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Challenging authority during a life threatening crisis: The effect of operating room hierarchy

Abstract

Background: Effective operating theatre (OT) communication is important for team function and patient safety. Status asymmetry between team members may contribute to communication breakdown and threaten patient safety. We investigated how hierarchy in the OT team influences an anaesthesia trainee's ability to challenge a clearly unethical decision by a consultant anaesthetist in a simulated crisis scenario.

Methods: We prospectively randomized 49 postgraduate year (PGY) 2-5 anaesthesia trainees at 2 academic hospitals to participate in a videotaped simulated crisis scenario with a simulated OT team practicing either a hierarchical team structure (group H) or a nonhierarchical team structure (group NH). The scenario allowed trainees several opportunities to challenge their consultant anaesthetist when administering blood to Jehovah's Witness patients in contradiction to their written wishes. Three independent, blinded raters scored the performances using a modified Advocacy-Inquiry Score (AIS). The primary outcome was a comparison of the best-response AIS between groups H and NH. Secondary outcomes included a comparison of best AIS by PGY and the percentage in each group that checked and administered blood.

Results: The AIS did not differ between groups ($p=0.832$) but significantly improved from PGY 2 to PGY5 ($p=0.026$). The rates of checking blood (92% vs. 76%, $p=0.082$) and administering blood (62% vs. 57%, $p=0.721$) were high in both groups but not significantly different between groups.

Conclusions: This study did not show a significant effect of OT team hierarchical structure on trainees' ability to challenge authority, however the results are concerning. The challenges were suboptimal in quality and there was an alarmingly high rate of blood checking and administration in both groups. This may reflect lack of training in appropriately and effectively challenging authority within the formal curriculum with implications for patient safety.