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Title

Provider Perspectives on Trauma Recovery & Violence Prevention Resource Allocation for Assault Injured Adolescents in an Urban Level 1 Trauma Center

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medical knowledge. Variable response rates and feedback fatigue are limitations. The discordance between perceived utility and lack of impact of nursing evaluations on resident standing may reflect quality or significance of feedback. Nursing staff may benefit from education on feedback delivery and avoiding retributional and gender-disparate feedback. Collaborative efforts are needed to create, validate, and standardize tools for collecting and utilizing nursing feedback.

43 Podcasting in Emergency Medicine Residents' Education: Information Retention Comparison vs. Lecture

Michael Overbeck, Jeremy Voros, Paul Pelletier, Rachel Johnson, Jeffrey Druck

Background: Podcasts as a source of information in Emergency Medicine resident education is gaining in popularity. However, the degree of knowledge retention compared to traditional learning modalities (i.e., Lecture) is unknown.

Methods: A convenience sample of residents at a 4-year academic emergency medicine residency were provided an in-person (synchronous) 30-minute lecture (Radiation Safety in the Emergency Department) and access to an (asynchronous) 30-minute podcast (Neonatal Endocrine Emergencies) to listen to at their convenience. Residents were asked to complete a pre-, post-, and after 10-14 days, retention test for both learning modalities. This longitudinal data set was modeled as a linear mixed model with a continuous outcome of test score. Time, type of learning technique, and interaction between time and type of learning were adjusted for by including them in the model as fixed effects. The correlation of both time and type of learning technique were accounted for by including them as nested random effects with AR(1) and unstructured covariance structures, respectively.

Results: Thirty-seven residents participated in the study, with 22 residents completing all pre-, post-, and retention tests for each learning modality. Podcast scores were significantly

higher at the post-test by 1.97 points ($p < 0.0001$) and higher at the retention test by 1.47 points ($p = 0.0107$). However, the decrease in scores from post-test to retention tests was not significantly different between the two modalities ($p = 0.443$).

Conclusion: Retention of content by emergency medicine residents is similar when delivered by lecture (synchronous) or podcast (asynchronous) modalities.
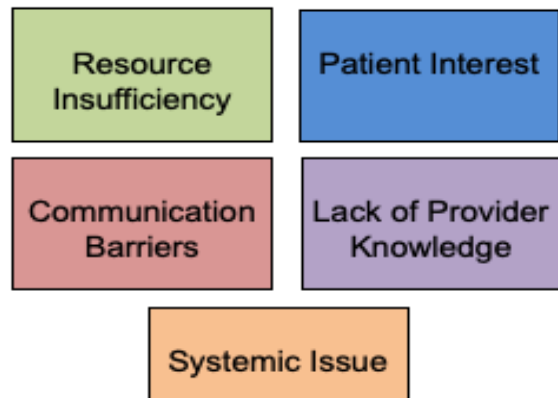
44 Provider Perspectives on Trauma Recovery & Violence Prevention Resource Allocation for Assault Injured Adolescents in an Urban Level 1 Trauma Center

Symphony Fletcher, Princy George, Alisa McQueen

Background: Nationally, firearm homicide is the leading cause of mortality for adolescents 1 to 19 years of age. Though rates of violence have decreased over the years, violent injury among adolescents remains an important public health issue, particularly in areas impacted by disproportionate rates of poverty and violence (Purtle et al., 2016).

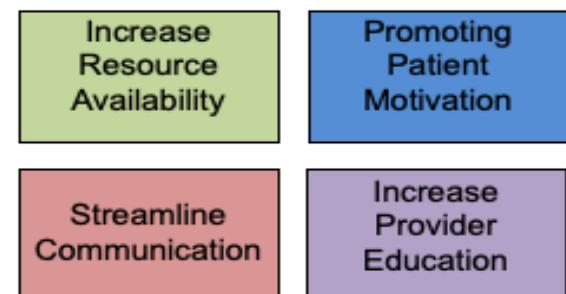**Objectives:** This study sought to assess provider reported knowledge and usage of trauma recovery and violence
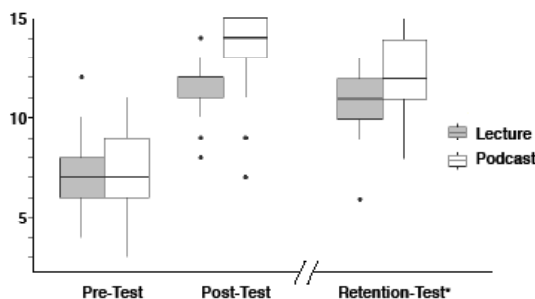
Figure. Participants' scores for the pre-test, and retention tests. Gray boxes: Lecture, white boxes: Podcast scores. *The slope of the drop in scores from post-test to retention tests was not significantly different between the two modalities (p=0.4430).

Figure.

prevention (TRVP) interventions at an urban Level 1 Pediatric Trauma Center and Emergency Department.

