

EDUCATIONAL DILEMMA OR QUESTION

Simulation: Do I need to warn learners that the manikin may die?

Reference

Weiss, A., Jaffrelot, M., Bartier, J. C., Pottecher, T., Borraccia, I., Mahoudeau, G., Noll, E., Brunstein, V., Delacour, C., Pelaccia, T. (2017). Does the unexpected death of the manikin in a simulation maintain the participants' perceived self-efficacy? An observational prospective study with medical students. *BMC medical education*, 17(1), 109.

DOI: 10.1186/s12909-017-0944-x. PMID: 28683737

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-017-0944-x>

Why Is This Paper Relevant to Emergency Medicine Education?

Simulation is a core teaching tool used in all levels of emergency medicine (EM) education. Simulation allows for exposure to rare or high stakes clinical scenarios, which learners may not experience during their training. This is particularly relevant with the transition to the Competence by Design training model. Learning to deal with patient death is an important part of medical education, especially in the EM environment, where deaths are often unexpected. There is debate among educators whether scenarios that involve death of the manikin can be safely used and are beneficial for learning. Some authors believe that these scenarios can increase learner stress and impair the psychological safety that is fundamental to learning in a simulation setting. Conversely, other studies show that learners feel unprepared to deal with patient death and support that manikin death does not affect psychological safety and may even improve performance.

1

Prebriefing and debriefing are essential to help learners deal with the stress and emotions that they will experience during simulation. This paper addresses whether it is necessary to disclose the possibility of death during the prebrief and thus can guide practice in designing simulation scenarios.

Level of Evidence

Randomized single site study, small participant numbers.

Level of Learning

Undergraduate

Study Design

Single site study where 56 medical students were randomized to either conventional prebriefing or specific prebriefing that included warning regarding death of the manikin. Self-reported performance was compared between the two groups. Single site study where 56 medical students were randomized to either conventional prebriefing or specific prebriefing that included warning regarding death of the manikin. Self-reported performance was compared between the two groups.

Setting

Emergency room setting in a teaching hospital in Strasbourg, France using a high-fidelity manikin.

Funding Sources

None

Synopsis

This study examined the effect of warning medical students of possible manikin death during simulation. Students were randomized into two groups: Group 1 (n=27) was warned of the possibility of manikin death in the prebrief, group 2 (n=29) was not. Groups were similar in sex, exposure to sudden death, and training in managing death. The remaining prebrief and debrief material was the same for both groups. The clinical scenario was a cerebral hemorrhage case that progressed to death. Sessions were conducted by experienced simulation instructors.

The primary outcome was the students' perceived self-efficacy (PSE). PSE is a learner's perception of their ability to carry out a task. The higher the level of PSE, the more learners will challenge themselves and better persevere, manage stress, and achieve a higher level of performance. The authors hypothesized that students who were warned of possible manikin death would improve their PSE compared with those who were not.

The students' PSE was measured after the scenario and after the debrief. The PSE for both groups was similar before the debrief ($p=0.41$) and significantly increased by the end of the debrief ($p<0.001$). There was no significant difference in PSE between the 2 groups ($p=0.382$).

These results refute the authors' hypothesis that warning learners of the possibility of manikin death will improve their PSE. By not needing to inform learners that the manikin could die in a simulation, we add to the authenticity and fidelity of the scenario. Furthermore, it supports the role of debriefing in improving learners' PSE.

BOTTOM LINE

This study supports the growing evidence that the death during simulation does not have a negative impact on a students' PSE. It also provides data supporting that learners do not need to be prebriefed on the possibility of death – much like what happens in real clinical practice.