Emergency preparedness depends on learning through doing and practice, and this typically results in tabletop exercises and physical drills. However, these one-time events are expensive and don’t always provide real-time learning opportunities or the ability to replicate the exercise with multiple groups at varying times.

Leaders at Children’s Memorial Hospital value innovation. They wanted to explore virtual world training for situations where spatial context and real-time group communication are important, so they designed a pilot project using a Second Life Island to train doctors, nurses, and staff on emergency evacuation. The Chicago Department of Public Health provided funding for the project using a Homeland Security Grant. The department saw the project as directly related to their own use of Second Life for training, and it saw an opportunity to leverage the experience for collaboration with other healthcare organizations in the future.

Children’s Memorial Hospital’s new approach to conducting emergency exercises enabled staff to test their decisions and response to an emergency scenario, review and weigh the consequences of their decisions when faced with an urgent critical situation, and conduct realistic training exercises without risk to patients. Participants practiced an evacuation and transport scenario that allowed staff to run through the complexities of moving patients and equipment from one facility to another.

The $25,000 in funding they received covered the cost of creating a private nonprofit island, first year site fees, and having a contractor build a replica of their facility in Second Life. Now that Children’s Memorial Hospital’s virtual environment is established, the platform can be reused with the same or different scenarios and without additional costs—over and over again. It is also ready to link with other hospitals and partners for community-wide emergency exercises.

To prepare for their pilot project, hospital leaders reviewed the facility evacuation plan and identified nine core components. They chose to test two, notification and escalation, because of experiences from prior events and drills. They selected a suspicious package scenario and
established clear learning objectives targeted at what people needed to practice or learn. They believe clear learning objectives are vital and help manage risk to ensure that staff didn’t get lost on the site in nonproductive activities.

The design of the virtual environment was driven by the learning objectives, the amount of funding, and the desire to keep participants from getting lost in the “glitz.” Details were sufficient for situational awareness and context and focused on what was important and relevant for the exercise.

- Important landmarks were detailed to help staff recognize where they were.
- The Hospital Command Center was detailed, but pictures on the walls or the look of the gift shop were left out.
- Pre-designed avatars, based on roles, were used to get participants into the flow as quickly as possible so that time was used efficiently. Participants are engaged in the context and realism of the simulation, and time is saved by not having them create their own avatars.

Other design features include

- voice and text messaging capabilities for communicating so that participants don’t all have to be located in the same physical space and
- a private island with access controls to maintain the actual facility’s security.

At the start of the pilot exercise, participants were oriented to the virtual world by arriving at work early and walking around the block to Starbucks for a cup of coffee. Once they arrived back at the hospital’s entrance, they were informed that a conference was being held on the second floor in response to a real-life suspicious package that had been found a week earlier in Chicago. This priming, along with a virtual copy of the hospital’s evacuation plan on the conference room table, was the only instruction provided.
Early in the exercise, a Security Officer reported finding a suspicious package, and other participants responded as they would in a real event. After the debriefing process, participants left the virtual conference room and soon began to find other suspicious packages, including a ticking backpack in the room of a high-risk patient. At this point the exercise escalated.

Patients had been color coded for acuity, and this data influenced the prioritization and response of resources. Participants were able to use the available information to practice decision making in as realistic an environment as possible with no risk to actual patients.

Exercise facilitators found that the virtual environment gave the 11 participants and 13 observers additional insight, which was important from a training perspective. For example, the hospital’s policy is to place a pillowcase in front of the door after the room has been evacuated. One participant realized the importance of the pillowcase during the exercise, after repeatedly going back into rooms to confirm that they were indeed empty.

Children’s Memorial’s pilot was a success, and the hospital is waiting for others to catch up so they can participate in multiple-jurisdiction and interagency drill exercises. Children’s has shared its experience with partner hospitals and the community preparedness coalition. The street from its facility to another hospital has already been built, but the replica of the other facility is still under construction.

The hospital’s leaders believe they were successful in integrating virtual world training into their blended learning strategy. Participants were highly engaged and excited about the exercise and the lessons learned. They look forward to using the tool again with new scenarios, such as an infant abduction exercise. The leaders believe in the methodology, and the outcomes confirm that the approach has significant value. As the emergency preparedness manager reported, it was the first time exercise participants didn’t turn to her and ask, “What do I do? “ The participants can see the results of their decisions and adjust their responses in real time, as appropriate.