Letter to the Editor

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Harnessing simulation to drive system-focused change

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Our team read with interest the recent publication by Dr Balikai and colleagues,[1] in which the authors evaluate a didactic and simulation-based, single-session, team-centric training curriculum to familiarize staff with modified COVID-19 PICU intubation protocols. We would like to applaud the group for their use of simulation capabilities to both develop COVID-specific workflows and to institute a training program to optimize implementation.

It is also important to recognize and celebrate strengths in the work that were underplayed in this article's discussion. The authors harnessed the power of simulation to not only teach and evaluate their staff but indeed to test and refine their modified airway management procedure before implementation. In situ system-focused applications of simulation can be truly powerful, and this report provides an overview of the multiple ways in which simulation can facilitate near-term improvement.[2]

The authors appropriately and candidly point out their limitations, in particular with regards to durability of confidence and performance improvements ("skill fade") and the extrapolation of their findings to clinical practice. A wealth of literature supports that simulation can improve team task completion, and that improved task completion results in enhanced confidence. However, the importance of this accomplishment in a time of forced and urgent change in practice is noteworthy. Considering that this endeavor was undertaken relatively early in the pandemic, as experience with managing COVID-19 patients increased, there may even have been a temporary decrease in confidence coupled with a seemingly paradoxical increase in performance due to the Dunning–Kruger effect.[3]

Dr Balikai et al mentioned an emphasis on "excellent team dynamics and communication so that PICU staff can implement these recommendations effectively." We would have loved to learn more about the team's experience in achieving these conditions, especially with regards to the challenges imposed by universal masking, powered air purifiers, and their associated hinderance on both verbal and nonverbal communication.

Finally, although the authors identified statistically significant improvement in technical performance, they are to be commended for paying attention to aspects of practice that showed suboptimal improvement—in this case, the performances of a time out and of postintubation hand hygiene. They suggest deliberate focus on the adherence to these steps in clinical practice; given the authors' stated intention to conduct refresher training, we posit that these findings should be used to iterate upon the educational module to proactively focus on driving desired behavior change.

System-level workflow optimization is a challenging task; the authors demonstrate that in situ simulation is a valuable tool in achieving peak performance at the individual, team, and system levels. We look forward to further study on this topic, particularly as it relates to long-term skill retention and sustained team performance.

DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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