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EMT and paramedic Jeff Lanenberg uses a special stretcher with wings on the sides that can carry more weight to move obese patients up the ramp and into an ambulance.

Surgeon Robert Cima, MD, regularly contends with the difficulties of operating on his colorectal patients with obesity: increased risks for hernia, infection and pneumonia, as well as the limitations of laparoscopic procedures. As more patients crossed the threshold into severe obesity, other challenges emerged. Operating room tables that could tip over when upright, wall-mounted toilets that break away under too much weight and equipment like lifts, CT scanners and wheelchairs that cannot safely accommodate heavy patients.

Hospitals, clinics, emergency services and other healthcare providers across Minnesota continue to grapple with these issues as their patient populations have grown increasingly heavier. They have had to consider and implement a multitude of changes to keep obese patients safe, provide dignified care and protect their employees. It's a necessary but expensive challenge that prompted healthcare entities to rethink a broad scope of issues, from lobby seating to gurneys.

"Across the board, everything is being adjusted to a larger size," says Cima, medical director of Mayo Clinic Hospital in Rochester. "It really started to take off in the last decade. And because of safety and infrastructure issues, it's not something hospitals can do overnight. In the operating room, we had to upgrade a number of tables because patients were outweighing their weight tolerance." Surgeons also needed to procure different instruments that would work for patients with obesity.

In the past decade, Mayo has invested millions in remodeling its facilities. It went floor-by-floor to install ceiling lifts to move obese patients in and out of bed and put in floor-mounted toilets that can safely handle more weight. Doorways were enlarged to make way for wider equipment. Mayo also purchased beds that accommodate higher weights, wider bariatric beds and equipment like wheelchair movers and assistive standing devices. "The whole infrastructure of the hospital has to change,

## AN OUTSIZED CHALLENGE

# Healthcare systems and providers have made changes to accommodate a heavier patient population

BY SUZY FRISCH

especially places like us with older facilities,” Cima says.

For many healthcare systems, it took a shift in understanding the severity of the obesity epidemic to catalyze movement toward change. Deeper awareness that obesity is a highly complex, chronic disease and not just a personal failure helped propel efforts at Hennepin Healthcare to undertake numerous changes, says Iesha Galloway-Gilliam, MD, an internist, obesity medicine and integrative medicine specialist at Hennepin Healthcare who co-directs its Comprehensive Weight Management Center.

Another impetus came from visual reminders that existing infrastructure just didn’t work for a heavier patient population. Wall-mounted toilets would break off walls, or staff would need to call equipment manufacturers to see if operating room tables, scales or beds for the CT scanners could handle higher weights.

“It really required detective work,” Galloway-Gilliam says she learned from her now-retired colleague, Gil Hartley, MD. “All of this was going on more than a decade ago, when medical device companies and equipment manufacturers didn’t include information about maximum weights. It goes to show that things have evolved, with 30 percent of the American population being obese. This is something front and center and can no longer be ignored.”

When Hennepin designed and built its new Clinic & Specialty Center in 2018 in Minneapolis, it made sure to install exam room tables that are safe for obese patients. Previous tables had a pull-out step that was not attached to the floor. There was a risk that people above a certain weight could step on it and tip the table, causing them to fall. Today’s tables are electric and can be lowered so that patients can sit directly on them, with a pedal to hydraulically raise the table. Scales are built into the floor in the new building, with plenty of room around them so that patients can be treated with dignity, Galloway-Gilliam says.

In addition, Hennepin instituted annual required training for its surgical and ICU staffs. The training covers obesity sensitiv-

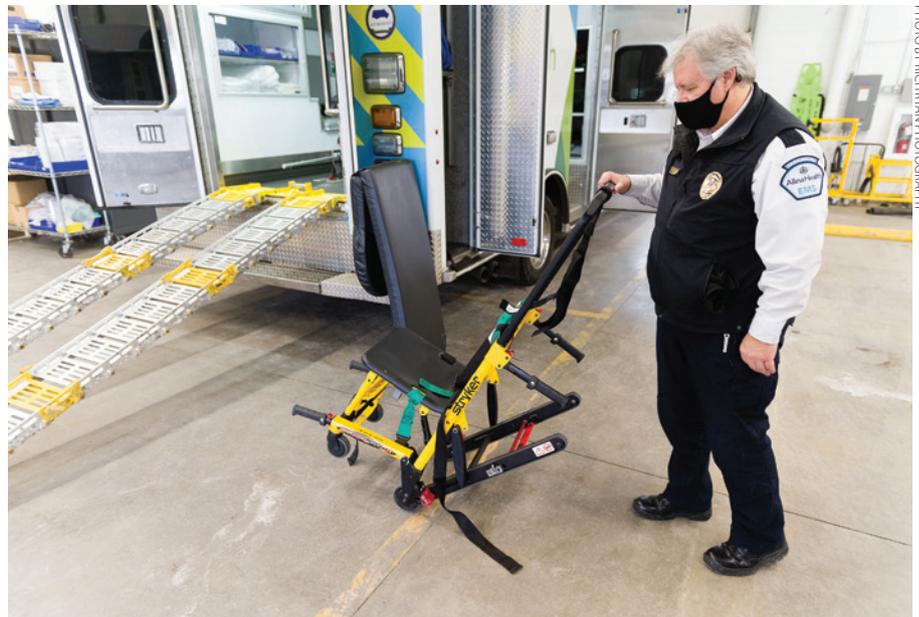


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A stair chair is used to move obese people down stairs, when using a stretcher would not be safe. Jeff Lanenberg, an EMT and paramedic for 35 years, says he and his crew used to transport obese patients only occasionally; now it’s daily.

ity and safety training for a workforce that does a lot of moving people in the operating room and patients’ rooms, she adds.

