Froedtert Hospital
Simulation Learning Center

A CASE STUDY BY LEVEL 3 AUDIOVISUAL

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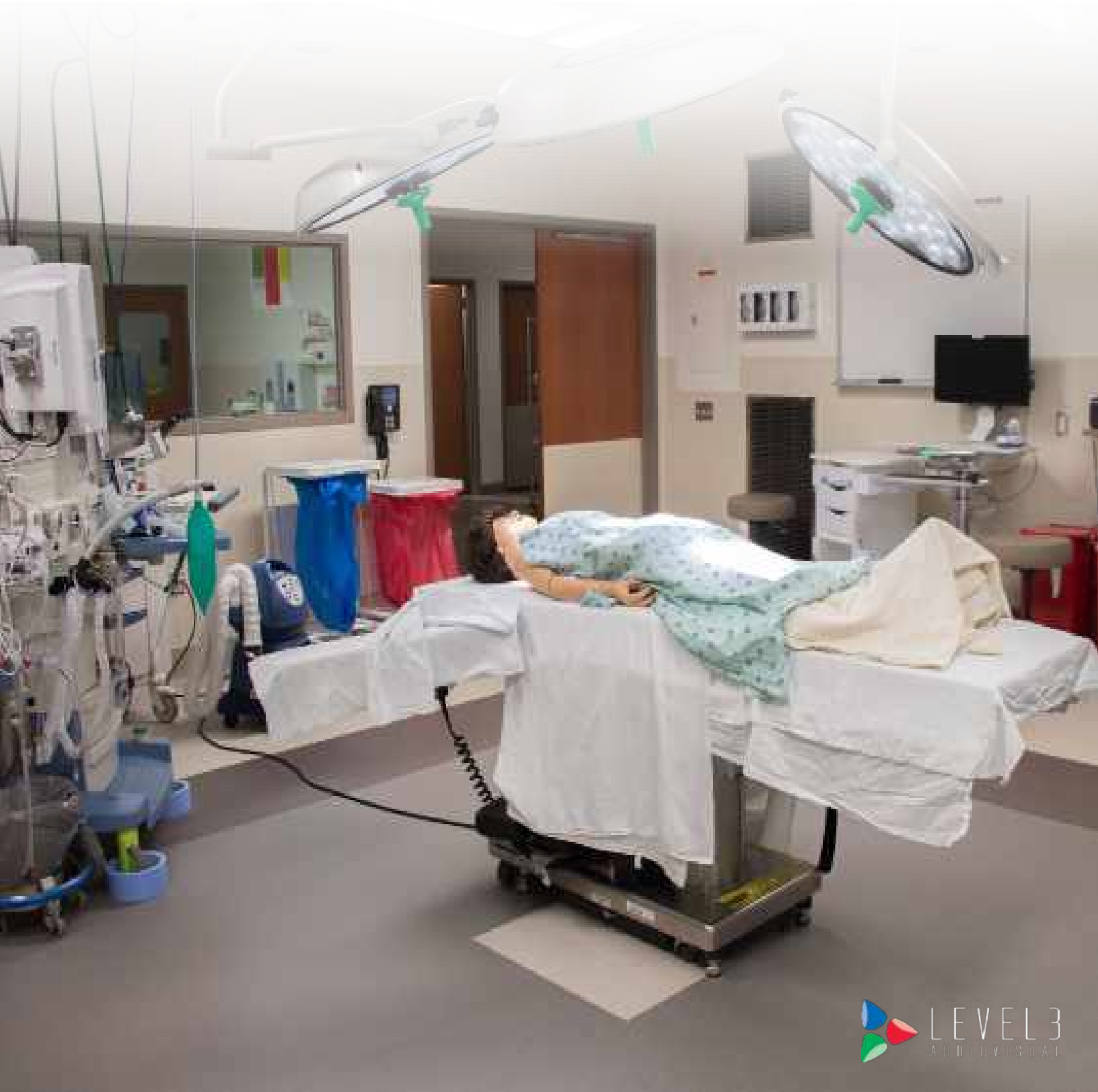
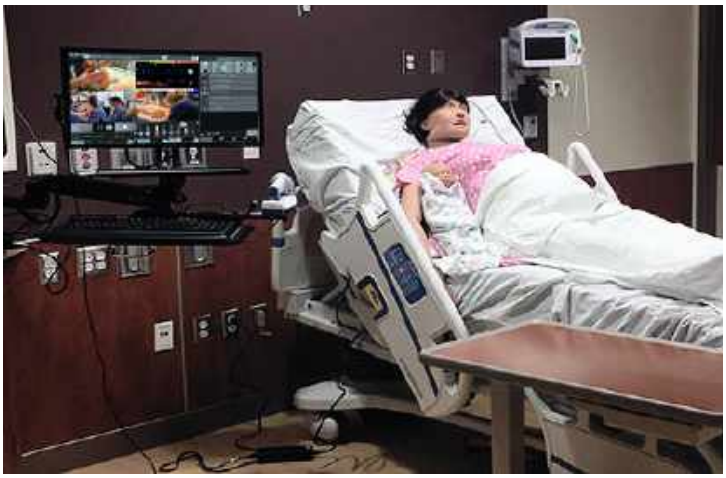


