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Abstract

Increasing Environmental Realism and Learner Engagement - Introducing SimHide

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During in-situ simulation exercises, one factor known to increase the buy-in and sustained engagement of the learners is the extent to which environmental, conceptual and emotional realism can be achieved. The learners should interact with the mannequin during the scenario but ideally, the computer operator and associated paraphernalia should not intrude physically on the simulation space. This is because a visible faculty member sitting behind a laptop, within the clinical area, during a simulated event draws the attention of the learners and reduces authenticity. Our objective was to create a mobile custom hide, which could house all the simulation equipment *and* disguise the presence of a technician.

We identified which items of furniture at our children's hospital were large enough (once "gutted") to accommodate all the simulation equipment; universal to all clinical care areas; and amenable to "gutting." A tall, double-fronted medical supply cart satisfied these criteria. We undertook a process of design by iterative refinement – a collaborative effort by anesthesiologists, simulation educators and medical engineers. The unit was "gutted" internally, leaving only an external shell, with custom-created sham shelf fronts, to give an observer the impression of well-stocked shelves. The unit includes a subtle viewing window with one way plexiglass which is virtually un-noticeable from outside, but through which the operator, seated in the rear of the unit has an unrestricted forward view. Cameras are mounted on the exterior of the unit with live feed to the operator and concurrent video capture for debriefing and research purposes. Internally, the structure is modified to house every component of the simulation equipment during transport plus a desktop, compressor, shelves and mounted audiovisual control unit. The unit is on wheels so as to be mobile.

We have implemented the SimHide in our in-situ simulation program. The SimHide has also assisted in transforming non-clinical rooms into simulation areas for ad-hoc simulation sessions. As a component of our program evaluation, a post-simulation learner survey includes questions regarding engagement, authenticity and believability. Comparison of data for our in-situ sessions pre- and post-introduction of SimHide show a statistically significant improvement in scores. The project was completed with minimal budget, increasing the cost-effectiveness of the endeavour.

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