

Medical mannequin bleeds, chokes, teaches

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BENNINGTON -- For the next two weeks medical technicians at Southwestern Vermont Medical Center will be able to practice techniques on a mannequin that bleeds, breaths, urinates, vomits, blinks, and has seizures.

On loan for free

The METIman, a \$100,000 mannequin, is on loan for free to SVMC from Life Net of New York, a helicopter medical transport service. Life Net is the company that serves the region's hospitals with air transport services, said Life Net Business Manager Jonathan Gryniuk.

METIman, also called Ed, is used by Life Net to train its airborne medical personnel. Most of the METIman units are ground-based at larger facilities, but Ed is the only one that is housed in a trailer, the interior of which is painted to look like the inside of a helicopter, and taken to smaller medical facilities.

Gryniuk said this is the first time Ed has been brought to a hospital for the staff there to work with. He said the benefit is that the ground technicians will be on the same page as the ones in the helicopters.

Ed is hooked up to a laptop computer, which is programmed with medical software that controls its various functions. Gryniuk said Ed can simulate any number of medical situations and comes with 120 pre-programmed scenarios ranging from drug overdose to head trauma.

The mannequin rests on a gurney in the center of the trailer, which Gryniuk said is about twice the size of a real helicopter. While the crew being trained works, someone else sits at the computer and tells it what dosage of what medication the faux patient is receiving as the technicians call it out. The mannequin is encased in a skin-colored rubber-like material with holes for body fluids to leak out on command and needles to be inserted.

Gryniuk said Ed is on the high end of medical simulation technology. The device is anatomically correct, can be made to simulate a patient of either gender, and while it normally resembles a 27-year-old male, the simulation can be rigged to portray a pregnant woman or an 87-year-old male with an extensive cardiac history. Gryniuk said the mannequin has additional parts for bones sticking out, burns, and different heads in various states of trauma.

He said Ed used to have front teeth that were rigged to break should a breathing tube be inserted too hard, but they broke off more easily than was realistic so Ed goes without front teeth. Its tongue can swell, as can its throat, in order to simulate difficult cases.

"When a patient comes in, you don't want that to be the time to learn," Gryniuk said, who is himself an experienced medical flight technician.

Shane Race, program medical educator for Life Net, said medical simulators have been in use for a long time, but didn't become what anyone would call advanced until the last 10 or 15 years. Their popularity has also increased and many large facilities use them regularly.

Gryniuk said the training sessions are recorded on video so technicians can see how they did. The simulations do much to improve teamwork and

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communication amongst crews and its possible to forget that the METIman isn't real.

He said the device is fashioned to be as realistic as possible, going so far as to have tape put under the injections holes to simulate the feeling of a needle puncturing real tissue. Ed's eyes can even change how dilated they are and there is a microphone in the head that allows the person running the computer to simulate a patient speaking.

Gryniuk said local technicians from local rescue squads have scheduled time with the METIman simulator. He said it is costly to transport the simulation so Life Net is trying to send it to strategic locations.

Eileen Druckenmiller, a communications specialist for SVMC, said invitations have been sent to local rescue squads to use the simulator. She said they do not have to register and isn't sure which ones may take SVMC and Life Net up on the offer.

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