Designing the Environment to Prevent Suicide

Anti-Suicide Door Offers No Hang Hold

The act of suicide, while tragic at any time or place, somehow seems worse when it occurs in the very place where troubled people go for professional help. Yet anywhere from 2% to 6% of suicides are by individuals who are getting treatment from health care professionals while in a hospital or other health care setting.[1]

According to Joint Commission standard EC.1.10, an organization must manage safety risks; EC.1.20 stipulates that the organization maintain a safe environment. Because suicide affects so many people and remains a challenge to behavioral health care, hospital, long term care, and assisted living organizations, the Joint Commission emphasizes the importance of preventing patient suicides through its Sentinel Event Policy. Under this policy, the Joint Commission's definition of a reviewable sentinel event includes the suicide of any individual receiving care, treatment, and services in a staffed round-the-clock setting or within 72 hours of discharge. Since that policy was implemented in 1995, suicide has been the number-one type of sentinel event reviewed by the Joint Commission.[2]

In behavioral health facilities, long term care facilities, and acute care hospitals, the most frequent method of suicide is hanging, and 75% of inpatient suicides occur in the patient's bathroom, bedroom, or closet.[3] Of that percentage, patients use the bathroom door as a hanging platform nearly 86% of the time.[4] "The patient's bathroom is the one area where a patient can be assured of some privacy for a certain amount of time," says Patrick Keller, director of plant operations for The Pines Residential Treatment Center, a group of three behavioral health facilities in Hampton Roads, Virginia. "However, this privacy may provide a window of opportunity for a problem to occur."

Leonard Lexier, M.D., is the chief medical officer for Alternative Behavioral Services (ABS), The Pines's parent organization. He challenged Keller and Keller's staff to make the patient rooms safer. "Sometimes I had sleepless nights thinking about what kind of harm our patients could inflict on themselves," Keller recalls. "A person might be doing well but then get a phone call or letter that sends them 180 degrees in the other direction, all in just seconds. They can go in the bathroom and wedge something into the door, and by the time they're discovered, it's too late. So we decided that the bathroom door was a major area for improvement."

Keller began to research the problem of bathroom doors, looking on the Web and talking to colleagues and vendors. He discovered that the problem with most bathroom doors is that an individual can use any side of the door to wedge or anchor a makeshift noose that will hold his or her weight. Moreover, nothing had been designed to deal with this problem. So Keller and his staff set about redesigning the door to prevent its being used by patients to inflict self-harm.

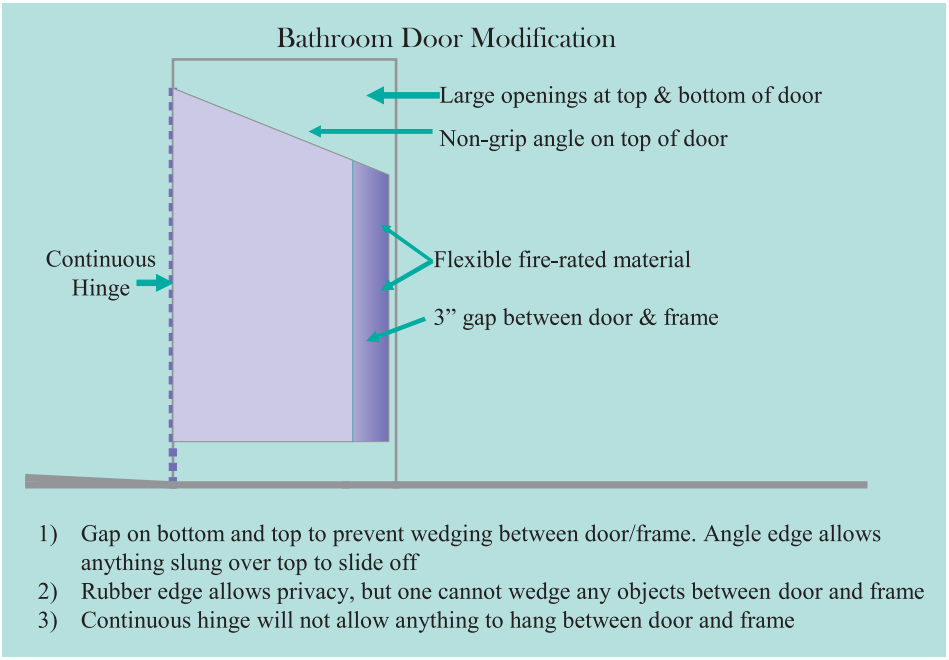
The first challenge was construction material. "Any redesigned door had to be made of material that would be lightweight yet strong enough so it wouldn't shatter or tear in case a patient wanted to use it for a self-inflicted injury or as a weapon," says Keller. This eliminated wood, which tends to splinter or crack under stress. Keller and his workers finally settled on expanded PVC, which is lightweight and can be cut or shaped to the facility's specifications. Other advantages of PVC are that it resists shattering or cracking and it can be disinfected.

