

## Eliminate Latent Safety Threats in New Clinical Settings Using Simulation Technology



### THE PROBLEM

*In-situ* simulation allows simulation specialists to examine new clinical settings for latent safety threats (LSTs), and then evaluate and eliminate them prior to actual patient care.

Texas Children's Hospital (TCH) has been a leader in pediatric healthcare excellence since it was first chartered in the mid-twentieth century. Jennifer L. Arnold, MD, Pediatric Simulation Center Medical Director, and Kelly D. Wallin, MS, RN, Assistant Director, determined how the use of in-situ simulation might reduce LSTs in actual care environments through an intensive learning experience.

### THE SOLUTION

"In Situ simulation prior to implementation can test the environment, staff, and the interaction of both in the delivery of patient care," says Arnold. "This can identify and address overt and/or latent threats to patient safety and weaknesses in complex systems involving the interaction of people and the physical environment."

The Texas Children's Hospital Pediatric Simulation Center is equipped with EMS' SIMULATIONiQ Enterprise simulation management system for fixed environments, such as rooms with cameras, as well as SIMULATIONiQ Portable for in-situ scenarios.

The EMS system allows Arnold and Wallin to simultaneously record any number of scenarios, and facilitates stakeholders' ability to make educated decisions, such as defining optimal staff roles, refining scope of practice, and identifying LSTs before facility opening.

### THE RESULTS

Wallin identified four primary areas of potential LSTs suited for evaluation: Facilities - the arrangement of physical space can greatly affect the delivery of patient care; Systems - the evaluation of policies, clinical processes, and communication systems prior to actual patient care delivery; Resources - determine if the staffing pattern is adequate; and Performance Gaps - these may emerge during the testing process, requiring formal or informal training.

These types of simulations can help calculate provider workload, refine team responsibilities, and identify LSTs in both new and established settings.

Additionally, Texas Children's uses SIMULATIONiQ technology to measure the effectiveness of a simulated event. Pre- and post-simulation surveys are sent to the recipients via email to garner valuable information about their experiences and observations. The system can tabulate the survey responses and assessment results and provide a variety of informative statistical reports.

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