

# Behavioral design strategies

Providing a safe and therapeutic ED environment

BY ANNE M. COX, AIA, ACHA, EDAC

**B**eginning any behavioral health project takes a unique frame of reference that allows designers to understand that the environment of care is a critical component of the patient care plan. A truly successful project is one that provides patient and staff safety, along with a pleasant environment that provides patient privacy, dignity and respect.

Emergency departments (EDs) are unique environments of care when it comes to behavioral health needs. They provide acute care without a prior appointment, so prediction of when, or if, care for a behavioral health patient will be needed, is not possible.

The patient type also can vary widely. Patients can present with acute care needs that must be stabilized but also have a range of emotional, mental or substance misuse issues. Prediction of the case load and patient type makes it hard to determine how prepared a department

should be. However, one thing is certain, behavioral health cases in the ED are on the rise.

### Rising case load

The rising case load is one reason that many EDs have found the need to prepare a behavioral health protocol for their facilities. Another reason is the Centers for Medicare & Medicaid Services (CMS) Clarification of Ligation Risk Policy memo. Each facility will need to carefully review its own need and application of the memorandum. The Joint Commission also has brought forth the Standards BoosterPak for Suicide Risk (NPSG.15.01.01) with guidance on screening protocols for patients being treated for behavioral health concerns.

EDs do not need to meet the same standards as an inpatient psychiatric facility, but if they are treating behavioral health patients, they should provide a safe environment. Some facilities may make the

decision to provide 1:1 observation as their accommodation. For others, the safety level beyond 1:1 observational monitoring can be improved through a number of design interventions, including:

- Room type and location planning.
- Determining the appropriate environment of care and safety level.
- Mitigating environmental risks and planning for ligation-, tamper- and impact-resistance as well as visual access and security.
- Material selections that can add to the therapeutic environment.

A careful combination and study of these concepts is needed before a facility decides on a design strategy. A planning team of architects, engineers, facility staff, clinicians and other stakeholders is best if planning a larger project. A coordinated team would look at all aspects of project planning from cost and schedule to project scope.

Facility professionals should always

### ANTI-LIGATURE / LIGATION RESISTANCE

1. Ligation-resistant door hardware. 2. A ligation-resistant paper towel dispenser. 3. Recessed toilet paper dispensers allowing toilet paper to be easily removed. 4. A grab bar with a safety fin. 5. A retractable toilet paper holder. 6. A short nurse-call cord. 7. A ligation-resistant toilet with push-button controls. 8. Ligation-resistant shower controls.



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### TAMPER RESISTANCE

1. Tamper-resistant outlets and tamper-resistant screws. 2. Tamper-resistant push buttons. 3. Lockable stainless-steel panel for concealed gas and electrical outlets. 4. Sheet flooring with cove base detailing. 5. Pick-resistant caulk and a solid-surface shower enclosure. 6. A contiguous lock-down ceiling with tamper-resistant ceiling fixtures.

keep in mind that behavioral health projects require careful attention to all details, from floor to ceiling and entry to exit protocols. “A safe environment is critical; however, no environment can be entirely safe and free of risk,” the Facility Guidelines Institute (FGI) states in the 2018 edition of its *Guidelines for Design and Construction of Hospitals*. “Each organization will need to determine the appropriate environment for the treatment programs it provides and the patients it serves.”

### Appropriate environment

Finding the appropriate environment of care for an ED beyond 1:1 patient monitoring can range from providing one or two appropriate rooms to a whole section of an ED dedicated to behavioral health.

Each facility needs to decide on the appropriate treatment area for the patients they serve. If facility leaders decide to provide a few safe rooms, The Joint Commission has included advice on ED room design in its Standards Booster-Pak for Suicide Risk. Its tips section notes, “Emergency rooms can use an aluminum roller door over counters, in-wall gases, and cupboards that can be quickly locked down to make the room of a patient/individual served safe.”

Further advice would be to carefully consider the location of these rooms. Rooms that are located too closely to an entry or exit point may provide easy means of patient elopement. If not carefully

monitored, patients could be gone before staff realize that they have left their rooms. As behavioral health includes the spectrum of patients, including those who may not want to be at the facility, room location and fit-out should be chosen carefully. Large windows can be helpful for staff to see into the room; however, other patients may have the same ability to see into the room. Maintaining patient safety along with privacy, dignity and respect should be at the forefront of room location choices.