Keller and his crew also rethought the shape of the door. "We had to eliminate possible anchoring points for hangings. And we wanted to provide privacy for patients, yet allow surveillance by staff members when need be," he says. Finally, any new door had to be inexpensive enough to be retrofitted in existing facilities.

After extensive brainstorming and making several prototypes, Keller and his crew settled on a design they call the sentinel event reduction (SER) door. Among the features of the SER door are large openings at the top and bottom so nothing can be wedged into the door frame. A continuous hinge prevents patients from hanging anything between the door and the frame.

A rubber gasket on the smaller side of the door allows for patient privacy but prevents anything from being wedged between the door and the frame. See the figure at right.

Keller and his crew began development work on the door in February 2003, installed a prototype in May 2003, and finished testing it at two ABS facilities in January 2004. The door is available in two widths, and Keller contends that it can be installed quickly on virtually any door jamb or bathroom partition, using the hardware that accompanies it. He cautions that the SER door is designed as a bathroom door or even a shower door but is not for hallways.



1) Gap on bottom and top to prevent wedging between door/frame. Angle edge allows anything slung over top to slide off
2) Rubber edge allows privacy, but one cannot wedge any objects between door and frame
3) Continuous hinge will not allow anything to hang between door and frame

Evaluations of the SER Door

Since the SER door was unveiled at the national convention of the American Society for Healthcare Engineering (ASHE) in 2003, many experts in behavioral health care have offered comments on it. "Anything that reduces the environmental risk of suicide is valuable," says Mary Cesare-Murphy, Ph.D., executive director of the behavioral health care accreditation program at the Joint Commission. "However, any organization looking at new and innovative technology such as this anti-suicide door to help reduce patient suicides always needs to balance patients' rights and patient privacy against the safety that an environment can provide. Facilities need to decide whether this is an appropriate modification to their environment for the population they serve."

"I haven't seen anything else on the market that meets this same need," says Kathleen McCann, Ph.D., director of clinical services at the National Association of Psychiatric Health Systems in Washington, DC. "I encourage people to look at this product if bathroom door safety is a matter of concern. The door appears to present a way of enhancing the safety of high-risk patients. But maintaining patient privacy is a real concern. And if behavioral health care facilities choose to use the door, it needs to be tested for effectiveness."

David Sine, A.R.M., C.S.P., O.H.S.T., a health care safety expert in Austin, Texas, cites the importance of using any new feature for patient rooms in combination with other improvements and safeguards to the environment of care: "I recommend looking not just at the design of the door but at the latching hardware and the swing of the door." He also points out that newly admitted patients are generally unknown to the staff, and until a treatment plan is designed for them, they should be considered at risk for self-inflicted harm. In a white paper titled "Guidelines for the Built Environment of Behavioral Health Facilities,"[5] Sine and his co-author Jim Hunt of the American Institute of Architects offer additional tips for designing and equipping patient or resident rooms.

A Final Word

"When we began working on making the patient rooms safer, we asked ourselves if we could afford a sentinel event," says Keller. "The answer, of course, is that nobody can. That's one reason we had to think outside the box and come up with this design." Keller estimates that when the SER door is launched on the marketplace, it will cost about $250 and will be on display at trade shows where it will be available for order from the door's manufacturer. "We're satisfied that the SER door offers both safety and privacy," he says. If Keller is right, the product could help open the door to greater patient safety.

References

1. Busch K.A., et al.: Clinical features of inpatient suicide. *Psych Annals* 23(5):256–262, 1993.
2. Suicides are the most frequently cited sentinel events reported to the Joint Commission, although they may not necessarily be the most frequent events that occur in organizations.
3. Preventing suicide in the health care facility: What EC professionals can do. *EC News* vol(1):Mar./Apr. 2000.
4. Phone conversation with Richard M. Croteau, M.D., executive director for strategic initiatives, Joint Commission on Accreditation of Healthcare Organizations, Mar. 22, 2005.
5. Available at and downloadable from http://www.naphs.org.