospital. The room prototype is designed for surgery recovery patients. The room is located along the South wall, with the window facing South, providing optimal sunlight for the patient, while not over-heating the room. The hospital exterior is surrounded by a Japanese platform garden, increasing the amount of fresh air around the building.

Research

Good design has been proven to help heal the sick. Patients have requested for 30 percent less pain medication while recovering in a comfortable, aesthetically pleasing space (New York Times, 2014). Healthcare design has moved towards being a more comfortable and inclusive, yet still efficient, experience for medical staffs, patients, and family members.

Same-handed configurations are generally preferred by medical staffs and patients, as such rooms tend to increase work efficiency and limit noise transmission between rooms (Atkinson, Jim, et al. 2014). Single rooms, while perceived as being more labour intensive for medical staffs, are generally more effective for emotional and physical healing; patients are able to focus on their own well-being in a private, quiet, personalized space (NHS Estates 2005). To promote a holistic healing approach, zoning design should be prioritized. Caretaker zones need to be efficient, functional, and convenient. Patient zones need to be customizable and comfortable to promote a stress-free environment. Family zones need to be supporting the patient zone, while still being a comfortable space for family members to stay for long periods of time; these areas are becoming increasingly convenient in terms of accommodation for family members.

Cardiac surgery patients generally experience high levels of discomfort after surgery. Many patients lose their appetite, and feel nauseated by the smell of food (Hamilton Health Sciences 2014). They may also have difficulty sleeping, have shortness of breath with activities, and have mood swings and depression for a period of time. To avoid blood clots, post-surgery patients are encouraged to exercise and walk around.

Hamilton Health Sciences. "Path to Recovery After Heart Surgery." Patient Education (2014): 62.
Jim Atkinson, AIA, EDAC, Jim Hohenstein, AIA, and Cyndi McCu. "Using evidence-based strategies to design safe, efficient, and adaptable patient rooms." Healthcare Design (2011): 30.
New York Times. New York Times - Art and Design. 21 August 2014. Internet. December 2014.
NHS Estates. "Ward Layouts with Single Rooms and Space for Flexibility." The Stationery Office (2005): 63. Document.

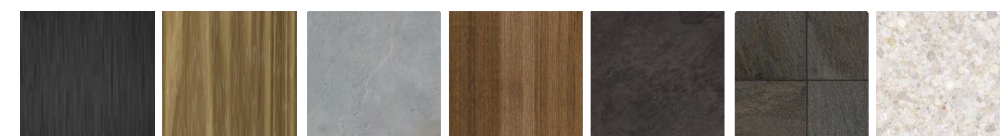
Lighting Concept

The space incorporates a combination of layered natural and artificial lighting throughout, allowing patients to customize their lighting level from their electronic tablets to suit their preferences. A floor to wall window on the south side lets in a large amount of natural light, quietly illuminating the room during the day. Window coverings can be drawn by the patient from the bedside with motorized electric curtain automation.

In the evening, subtly lit linear recessed lights extend throughout the room, symbolizing the mending of scars; cove lighting highlights curvilinear ceiling planes, creating a calming space for healing. Task lighting are integrated into the ceiling and the millwork to maintain a minimal clutter-free environment. Automatic occupancy sensors have been installed in the bathroom to save energy as well as provide patient safety.

Materials

Sustainable finishes have been selected in order to minimize the environmental impact while ensuring patient comfort. Recyclable hospital-grade anti-bacterial rubber flooring that mimic the pattern and texture of wood is applied throughout the room. It minimizes noise levels to promote quality sleep and reduce stressors. High quality GREENLAM Green-Guard certified laminates are used for millwork; working together with the interior green wall, they ensure patients get the best quality of air possible. A rammed earth wall sits in the Zen garden, enveloping patients inside the tranquil sanctuary.