THE MEDICAL CENTER

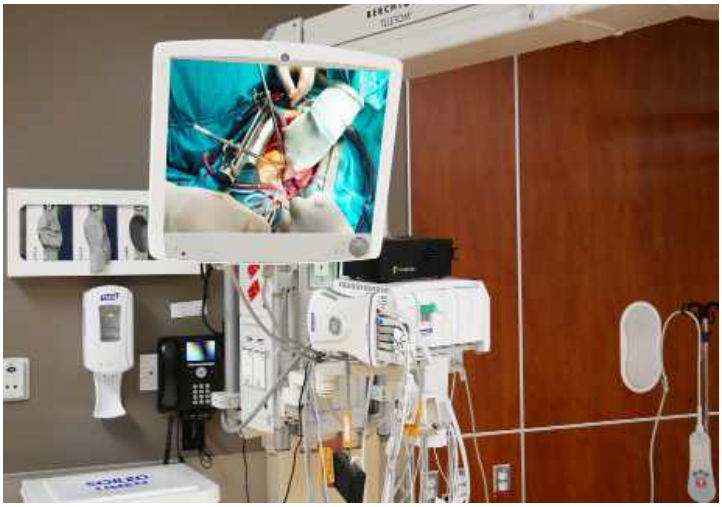
Froedtert Hospital has built a dedicated, interprofessional simulation center, located within the walls of Froedtert Medical Center. This 20,000-square-foot simulation center will began with a full renovation of an existing structure. It features multipurpose simulation rooms, a surgical skills lab, as well as debriefing and observation rooms. The new facility will serve the entire Froedtert Health system that includes medical professionals from all disciplines at Froedtert Hospital, Community Memorial and St. Joseph's (West Bend) hospitals, and Froedtert & the Medical College of Wisconsin Community Physicians.

THE PROBLEM

At the eleventh hour, management overseeing the scope of the new simulation center visited Level 3 Audiovisual's booth at the International Meeting Simulation in Healthcare (IMSH) and saw the great potential of SIMStation for their simulation program. The SimCenter was still being renovated and a simulation AV solution had already been planned, but SIMStation stood out to the representative from Froedtert and a request for a quote was given, and L3AV went to work on the initial quote and design. At the core of the challenge was the reality that a program manager had not yet been hired, and there were a lot of details yet to be determined. However, a quote was submitted, and Level 3 Audiovisual's SIMStation was selected as the simulation recording and debriefing system of choice.



Through a series of meetings, other details were identified as the scope of the project took form, and grew. The pace of the project was quick as well. Other challenges included unexpected delays due to fire repression system failure to be certified. A new system had to be installed. By the time the Level 3 team arrived for installation of the simulation and AV system, the site was not ready. Michelle Hull, project manager assessed the situation and began to coordinate with the simulation center manager, Jean Morzy on how to proceed. Ms. Hull is highly skilled and organized for such a challenge, and a plan emerged. Working around the schedule of the renovation construction crew, and in collaboration with manager Ms. Morzy, and amidst a snow and ice covered Milwaukee. Through the hard work of the entire Level 3 team along with Jean Morzy's vision for the simulation center, the facilities opened in January of 2016.

