

Simulation of a New Sedated Procedure Improves Caregiver Confidence and System Readiness

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Introduction: Since 2012, Texas Children's Hospital (TCH) has provided care to women in the Pavilion for Women (PFW), a separate building connected to the pediatric West Tower (WT) via skybridges. In May 2017, the adult Interventional Radiology (IR) group proposed providing uterine fibroid embolization, a new procedure requiring moderate sedation and specialized IR tools which were only available in the WT IR suite.

Methods: A multi-disciplinary task force was assembled to create moderate sedation training, credentialing, and workflows for adult providers, along with electronic medical record documentation and order sets. A select team of IR suite staff with adult care experience were educated regarding the new procedure and moderate sedation processes. In collaboration with the TCH Simulation Center, the task force devised and conducted two Simulation-based Clinical Systems Tests to proactively identify and address latent safety threats with the new environment (people, physical environment, and processes). Simulation One consisted of conveying a simulated patient from the initial registration in the PFW through preparation and procedure/sedation initiation in the WT IR suite, with subsequent cardiorespiratory arrest and activation of the adult code response team. Simulation Two tested the system response to an emergency event during transport of the recovering patient post-procedure from the WT to the PFW for 24-hour observation admission and the subsequent PFW patient admission processes.

Results: These simulations identified 33 latent safety threats which were subsequently addressed by the task force (Figure 1). Simulation participants' confidence in the system safety and their ability to perform their care duties increased from an average of 3.9 to 4.6 (5-point scale) from pre to post simulation surveys.

Discussion: Simulation of a new care process identified latent safety threats and increased caregiver confidence, ultimately improving patient safety. Simulation will continue to be incorporated into new procedure development processes to improve care and maximize safety.