

Nobody knows the troubles he's seen

But Lancaster General students can learn in a new lab as 'Stan' and friends suffer heart attacks, break bones, sweat and even 'die.'

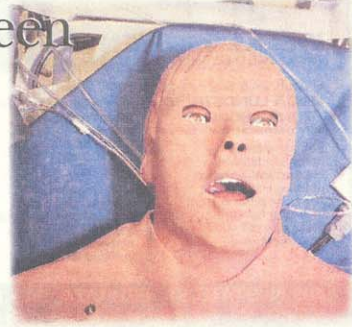
BY JON RUTTER
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 Say hi to "Stan." He's an outwardly healthy young man who suffers several daily heart attacks.
 He's plagued by bloody, gaping flesh wounds. Allergic reactions. Splintered bones.
 All of which have a terrible ef-

fect on him. He hollers. He goes unconscious. One eye dilates to indicate head injury.
 He's just a dummy, of course. But a high-tech one.
 The Lancaster General College of Nursing & Health Sciences is delighted to have him on board.
 Stan and two other full-size patient simulators, a second adult and a baby, are centerpieces in

the college's new Clinical Simulation Laboratory. Nestled in the gleaming basement of the college at 410 N. Lime St., the \$1.2 million facility will be unveiled at 9 a.m. Wednesday during a ribbon-cutting ceremony and open house.
 The sophisticated lab includes two clinical re-enactment rooms, a simulation control center and

Lifelike mannequin breathes, blinks, talks and more.

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 SUNDAY NEWS



Dummies: Lifelike practice for students

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an adjacent 48-seat classroom and observation area with television monitors and one-way glass.
 A battery of video and digital

cameras enables teachers to evaluate student-led treatment and diagnosis sessions and record them for review by classes.
 The installation is state-of-the-art, according to Laurie Kerns, a trainer with one of the lab's designers, Education Management Solutions of Malvern.
 "Many medical schools across the country aspire to a lab like this."
 The company created the laboratory in partnership with the college; Medical Education Technologies Inc., or METI; Horst Construction; and Cornerstone Design.
 Its size and advanced audiovisual capabilities make it one of a

kind in this region, college president Mary Grace Simcox said.
 Stan is not a substitute for mandatory clinical rotations in hospitals and nursing homes, she said.
 Visits to patients will continue to constitute about half of the college's nursing and health science curricula.
 But Stan will serve as a valuable bridge to real-life experience.
 He'll help students avoid making mistakes on actual patients, especially important at a time of growing concern about medical errors and litigation.
 And he'll expand training options in the face of Pennsylvania's severe nursing shortage, projected by the federal government to



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Examining new patient simulator at Lancaster General College of Nursing & Health Sciences are, from left, Mark Beam, Valerie Rieger-Grimm, Barbara Conran and Clint Hale.

reach more than 40,000 vacancies by 2020.
 The college plans to double its nursing program enrollment to nearly 500 students in the next three years, development officer Margie Lamberson noted.
 Current enrollment in all programs is just under 500.
 "We're really looking for some creative ways we can educate more students," Lamberson said.

Man for all lesions

Stan's the guy for the job.

Or the woman, thanks to interchangeable anatomical parts.
 He can be old. He can be young. He can be practically anything an instructor wants him to be.
 The latest in a series of hundreds of simulators assembled by Sarasota, Fla.-based METI since the mid-1990s, he isn't really even named Stan.
 The college's mannequins don't have formal names, noted lab coordinator Joe Corvino.
 However, the \$250,000 simulator is known generally as Standard Man, or Stan for short.
 He represents a 30-year-old guy who is in good shape from running a couple of miles every other day.
 But he comes with 30 preset problem scenarios. More medical troubles wait in the wings.
 The dummies are totally customizable, said Corvino, who will be constructing additional scenarios with faculty members.
 As Corvino was explaining the function of the control-room computers last week, a monitor track-

ing the mannequin's vital signs began beeping urgently, echoing the true-life beat of a hospital ward. Stan's heart rhythm was going crazy. His blood pressure was fading, oxygen levels diving. Without intervention, he was doomed.
 Corvino took it in stride.
 "He can die, and students can learn from that," Corvino said. A flick of the keyboard brings him back.
 Such dramas may unfold in real time or be slowed down to allow discussion.
 They can be set to happen automatically or manipulated manually.
 Plastic tubes, bags, prostheses and computer chips enable Stan to uncannily mimic human responses to such procedures as CPR, intravenous medication, anesthesia, catheterization and insertion of an artificial airway (intubation).
 Authentic carbon dioxide gusts from his mouth when he exhales.
 An instructor in the control room can make Stan talk via speakers in the dummy's head.
 The \$45,000 baby mannequin can be induced to cry.
 "We can have broken bones," Simcox said. "The dummies will actually sweat. We can create any kind of bodily secretions you might dream of."
 "Except vomit," noted Valerie Rieger-Grimm, director of learning resources.
 The mannequins are so lifelike that students have been known to cry when they "die."
 "I'm starting to talk to them," Corvino joked. "Bringing them coffee."
 One of the adult dummies, a lighter-weight mockup equipped with a laptop computer, is portable and will be available for off-site training.
 Stan's family will likely grow.
 The college is seeking to raise \$70,000 for a pediatric mannequin, Simcox said.
 Meanwhile, Stan's dance card is filling up fast.
 All of the college's roughly 50 instructors will be shown how to use him.

According to Lamberson, the Lancaster County Career & Technology Center, a contributor to the new lab, will bring practical nurses in for training in April.
 The center will also coordinate tours for high school students in June, she said.
 Emergency medical service crews are already learning from Stan, and the college students have been trying to save his life since the lab was completed last month.
 They see Stan struggle. They hear him, feel him.
 "All their senses are going to come into play," Rieger-Grimm said. When the gases that simulate bodily odors are hooked up to him, "They'll be able to smell things, too." ■