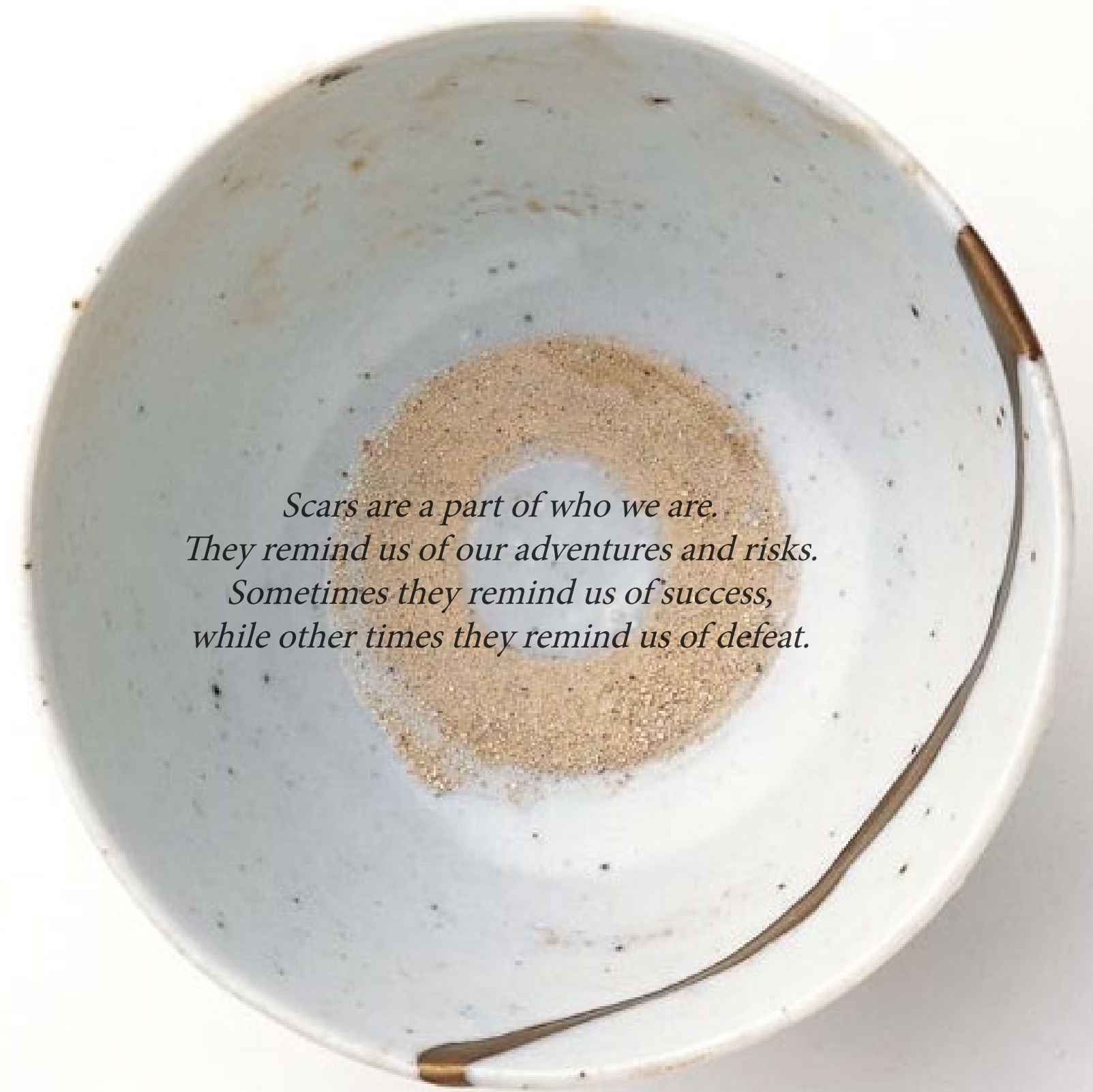
金継ぎ [KINTSUGI]

Kintsugi, the Japanese art of repairing broken pottery with gold lacquer, understands that the piece is more beautiful for having been broken. Emphasizing intrinsic beauty through imperfection, Heart-to-Heart Hospital encourages holistic healing through embracement, strength, and empowerment.

The serene patient room has a warm, neutral color scheme. Sustainable wood-textured rubber flooring creates a minimalistic restful space. Linear recessed lights extend throughout the room, symbolizing the mending of scars, whilst curvilinear lines are used throughout to represent the journey of physical and emotional healing.

Patients are empowered through the ability to control their environment. Technological systems allow personalization of the room, including layered lighting, automated window coverings, and smart glass for privacy.

Natural sunlight and a view of the raised Japanese garden outside the window interlink the exterior with the interior. As night falls, moving shadow-plays of tranquil sceneries can be projected onto window blinds to gently ease patients to sleep. A green wall at the end of the bed promotes fresh air; they grow and thrive throughout the patterned crevices, illustrating strength and breakthrough.