Once a facility has decided on one or two rooms or an entire unit, there is a series of tools that can be used to help define the environment of care. If a facility plans to use roll-down shutters, the rooms can be flexible to serve other patients when not in use for behavioral health. While this is an appropriate safety and treatment solution, it does not provide a therapeutic or healing design. If a patient is medically stabilized, there are alternate safe rooms that can be provided for a more calming environment.

The rooms not intended for 1:1 observation need to be ligature-, tamper- and abuse-resistant, and have visual access and security. But with careful choice of room environment, a safe and clinically appropriate environment can be provided, ultimately ensuring better patient-centered care. Seclusion rooms, a different type of safe room, provide solitary containment in a protected environment and can be closely monitored by staff. In some

psychiatric emergency settings, this type of room may be needed. The FGI *Guidelines* clearly defines the requirements for a seclusion room if a facility decides to provide one in its ED. Every facility needs to decide on its needs based on its patient population. Most facilities likely will not be including a seclusion room in their EDs.

Defining the appropriate environment of care for the rooms that an ED will provide is an example of the crucial attention to detail that makes for a successful project. One of the first steps is to select the appropriate level of safety needed in any rooms provided. The *Behavioral Health Design Guide* by James M. Hunt and David M. Sine includes a Patient Safety Risk Assessment (PSRA) tool.

The PSRA was developed with inpatient psychiatric facilities in mind, but the advice can be applied to EDs. Patients will be in admitting, waiting and treatment areas and not in staff-only areas like medication, supply or utility rooms. The PSRA addresses five levels of concern for the safety of patients and staff:

**LEVEL I:** Areas where patients are not allowed or under constant supervision (e.g., staff and service areas).

**LEVEL II:** Areas where patients are highly supervised and not left alone for periods of time (e.g., corridors, counseling, activity and interview rooms).

**LEVEL III:** Areas where patients may spend time with minimal supervision (e.g., lounge or day room).

**LEVEL IV:** Areas where patients spend a great deal of time alone with minimal or no supervision (e.g., patient room and patient toilet room).

**LEVEL V:** Areas that require special consideration where staff interact with newly admitted patients that present potential unknown risks or where patients may be in a highly agitated state. Because of the unknowns, these areas fall outside of the risk map and require special considerations for patient safety (e.g., seclusion, exam and admission rooms).

If there is intent and opportunity for self-harm, providing a safe environment will take attention to the environmental design of a room.

**A product focus**

Mitigating risk in the built environment includes removing ligature points, providing tamper-resistant products, requiring high-quality, impact-resistant materials and ensuring the proper amount of visual access and security. Improper selections can lead to self-harm or create an unsafe environment for staff or other patients. The mindset needed for behavioral health design

means thinking of products as potential opportunities for self-harm or as potential weapons that could harm others.

• **Anti-ligature/ligature resistance.** Ligature resistance is one of the first design aspects that people usually consider in a behavioral health environment. It is defined in the FGI *Guidelines* as “without points where a cord, rope, bed sheet or other fabric/material can be looped or tied to create a sustainable point of attachment that may result in self-harm or loss of life.” Many typical products used in patient areas have ligature points or are ligature devices, including grab bars, nurse-call pull cords, wall base, door handles/hardware, soap and paper towel dispensers, plumbing fixtures and furniture.

Potential ligature hazards like wall base, long nurse-call cords or shower curtains should not be used. A short nurse-call cord that is still accessible in case of a fall works to mitigate risk. Sheet flooring with an integral coved base lessens the possibility of a typical wall base being removed and used as a ligature device.

Ligature-resistant fixtures would have sloped tops, fins included in grab bars, retractable or recessed toilet paper dispensers and toilet and sink fixtures that do not allow for a means of providing attachment points. Push-button controls, smooth shower controls and automatic sensor controls at a hand-washing sink will remove ligature points. Removing furniture or equipment from a room also is a strategy for limiting ligature points. If a patient is calm and a family member is going to be included in the care plan for a visit, chairs can be brought in as needed. Otherwise, all ligature points should be eliminated by design and only brought in as needed for treatment or care.

• **Tamper resistance.** Tamper resistance is important in behavioral health design as items in the built environment easily can be used as weapons or items for self-harm. Careful attention to product selection and installation techniques are needed to mitigate risk.