Methods: We surveyed 70 health providers working in a Level 1 pediatric emergency department over a 6-month period. All participants completed a 12-item survey to assess knowledge, usage, importance, and efficacy of TRVP resources (N=70). A psychometric 5-point scale was used to assess knowledge, usage, importance, and efficacy while free responses captured data on "existing resources, resource barriers, and TRVP areas of improvement".

Results: The 70 participants consisted of 53 physicians, 12 nurses, 2 ED technicians, and 3 other staff. Of physicians, 74% were residents with 47% in EM residency and 47% in pediatrics. Participant awareness of existing TRVP resources was low, 80% scored a ≤ 3 (of 5). Overall, 67% of participants indicated a moderate to frequent use of TRVP resources. However, nearly 41% of participants reported feeling slightly to not at all confident in activating existing resources. Most participants (90%) agreed that providers should incorporate TRVP into standard youth medical care. Over 88% of participants identified resources as minimally effective at preventing reinjury.

Conclusion: Providers agree that TRVP use should be standard care of for assault injured youth. However, they have limited awareness of resources, low confidence in utilizing resources, and low efficacy rating for existing resources. Further work is needed to train providers on TRVP resources to improve provider utilization.

45 Rapid Cycle Deliberate Practice in Resuscitation: Time to Completion of Critical Actions

Jaron Raper, Katherine Griesmer, Andrew Bloom, Anderson Marshall, Ryan Kraemer, Zachary Pacheco, Stephanie Berger, Andres Viles, Charles Khoury

Background: Simulation training is often used in graduate and undergraduate medical education programs to teach procedural and clinical skills. Rapid cycle deliberate practice (RCDP) is a simulation strategy that utilizes iterative practice and immediate feedback to achieve skill mastery. The impact of RCDP training on adult resuscitation education has yet to be studied.

Objective: Compare the time to completion of advanced cardiovascular life support (ACLS) actions between trainees who have completed immersive sim vs. RCDP sim for ACLS.

Methods: This study was a prospective, randomized, controlled, curriculum evaluation in which 55 ACLS certified Internal Medicine and Emergency Medicine interns were randomized to either RCDP sim or immersive sim. Time to initiating critical ACLS actions was compared between groups. Metrics included time to first pulse check, first chest compression, backboard placement, first rhythm analysis,

first defibrillation, first epinephrine, pause duration, and amiodarone administration. Performance was evaluated and timestamps recorded during an additional immersive sim.

Results: Residents were randomized to instruction by RCDP sim (28) and immersive sim (27). Immersive vs. RCDP groups demonstrated seconds to first pulse check 5.6, 4 (p=0.09), first chest compression 15.2, 12.4 (p=.18), backboard placement 193.4, 40.4 (p=.14), pad placement 74.8, 66.4 (p=.46), initial rhythm analysis 111.2, 73.6 (p=.09), first defibrillation 150.6, 93 (p=.11), first epinephrine 158.2, 131.6 (p=.36), pause duration 14.2, 6.2 (p < 0.05), and amiodarone 376.6, 438.8 (p=.34), respectively.

Conclusions: RCDP learners trended towards earlier completion of ACLS actions compared to their immersive peers in all categories (Chart 1, 2), with a statistically significant reduction in pause duration. Results are limited by the sample size, but given the overall trend, RCDP-trained residents appear to complete ACLS actions more quickly than immersive trained peers.
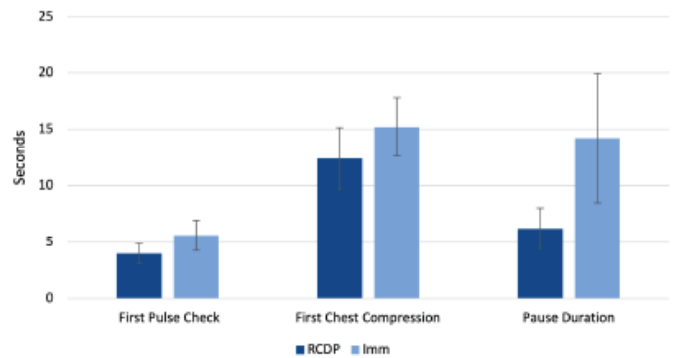

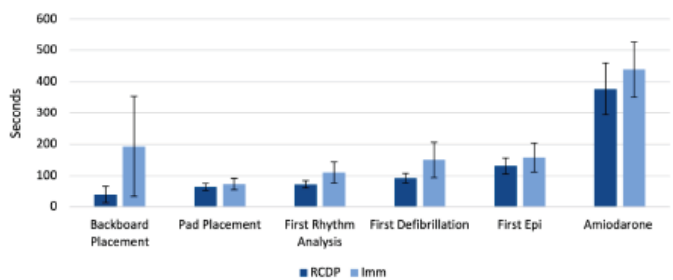**Figure 1.** Chart 1: RCDP versus immersive time differences.

Figure 2. Chart 2: RCDP versus immersive time differences.

46 Rapid Cycle Deliberate Practice vs Traditional Simulation Methods in Trauma Team Resuscitations

Jessica Parsons, Richard Tumminello, Deborah Pierce, Anthony Sielicki, Jacqueline Dash, Chad Siewers

Background: Rapid cycle deliberate practice (RCDP)