



Pre-Construction Simulations for the Emergency Department Triage: Lessons Learned

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*(Preconstruction build for simulated emergency department triage space. Setup based off designs.
Photography by Amber Licklider, RN, MSN)*

Pre-construction simulation can be useful in identifying latent patient or staff threats and determining if any needs are not met in the original design. This allows for minor changes to occur before construction is complete, improving the overall safety and efficiency of the space for both Veterans and staff. In March 2022, the Kansas City VA Medical Center (KCVA), utilized this concept for the Emergency Department (ED) patient check-in, waiting room, and triage areas. During pre-construction meetings, concerns arose regarding patient flow and staff safety in the new space. The KCVA simulation team worked with the ED key stakeholders to construct a replica of the triage space to conduct simulations to test these concerns.

The first step to conducting the simulations included obtaining the designs. From there, the KCVA simulation team utilized a large conference room at the facility to construct the replica. Using the design, the exact dimensions of the ED triage room were taped off on the floor. The walls were then constructed using multiple sheets of foam poster board that were taped together. Each poster board wall was then set upright and taped to rolling white boards for stability. The fourth wall of the triage room was made up of sliding glass doors in the design. To mimic this, rolling white boards were utilized.

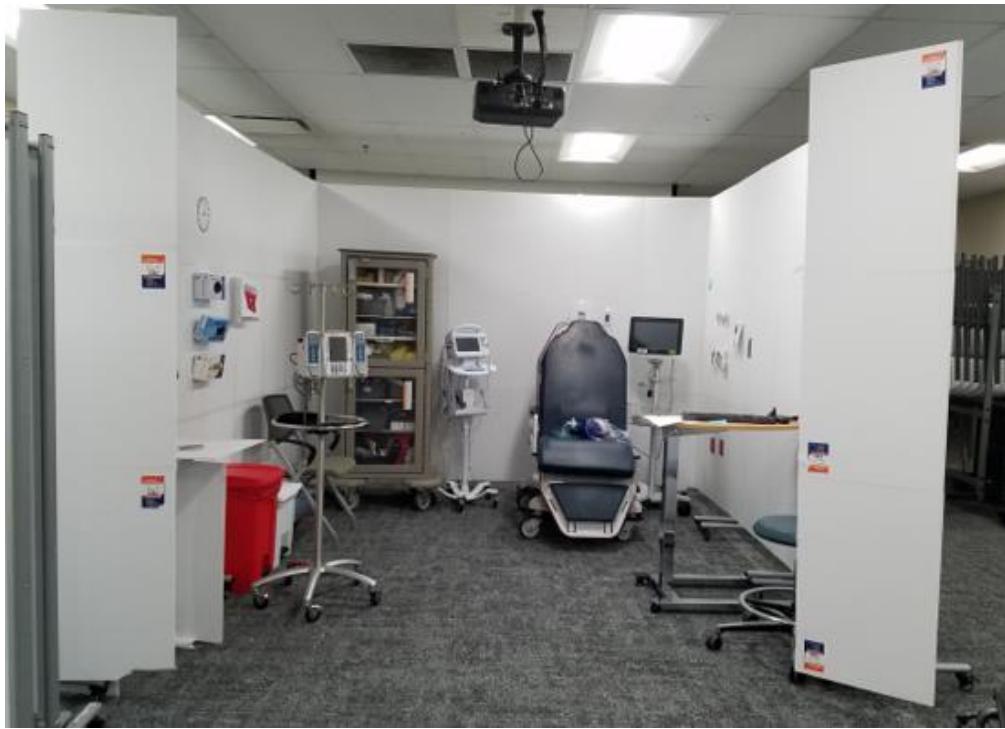
The designs were then referenced to identify the exact setup of the triage room. Images of items that would be hung on the triage room walls such as a phone, sharps box, clock, and other items, were printed, attached to poster board with additional backing, and then hung on the wall to give them a three-dimensional look. All items in the room were placed within inches of the architectural designs used by the construction team.



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Simulations were then conducted with staff in the area to test the identified concerns. Following each scenario, a team discussion was conducted, and a safe patient flow process was established. Key stakeholder concerns centered around patient and staff safety. Concerns identified included lack of a clear view of the waiting room from the triage rooms and having only one entrance and exit from the triage room. Since construction has already begun on this phase of the ED, no major changes can be made, but the feedback was noted for future phases. The team discussion also led to identifying measures to increase staff safety when using the triage rooms.

In addition to the safety concerns, opportunities to increase efficiency were identified. The opportunities included rearranging the room and the need for additional code-blue buttons and data ports for equipment. The facility planner also shared that completing pre-construction simulations earlier in the design process could allow for significant design changes to occur without disrupting other critical design elements such as electrical, heating, ventilation, and air conditioning (HVAC), Office of Information & Technology (OI&T), and others. Completing simulations at a 35 percent design completion would be the ideal time. Pre-construction simulation offers the opportunity for spaces to become safer and more efficient while staying focused on the mission of improving the lives of Veterans and their families every day. Safe and efficient workspaces can contribute to more Veterans receiving high-quality health care in a timely manner.



(Preconstruction build for simulated emergency department triage space. Setup created from end user input. Photography by Amber Licklider, RN, MSN)
