

## 'Evacused' devices help hospitals evacuate

By DAWN SAGARIO • REGISTER STAFF WRITER • April 9, 2008

The thin, bright yellow mattress looked unassuming enough.

But within minutes, Brenda McGraw had used it to cocoon together the "patient" - a training mannequin named "Larry" - and the hospital mattress he lay in.

With a swift tug, McGraw pulled 180-pound Larry off the frame of the hospital bed and onto the floor. She grabbed hold of straps at the foot of the mattress and pulled. Twenty-five small wheels attached to the underside of the yellow mattress let McGraw roll Larry down hallways, to the stairwell and, fairly smoothly, down several flights of stairs. Five spinal boards give the patient's head and neck support.

The device is called an Evacused. It is one of the newest devices at Mercy Medical Center and Mercy Capitol hospital used to help move patients during emergency evacuations.

"It provides a very quick way to evacuate a patient out of a bed, using just one person," said McGraw, emergency management coordinator at Mercy Medical Center and Mercy Capitol.

Hurricane Katrina and 9/11 brought the issue of hospital emergency preparedness to the forefront, with one key piece being patient evacuation, from natural disasters to terrorism attacks, say health officials in Iowa and companies who sell patient evacuation devices. According to the makers of Evacused, the device was actually used to evacuate patients during Hurricane Katrina. It has prompted Mercy, Iowa Health-Des Moines and Broadlawns Medical Center in the last several years to build their arsenals of emergency evacuation equipment that help safely move patients quicker and more comfortably, particularly down stairways. Federal funds have helped defray the cost for the expensive gear.

The equipment is a great improvement over other techniques of transporting patients, including wrapping patients in bedsheets or blankets and carrying or dragging them, hospital officials say. Two dozen of the Evacused devices were put into Mercy's coronary care unit about a year ago, along with a few in Mercy Capitol's rehabilitation unit, McGraw said.

She'd like to buy additional Evacuseds, including 40 that would be placed in other Mercy units where patients are bedridden. McGraw said each costs about \$630.

It takes one person to deploy the Evacused. While older methods like using backboards or sheets can also be used, McGraw said the patient can be harder to maneuver, with more workers needed to move larger patients.

McGraw said the hospitals also use a device called an Evacu-Trac. The Evacu-Trac looks like a deck chair and features a set of rubber tracks that help a person glide the patient down stairs for a smoother ride. It has a weight limit of 300 pounds. The cost for the machine itself is about \$2,100.



ANDREA MELENDEZ/THE REGISTER

Brenda McGraw, emergency management coordinator at Mercy Medical Center and Mercy Capitol, pulls a dummy down the stairs as she demonstrates an Evacused for Des Moines firefighters. "It provides a very quick way to evacuate a patient out of a bed, using just one person," McGraw says.

### Here's how Evacused works

**SECURE THE PATIENT:** With a few steps, Brenda McGraw secures the 180-pound dummy, hospital mattress and all, to the Evacused mat.

**PULL PATIENT OFF BED:** The patient and mattress are pulled off the bed frame and onto the floor. Five spinal boards give support to the head and neck.

**GET TO SAFETY:** The patient is easily pulled across the floor, down the stairs and out of the building. The Evacused features 25 small wheels attached to the underside.

Iowa Health-Des Moines has about a dozen Evacu-Trac machines, as well seven "soft stretchers" that can carry up to 1,500 pounds each, said Scott Draper, risk manager and safety officer at Iowa Health-Des Moines. The health system is also considering purchasing Evacusleds.

"We have so many beds in the hospital here that we'd have to really take a hard look at where we'd put them, with which patients and which beds," Draper said.

Broadlawns purchased two Evacu-Tracs in the last year. Even though the majority of patients who would need to be transported are located on the ground level, there are some patients on the lower level who may need help using stairs, said Sherry Olson, director of the emergency department and urgent care at Broadlawns.

Some of the money for the equipment comes through the federally funded hospital preparedness program, which began in 2002. The money goes to help efforts at the state and local levels in areas including planning, personnel, equipment and training.

Iowa received approximately \$4.3 million this year, and has received about \$27 million to date through the program, said Rebecca Curtiss, with the Iowa Department of Public Health. Curtiss is bureau chief of the department's Center for Disaster Operations and Response.

The Department of Public Health provides guidance to the 116 hospitals contracted with the preparedness program, Curtiss said. Each hospital must complete specific tasks in five areas as outlined by the federal government before receiving the federal money. One of the areas covers hospital evacuation plans.

Miriam Gordon, president of Evacusled Inc., based in Toronto, Ontario, said revised emergency standards set by the Joint Commission on the Accreditation of Healthcare Organizations is one factor that's prompted more organizations to look at the devices.

"And I think just a lot of it has been natural disasters that have happened in the U.S., and I also think that ... quality of patient care is really, really important," Gordon said. "That's how facilities differentiate themselves."

Norm Cooper, director of marketing at Garaventa Lift, which distributes Evacu-Trac in North and South America, said that as a result of 9/11, there's also been more of a focus on emergency evacuation of disabled people in places such as schools and government and office buildings.

"(Our) bigger markets are schools and government buildings. There are some government buildings that may house 2,000 or 3,000 people," some of whom can't walk down the stairs, Cooper said.

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