If screws used to fasten down electrical plates, gas outlets used for medical treatment, or emergency call buttons are not secured or tamper resistant, they become environmental risks. Keeping a ceiling height of at least 9 feet and having a solid

**ASHE RESOURCE**

**i** American Society for Health Care Engineering members can access the monograph “Converting Medical/Surgical Units for Safe Use by Psychiatric Patients” by logging on to [www.ashe.org/MedUnit](http://www.ashe.org/MedUnit).

**VISUAL ACCESS AND SECURITY**

1. An emergency call system.
2. Large windows at a seclusion space.
3. Security monitors at workstations.
4. Windows at patient’s room for staff visual access.
5. Lock and blind control on the corridor side.
6. Room controls on the corridor side for staff use.
7. Ceiling cameras in patient treatment rooms.



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### IMPACT RESISTANCE AND DURABILITY

1. Impact-resistant gypsum board for sheet wall protection. 2. Tempered window glazing and integral blinds in an out-swinging door. 3. A polished stainless-steel safety mirror. 4. Impact-resistant window framing. 5. A television secured behind plexiglass and audio in the ceiling above the patient's head.

or contiguous ceiling surface are important design factors. Ceilings of gypsum board or acoustical lockdown ceilings with tamper-resistant ceiling fixtures provide a safer environment as well as acoustical privacy. Using acoustical tiles in a lay-in ceiling can provide opportunities for tampering and lead to weapons or self-harm.

Regarding wall surfaces, resistant epoxy sealant, tamper-resistant cover plates and plexiglass enclosures for televisions can be design strategies. Tile with epoxy grout or solid-surface panels can be used in showers to provide a cleanable surface that is water resistant. A sheet-flooring material that can be detailed to have a cove wall base that runs up the wall and be securely fastened in place with a vinyl cap instead of a metal edging eliminates a separate wall base that can be peeled off and used as a weapon or for self-harm. Ceramic or porcelain tile is a poor choice for flooring in behavioral health areas as it is not resilient to falls and easily can cause bodily harm. A resilient sheet flooring may be a better choice.

- **Impact resistance and durability.** Impact resistance and durability are important considerations for the safety, longevity and look of an environment. If products are easily damaged, the small pieces can become weapons or items for self-harm. Part of creating a successful healing

environment is being able to keep it looking well-maintained and attractive. Impact- and abuse-resistant Type X gypsum board that can meet the material quality standard ASTM C 1629 and the ASTM E 695 soft-body impact test should be specified. This will provide surfaces that are manufactured with a greater resistance to surface indentation. Vinyl wall protection can add an additional layer of surface protection. Securing items like door bumpers and grab bars with extra blocking behind the items also will add durability.

Laminated, tempered safety glass, polycarbonate or polycarbonate resin thermoplastic in any vision panels or windows is important for safety. Mirrors of highly polished stainless steel make attractive and reflective surfaces, and do not have the breakage and risk factor of a standard mirror. Enclosing TVs behind plexiglass allows for protection of the unit. Installing a ceiling-mounted speaker allows for TV sound to be heard. Handheld TV controls that are kept at the nurses' station can be controlled by staff and shared with patients as needed. Durable elements like solid-surface materials and stainless steel can make for long-lasting product installation.

- **Visual access and security.** A safe environment for patients and staff that considers visual access and security is critical in behavioral health design. Important features to consider are cameras in corridors

and treatment areas with monitors in staff areas; and large windows in treatment areas for staff surveillance, but with integral blinds for patient privacy when needed. Staff security with panic or call buttons for emergency security backup can be wall-mounted or attached to each staff member for personal safety. Controls for temperature, lighting and adjustable blinds located in the corridor allow staff to adjust as needed. Locked covers to protect the controls from other patients may be required. Out-swinging doors so that patients cannot barricade themselves into their rooms is another design feature that should be incorporated into a safe room design.

### Safe and healing environment

Creating a safe, healing environment for behavioral patients is a key objective in health care today.

Following recognized guidelines for proper room sizes, appropriate location and safe product installation is critical. Adding finishes, equipment and furnishings that are safe, durable and easy to maintain will minimize risk in the facility.

Ensuring that rooms are safe and attractive will only add to the healing quality of the space. **HFM**



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