AIA Presentation - Guided by Transformation: Building a Framework for Behavioral Health Design Ideas

Date: August 20th, 2019

Question: Can you share your approach to have patient toilet rooms accessed form the hallway rather than directly through the patient room? Many jurisdictions require direct access from the patient room.

Answer: This topic was heavily debated and reviewed on various site visits of peer institutions. The decision to have the toilet rooms accessed from the corridor came down to the acuity and diagnosis of the patients they expect to treat. CHKD did not want specific units dedicated to diagnosis, rather a universal room model of care where you may have patient with eating orders, where their bathroom use needs to be heavily supervised. All toilets will be locked, and patients will need to ask staff to gain access. FGI 2018 section 2.5-2.3 Child Psychiatric Patient Care unit permits the patient toilet room to be accessed from the corridor outside the room.

Question: What was your approach to balance vibrant color with needs of children on the autism spectrum that might have high sensory-sensitivity to vibrant colors?

Answer: Our approach to color application was to use natural, mid-tone neutral flooring for a grounding effect; walls are primarily a soft white with the mindful juxtaposition of bold colors. We were intentional with color placement so that there would always be restful whites within each patient's field of vision, so as not to over-stimulate. We also for the most part kept color vignettes monochromatic meaning that colors are layered. Specifically, color in sleep rooms is limited to a color wrap at the bed zone (more saturated at the soffit surround, more muted on the adjacent wall, with a matching tactile panel); looking outward, the remaining walls are white and the flooring is a mid-tone wood-look. The art panel is placed on the angled wall, so not in the direct line of sight while resting. Sensory (*Snoezelin*) Rooms are available to provide a controlled multisensory environment (MSE) as an additional therapy option. They can include lighting effects, tactile experiences, cause and effect items, sound effects and motion stimulation.

Question: Are the patients mixed by gender? If so, are there anticipated safety issues at all?

Answer: Yes, patients are mixed by gender, age and diagnosis on each unit. Patients will get into smaller groups of similar diagnosis and age of 4-5 patients and will go through daily programming each day. At night there will be 15-minute checks of

the patient room. Given the highly supervised nature of their program CHKD does not see mixing genders as a safety issue.

Question: Is there a process improvement effort with parent and patient advisory groups?

Answer: This process effort is in development. Since inpatient MH care is a new service line for CHKD we were not able to gather pre-occupancy data, however we did work with MH team to establish specific goals that are not yet widely adopted in the inpatient environment. They include parent sleep accommodations in the patient room; parent engagement and freedom of movement throughout the care environment, a hands-off, no seclusion protocol supported by the unit configurations, and sensory tools for patient calming. The parent and patient advisory groups were very specific about 'nice-to-have' and must-have' aspects of the care environment. The must-haves included a safety-first mind set; they were delighted to hear about the impact of natural light, views, outdoor recreation, art and music therapy and patient empowerment (especially the color-changing light & soothing sounds as part of morning and nighttime rituals and the potential for aromatherapy). They were particularly grateful for the ability to room-in as well as the level of family engagement during the treatment day.

Question: Could you please describe the revenue stream that supports this facility? Private insurance, Medicaid, Medicare, veteran benefits, private pay, etc...

Answer: Yes, all of the above. CHKD is a not-for-profit institution. The exact amount anticipated from each revenue stream has not been shared with Array.

Question: Has the project given you any additional insights with regards to room configurations? Presumably the requirements have not changed (compared to other projects). Do you see a standardized room layout for projects in the future?

Answer: Standardized room layouts per project have benefits in that you can better manage patient census changes and staffing changes that go with that. The other advantage was to create rooms that were highly standardized to take advantage of prefabrication. Each project has their unique programmatic issues; therefore, we have not seen one standard room layout that is best for every client or situation. Patient acuity levels, Toilet configuration, Private vs. Semi-private and in room accommodations for families would change our approach to each room we design.

Question: The project start evolved much more than the physical environment. How did this project start as a programmatic concept?

Answer: The project started as a lower height building constructed on top of the parking garage. The decision to build a tower and divorce the parking garage was to gain efficiencies in the garage structure and ultimately saved the project costs.

Question: How do you incorporate aroma therapy into the facility?

Answer: This is a new initiative that has strong interest and support but is still in development. The most basic option being reviewed is the availability of common essential oils such as lavender, peppermint, eucalyptus and lemon. These might be available in simple spray bottles, diluted by water, which could be sprayed in the room as part of winding down or waking up-and would be controlled by staff along with other toiletries, or in specific circumstances-lavender-which is recognized as a sleep-aid when applied to the bottom of feet-might be made available for a parent to apply to their child to aid in the night-time routine. We will be re-visiting these concepts as building documentation is complete and construction gets underway.

Question: What was the cavity area between rooms? Just mech chase or did it serve another function?

Answer: The chase was a result of the study to eliminate blind spots within the room from the doorway. As the design progressed this chase accommodated built in storage that was locked and accessed from the room.

