Title

Rapid Cycle Deliberate Practice vs Traditional Simulation for Neonatal Resuscitation Training and Retention of Skills

Authors

Parsons, Jessica
Pierce, Deborah
Sielicki, Anthony
et al.

Results: Table 1 shows the prevalence of each platform in EM programs. Our analysis found that most programs maintain a website. X and IG are the most commonly used SM platforms, FB and blogs are infrequently utilized, and TikTok is nearly entirely absent. While the prevalence of X and IG is effectively equivalent, the engagement with IG was higher, with a mean of 60 IG posts/program over the year-long study period vs 36 for X. Figure 1 shows the average monthly posts per platform.

Conclusion: These findings demonstrate that IG is now the most utilized SM platform for EM residencies, a shift from previous studies that identified X as most popular. A limitation of this study is that IG Stories could not be quantified, meaning that utilization of IG is likely even higher than reported. TikTok is rarely used by EM residencies, despite being the most globally downloaded app, and is a potential for future focus.

Figure 1. Average monthly social media posts per EM residency program.
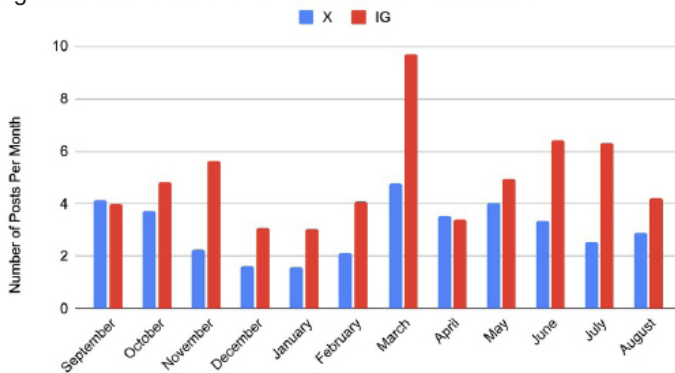

Table 1. Presene of EM residency digital platforms.

	Yes	No	Prevalence (%)
Website	203	36	85
Blog	35	204	14
FB	41	198	17
X	103	136	43
IG	102	137	42
TikTok	1	238	0.004

20 Rapid Cycle Deliberate Practice vs Traditional Simulation for Neonatal Resuscitation Training and Retention of Skills

Jessica Parsons, Deborah Pierce, Anthony Sielicki, Caitlin Boyle, Joseph Pavlik, Kelly MacKenzie

Background: Neonatal resuscitation protocol (NRP) is a required component of EM residency education. As a rare but high acuity event, NRP is often taught and reinforced through SIM. Rapid cycle deliberate practice (RCDP) is a method of SIM that uses frequent interruptions to immediately correct mistakes and provides opportunities for repetitive practice. RCDP may be a better method than traditional SIM for teaching and reinforcing NRP skills.

Objectives: We compared traditional SIM versus RCDP on improvement and retention of team NRP skills. Our hypothesis was RCDP will result in greater improvement of team NRP skills and these skills will be retained at six months.

Methods: Thirty EM PGY1-4 residents were divided into six teams in January 2023. Each team participated in an NRP SIM case that was video-recorded and scored by two blinded raters using a validated NRP scoring tool. Then, three teams had the traditional SIM training with a post-scenario facilitated debrief and three teams had RCDP of NRP. Three days later, all teams had a post-test NRP SIM case. Retention testing occurred in June 2023 and involved testing ad hoc teams of three residents who all had either traditional SIM or RCDP of NRP. The post-tests and retention NRP SIM cases were graded by two blinded raters.

Results: Due to audio error, the pretest for one of the traditional SIM teams could not be scored, so this pretest was excluded. Both the traditional SIM and the RCDP groups demonstrated significant improvement in NRP scores, however, post-test scores were not statistically significant different between the two groups. Average scores for both groups showed significant degradation of NRP skills after six months.

Conclusion: Both traditional SIM and RCDP improved NRP team performance but a study with higher power is required to detect differences between the two types of SIM. Residency should incorporate NRP frequently as there was significant degradation in skills after six months.
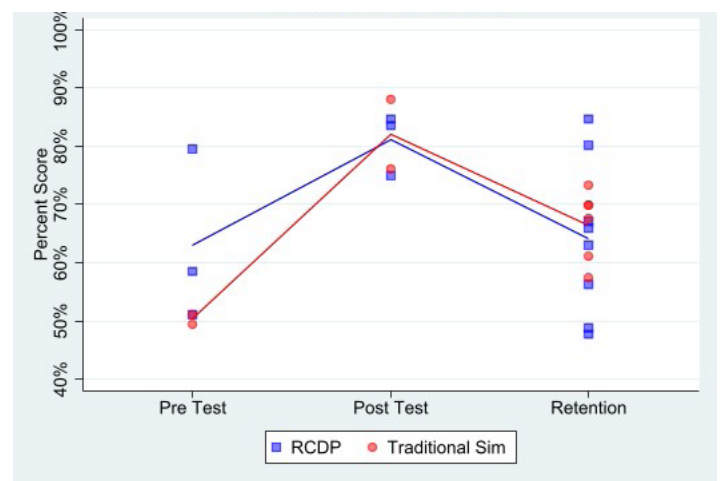

Figure 1. Neonatal resuscitation scores.