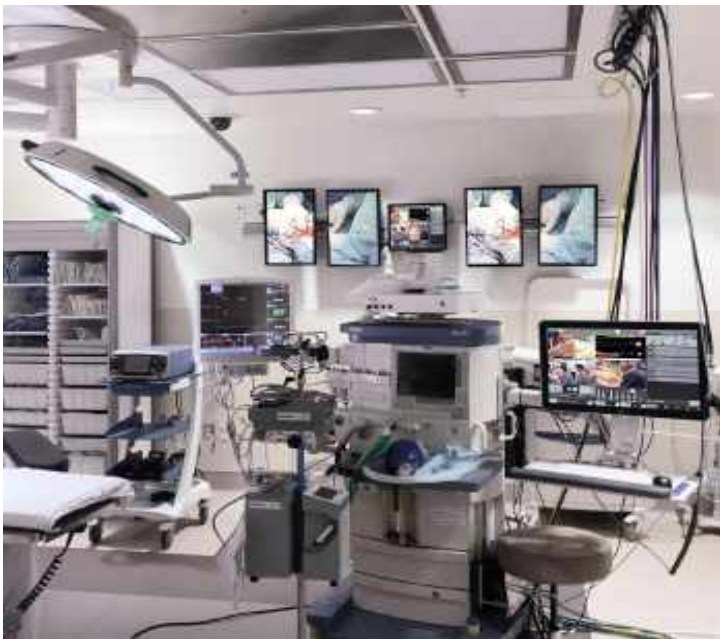


OUR SOLUTION

The SimCenter at Froedtert was designed with three control rooms, three simulation training rooms, and three debriefing/observation rooms, and a skills lab for staging various task trainers. The debriefing/observation rooms were each adjacent to each training room so that a one way reflective glass between the training room and the observation area allowed a full view of the training space. From inside each training room, the "mirror" reflected the entire training area.

Each training room was unique and could be adapted for just about any type of scenario. Simulation Training Room 1 was primarily going to be an OB suite, including fully functional restroom. The control room allowed remote control of the OB simulator and patient monitor. Using SIMStation software and related hardware, both the patient monitor and a documentation computer (EHR) were captured and recorded as determined by the simulation operations specialist. The recording the EHR computer's screen along with the other three cameras placed in the room enabled operators and facilitators to actually identify the critical thinking process of the caregiver. As a hospital-based simulation program, the scenario participants are actual professionals working with real patients. The simulation center allowed these professionals to learn new protocols, processes and even evaluate their own skills and needs for improvement, which they could in turn apply with their own patients.

The second simulation training room is a full-featured surgical operating room, complete with anesthesiology and respiratory support equipment, including the various gasses needed to keep a patient sedated and breathing. Cameras, microphones and overhead speakers



were distributed appropriately to capture activities and to also enable communication to the room from the control room. Medical equipment screens are captured and recorded in sync with activities captured on camera for later debriefing and to also give the facilitator access to the critical thinking processes of the practitioners while the scenario unfolds.

The third simulation training room was set up to support either two simultaneous scenarios with two patients, or for quick transition from one scenario to another. Like the other training rooms, microphones, speakers, and cameras were properly placed to be able to see around ceiling and wall-mounted equipment.

Control Rooms were designed for easy operation of the SIMStation Recording and Debriefing system alongside the simulator control computer. Observers in the debriefing rooms could either monitor the scenario through the one-way glass, or they could watch the live feed being pushed from the control room. To offer the program more flexibility, each control room operator can broadcast live video and audio to one, two, or all three debriefing/ observations rooms, allowing for greater participation of various stakeholders and learners. Facilitators could enter book marks and add annotations to the recording from SIMStation control tablets. Each tablet's entry could be identified by user and by color so that during debriefing it is clear who entered each annotation. The simulation operations specialist could also play ambient sounds and overhead codes and messages from the control room. A code can be called and that be broadcast into the simulation space. Another microphone was also included in each control room so that a dedicated wall-mounted speaker near the manikin's head could be used for transmitting the voice of the patient. While the manikins have their own speaker for transmitting both recorded and live audio from the control room, the audio tends to be much poorer quality. The added speaker allowed for clear crisp communication as the voice of the patient.

Later, Level 3 AV was contacted to add yet another innovation to each control room: the SIMStation Voice system. This allows the operator to have a female, male, or child's voice regardless of their own gender and age.

The simulation center is now complete and remains one of the most advanced simulation centers in the country.