Question: What was the reason for creating void space between inpatient bedrooms?

Answer: See answer above.

Question: Are you employing any barrier resistant solutions on the room openings?

Answer: Yes. We are utilizing a patient room door with a sidelight door that a staff can gain access into the room if needed. The sidelight door opens into the corridor.

Question: How were the colors selected for the sleeping rooms?

Answer: In an effort to create a normalized environment, the floors are a medium wood tone and walls are primarily a soft white, with one full-height art panel with a simple, yet whimsical vector graphic infused into the solid surface panel. We chose 3 high chroma colors: an azure blue, cerulean blue-green and citron to create a color canopy at the sleep zone with a secondary lighter tint of the same color on the adjacent wall with an inset of a matching tactile panel beside the patient pillow for self-soothing. The only other color introduction will be on the patient stool, and the color-changing LED down light in the drywall canopy above the patient bed and coordinating night light on the side wall. The goal was to

create a cocoon effect with the color at the bed area, with 3 walls of soft white looking out into the room from the bed, to create a restful field of vision.

Question: How did you handle design for anti-ligature?

Answer: We conducted a series of workshops where we shared anti-ligature fixtures, devices and accessories with CHKD facility leads, and once vetted, presented these options to the end users to gain their approval. When possible, we procured actual fixture samples for evaluation during the mock-up phase.

Question: The casework seemed to have sharp corners. What was done for patient safety?

Answer: What was seen in the mockup are simple plywood boxes to define space and storage needs. The millwork within the room will be constructed of a phenolic material such as Trespa, that will have eased edges and radiused corners at the solid surface tops and waterfall edges.

Question: How was anti-ligature design incorporated into the patient rooms and private rooms?

Answer: See response to anti-ligature question above.

Question: When we design facilities for children with autism spectrum disorder, sometimes we come across difficulties with alarm features such as light strobes or noise disturbance...could you share your experience?

Answer: We are designing the units to minimize noise through the finish materials and wall construction used as well as eliminating items like overhead paging and confining that to staff only areas. For code required fire alarm devices the Virginia Construction Code section 907.2.6 Exception #2 states that occupant notification systems are not required to be activated where private mode signaling installed in accordance with NFPA 72 is approved by the Fire Marshal and staff evacuation responsibilities are included in the fire safety and evacuation plan required by Section 404 of the International Fire Code.

Question: What was the cost per square foot of construction

Answer: That is unknown. The total construction cost is $165M.

Question: Could you discuss the cost involved with travelling with such a large group to tour other facilities, and the cost/benefit discussions with your client?

Answer: Our cost was part of the project reimbursable expense. Our client was satisfied with the travel expenditure as they saw it as an invaluable resource to connect

each CHKD participant with their peers at highly regarded institutions; nurse-to-nurse; LCSW to LCSW; facility lead-to-facility lead, etc. The peer institutions were candid and transparent with their protocols, safety measures, incident-free days and countermeasures, recruitment and retention challenges and process improvement work. Relationships started as a result of these tours have evolved, and our client has found a real generosity of sharing. I believe they plan on extending these same courtesies once they are operational as way to continue to raise the bar for the compassionate and state-of-the art care for those in need of MH services.

NOT ANSWERED

Question: On the front end of this project, did the client consider land options which could support a single-story residential environment versus a high-rise building development.

Answer: When Array was selected for this project the site and feasibility study was already completed.

Question: How did you integrate the operation flows (i.e. dispensing home medication to patient) in the design progress. Is it figured out in the programming or in later phase?

Answer: Some operational flows have space impact and others do not. The home medications component did have us design a medication room, with dispensing window, near the front of the suite so that families had easier access. The future state mapping process did identify many operational flows which became part of the transformation plan.

Question: Are patient rooms locked during the day? Do any therapeutic activities/discussions with the staff happen in the patient room?

Answer: Yes, they are locked during the day with very limited activity occurring in the rooms. The goal is to get patients out of their room in programming throughout the day.

Question: What was the duration of the design exploration and time to CDs

Answer: We started the design in earnest roughly 1 year ago in July 2018, CD's for the core and shell will be finished the end of this year with the fit-out finished in March 2020.

Question: What solutions did you investigate for achieving glazing requirements that meet AAMA 501.8 and ASTM F123 Class 1.4, especially since AAMA 501.8 is new to the FGI 2018

Answer: The window systems at the exterior wall will have polycarbonate glazing and integral blinds in patient rooms. We are selecting multiple manufactures for bidding purposes that meet the 2000 ft/lb impact testing.

Question: Is there a formal plan for post-occupancy assessment?

Answer: See above, fourth question for context; The design team and the owner have committed to a post-occupancy assessment; however, the actual plan is pending.

Question: Are the two beds in the patient room to provide different sleeping configurations or for a family member to stay overnight?

Answer: The second bed is for a family member; all rooms will be private.