*Scars are a part of who we are.
They remind us of our adventures and risks.
Sometimes they remind us of success,
while other times they remind us of defeat.*

Floor Plan

Smart glass separates the view between the nurse's station and the patient bed. With smart glass technology, patients are able to choose when they want the glass to be translucent or opaque. Empowering patients by offering control of the space provides them with a sense of ease and comfort.

Decentralized nurses station are located immediately outside patient rooms. It offers both patient / family privacy as well as a quiet and convenient space for nurses to concentrate and respond immediately to medical situations. A portable charting station is also available beside the patient bed for closer contact.

Opaque glass panels can be pulled out to separate the family area from the patient during medical procedures. It doubles as a glass white-board, which is another fun way for families to interact with the patient.

Patient rooms are designed with same-hand configurations. By stacking room plans instead of mirroring, important equipment and buttons can be kept on the same side, so doctors and nurses are less likely to make mistakes during treatment.



Furniture



Elevations

The glass wall panel incorporates a LED glass TV screen which displays the patient's health status as a form of visual communication between the doctors, the patient, and the family. It also doubles as an entertainment unit. Patients can watch TV, play video games, or video chat with friends and family. Data such as medical reminders and exercise suggestions for the patient can be sent remotely to appear on the screen. Height can be seamlessly adjusted to suit various viewing preferences.

Paper towels, sanitizer and glove dispensers are concealed behind curvilinear millwork.



The cove's built-in desk incorporates an interactive computer screen for family entertainment.

Back cushions can be folded down to become a bed for two during overnight stays.



WEST WALL ELEVATION

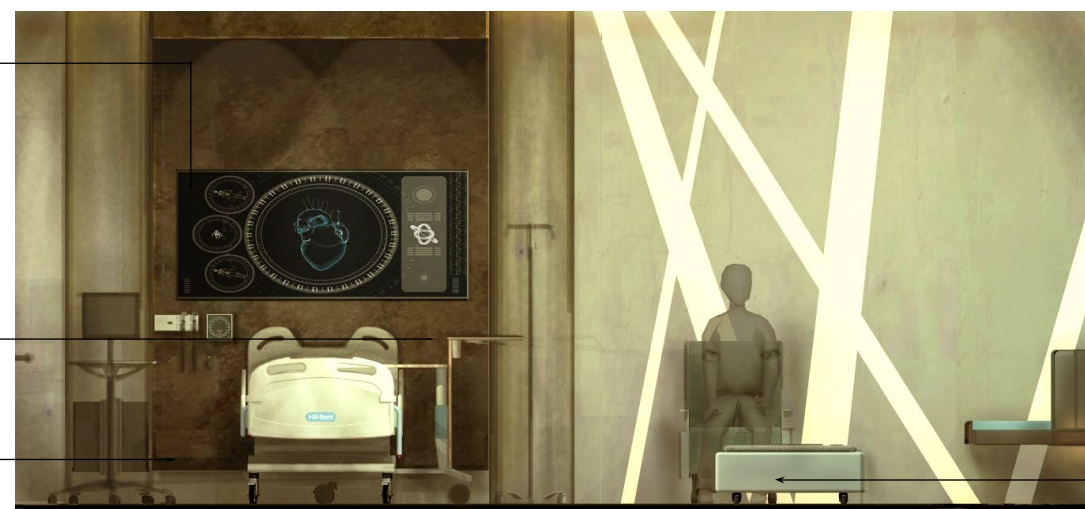
The sink at the entrance of the room contains sensor technology and compliance indicator light to ensure nurses wash their hands thoroughly.

Millwork incorporates a microwave, espresso machine, a mini-fridge, as well as storage for blankets and pillows for family which also doubles as a personal locker.

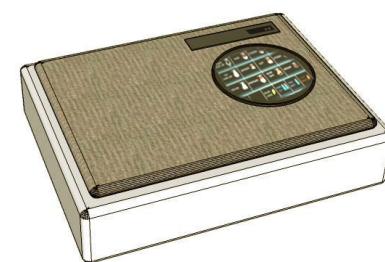
Large built-in screen monitors patient's overall health, visible from the nurse's station outside.

Double-tiered overbed table allows patient to place their items on there without interfering with the nurses' work surface.

Built-in side tables serve as storage space for patients. Personal lighting and window controls can be found here.



EAST WALL ELEVATION



The upholstered coffee table, which can be used as a seat, can be tucked under the built-in seating to create more room for activities. It also contains an interactive touch-screen surface that offers menu items for in-room delivery. Outlets and charging docks are also incorporated.