### Comprehensive changes

Bringing in new technology that assists with moving people with obesity helps keep patients safe and also reduces injuries to staff. Quality care and safety for patients and staff were key concerns as Mayo sought to change its facilities to better accommodate obese people. Moving patients from gurneys to beds or from the bed to the bathroom were risky situations. These circumstances often cause the most prevalent injury to staff—back injuries—and they typically required multiple nurses to move one patient. “You can’t take two to three nurses off the floor to move a patient anymore,” Cima says. “We just don’t have the staff.”

As Mayo started seeing the clash of having a heavier patient population and more injuries to its staff, it assessed which areas of the hospital had the highest risk factors for patients and most incidents of employee injuries. “We had nurses, physical therapists and facilities people look at how to best transport and move patients, with patients as the number-one priority and then looking at how to protect staff,” Cima says. “We looked at what the hottest areas are and how can we educate our staff, what

resources do they need and what technology can we bring in the best and fastest way possible.”

When Deb Vanderhall, RN, moved into management at Abbott Northwestern Hospital in Minneapolis about 15 years ago, she assumed responsibility for the accreditation process for its bariatric surgery program. Vanderhall—who is now manager of bariatrics and weight loss operations and clinical programs at Allina Health—found an overall lack of awareness about the needs of a heavier patient population and how the hospital could serve them better.

Vanderhall’s first efforts involved tracking down weight-capacity information about equipment like wheelchairs, gurneys and scales, and labeling them to keep patients safe. Another project she undertook, along the lines of efficiency, was to create a way to flag patients’ electronic medical records if they weigh more than 300 pounds, similar to the way clinicians could enter flags to notify transport staff of other patient needs, such as requiring an interpreter.

“The transport department doesn’t have access to patients’ charts, but they can see if someone is blind or hard of hearing,” Vanderhall says. “The FYI plan reduced the number of times that transport arrived at the patient’s room with the wrong

gurney or wheelchair to zero. It cut down on transport times and really improved service to the patient.”

Over the years, Abbott and Allina have invested in more equipment with 500-pound capacity, as well as Stryker Zoom gurneys that are easier to move and reduce push-pull injuries to staff. Evaluating seating throughout the hospital became important after Vanderhall saw a man’s folding chair give out from underneath him in a classroom. Now the hospital’s auditorium chairs can hold up to 1,000 pounds. Similarly, Allina changed out its cafeteria and lobby chairs to ensure that family members and guests have comfortable and safe places to sit. The system also added obesity-sensitivity training.

Such changes extended throughout the Allina system, especially as hospitals and clinics undertook remodeling projects. Today, exam room tables and gurneys can handle patients up to 500 pounds, and about 20 percent of the rooms have wider and lower tables that are easier for patients to access.

When Abbott began remodeling its emergency room in 2016, it started by rethinking how it could better serve a variety of patients, including people who are obese, those with mental illnesses and the elderly, says Jennifer McAnnany, RN, director of patient care for emergency services at Abbott and its WestHealth facility in Plymouth. The project included designing rooms that have ceiling lifts for repositioning patients or moving them from wheelchair to bed. It also incorporated some larger rooms to accommodate other equipment for moving patients, ceiling lifts that can handle up to 1,000 pounds and bariatric beds.

In addition, Abbott’s waiting room chairs now include bariatric options and toilets throughout the department have higher weight capacities. “In the old emergency department, all the rooms were created equal and had a much smaller square footage in each room. We didn’t have the space to accommodate a lot of lifting equipment,” McAnnany says. “By expanding, we have more space in each patient room that can accommodate all of those



The MegaMover is placed on top of a stretcher, making it easier for a group of EMTs to lift, carry and move people when a bariatric stretcher won’t fit in their homes.

options to serve all patients. Plus, having higher weight capacities for our everyday equipment like seating and toilets has provided a much more respectful experience for our population.”

### It’s an emergency

Emergency medical services (EMS) is another area that made significant changes to serve bariatric patients. Jeff Lanenberg, operations manager for Allina Health EMS South Metro region, has been an EMT and paramedic for nearly 35 years. Treating and transporting severely obese patients used to happen once every five years; now it’s a situation his crews handle daily with its fleet of bariatric ambulances.

The challenges are numerous, including needing to move patients from their homes where the doors often aren’t big enough for wider stretchers. That generally involves using a sturdy tarp with handles around its edge—called a Mega Mover—so that multiple people can carry an obese person from their home to a stretcher waiting outside, Lanenberg says.

EMTs also bring stair chairs with wheels to safely lower patients down flights of stairs, removing some of the strain on employees. Once they are outside, teams will use a ramp and winch system to move people on a bariatric stretcher into the ambulance. Bariatric ambulances also carry

equipment like extra-large blood pressure cuffs and longer needles for starting IVs.

It takes significant training to learn how to safely transport severely obese patients, especially in an emergency situation. Allina EMS also frequently transports obese patients from one healthcare provider to another, say from a hospital to a long-term care facility for post-surgical rehabilitation. About 80 out of Allina’s 600 EMS staff are trained in bariatric care and transport and their ambulances go to emergency scenes to team with other first responders on moving patients with obesity. A supervisor like Lanenberg also will attend these emergencies to help coordinate care between the two crews.

“We tend to get patients who are very upset that they are being moved out of their environment due to a medical situation or something else. We really try to work with patients to make sure we’re doing the right thing, and it’s always good to have a second set of hands,” Lanenberg says. “It’s not always the most ideal setting because we can’t get the equipment through the door or into the bedroom and we know we are not going to make the patient happy.”

Finding the right equipment to transport obese patients safely and with dignity is a constant trial and one that Lanenberg would love to solve. He knows it’s a challenge that is not going to go away anytime soon. **MM**

Suzy Frisch is a Twin Cities freelance writer.