

Online supplementary table 1. Recognizing and responding to threats in psychological safety – a two-column case*

<p>Setting: Day-long acute care simulation-based course focused on airway emergencies</p> <p>The first scenario of the day involves a 5-year old patient with progressive respiratory failure due to severe pneumonia who requires intubation. Initial attempts at intubation are unsuccessful and while performing bag-mask ventilation, the oxygen levels remain between 83-85%. The patient has low oxygen levels for several minutes.</p> <p>Six course participants observe the scenario from the debriefing room via video technology. When the team leader (Jordan) of the scenario does not follow the appropriate steps of the difficult airway algorithm, one of observing participants (John) voices clear but harsh critique of the decision-making both during the simulation and during the debriefing. In doing so, this participant repeatedly breaches psychological safety.</p>	
Debriefers' Thought Process	Dialogue
<p><i>Wow. One participant is criticizing another course participant who had volunteered to go first and lead the team. Since it is the first scenario of the day I worry this will threaten the psychological safety we worked hard to create.</i></p> <p><i>I hope this criticizing does not continue. I would hate for John to feel like people are ganging up on him. This could set the tone for the rest of the day....</i></p>	<p><u>During the simulation scenario:</u></p> <p>Observer JOHN (<i>after sipping his coffee</i>): At this point in the case, the difficulty airway algorithm clearly recommends a laryngeal mask airway (LMA) since the sats are so low. He is totally missing the boat and clearly not following the guidelines (<i>other observing participants nod in agreement</i>).</p> <p>Observer JUANITA: so obvious...</p> <p>DEBRIEFER (<i>sits silently...</i>)</p>
<p><i>Good, Jordan was engaged and the simulation felt real to him! Excellent!</i></p>	<p><u>During the debriefing:</u></p> <p>Debriefers: So how are you feeling after that case?</p> <p>Team Leader JORDAN: That was pretty stressful! The patient's respiratory status deteriorated rapidly and we had a difficult time maintaining oxygenation. He was hard to intubate. We finally got the patient intubated in the end. Felt real to me!</p> <p><i>Others nod.</i></p>

<p><i>Let me normalize the “stressful” part of it..</i></p> <p><i>I wonder how the other participants in the simulation experienced it...</i></p> <p><i>Oh, no, John has a good point, but he is being overly critical and quite blunt...</i></p> <p><i>This is stressful for me now....I feel like how I manage this situation will set the tone for the rest of the day .John is getting beaten up here...</i></p> <p><i>Let me try to nip this in the bud by redirecting other active participants. Can ’t have more unfiltered critique like this at this point...</i></p> <p><i>Not the best rationale, although at least that is a starting point for the discussion....</i></p> <p><i>Wow, John is continuing to be super-critical...although I agree with him that an LMA would have been a great strategy.</i></p> <p><i>But John’s critique has sucked the air out of the room...how do deal with this?!?!?</i></p>	<p>Debrief <i>(using eye contact to direct question to other participants in the simulation):</i> I’m hearing it was stressful dealing with a hypoxic patient who needed urgent airway management. Lots of us find those situations stressful! Other initial reactions?</p> <p>JOHN <i>(interjects after sipping his coffee):</i> That should have been a straightforward case, after not getting the intubation attempt the second time, you could not get the oxygen sats consistently above 85%. The obvious next step according to the airway algorithm was to place a laryngeal mask airway, not to attempt intubation a third time since you could not ventilate sufficiently with bag-mask.</p> <p><i>Other observing participants nod.</i></p> <p>DEBRIEFER: Thanks John, we come back to that...right I now I would like to hear from others who were active participants in the case...</p> <p>JORDAN <i>(interjecting):</i> I thought it would be best to try to intubate a third time since then we would have a secure airway and the sats were low-ish between 83-85%, which is not that bad—at least above 80%! An LMA would not secure the airway and I was anticipating the patient would need significant ventilatory support because of the severe pneumonia.</p> <p>JOHN: Although the airway algorithm is pretty clear that once the oxygen saturation falls below 90%, you no longer have time and you need to step it up!</p> <p><i>Jordan sighs and slumps a bit in his chair. Other participants look at the floor..</i></p>
<p><i>This situation is really stressing me out, the mood went from upbeat to everyone looking at the floor in a flash...</i></p> <p><i>It is so obvious to John what needed to happen while he was sitting there watching sipping his coffee...</i></p>	

<p><i>But might this be a way out of this? But I need to lean into it...</i></p> <p><i>That approach seems to have gained traction....</i></p> <p><i>Let's continue with the reactions phase...and let me reiterate where we are in the debriefing to make sure people are oriented.</i></p>	<p>DEBRIEFER: John, I am so glad you highlight the importance of the importance of the oxygen saturation being above or below 90% to help make decisions about next steps—we will talk about that more later on.</p> <p>However, your comment actually highlights something quite normal in simulation and in clinical practice: when we deal with acute emergency situations, our thinking changes and don't process information the same way. What might seem obvious to an observer drinking a latte is not at all obvious when you are in the heat of the moment! You see when you take your turn.</p> <p>JORDAN: valid point...</p> <p>JOHN (<i>sitting up a bit</i>): Yes, it is much harder to think straight...</p> <p><i>(all participants nod knowingly....)</i></p> <p>DEBRIEFER: how about we finish up getting some initial reactions from those of you who were in the case, we'll make sure we are all on the same page about the main medical issues, then we will explore airway management in more detail: both in this case, and in your future clinical practice</p>
--	---

Note. * The two-column case idea is based on work in action science and organisational behaviour.¹⁻³

References

1. Argyris C, Putnam R, McLain Smith D. Action science: Concepts, methods, and skills for research and intervention. San Francisco: Jossey-Bass 1985.
2. Senge P. The Fifth Discipline: The art and practice of the learning organization. New York: Doubleday 1990.
3. Rudolph JW, Foldy EG, Robinson T, et al. Helping without harming. The instructor's feedback dilemma in debriefing--A case study. *Simul Healthc* 2013;8:304-16.