

9 Removing the Writer's Block: The Clinical Image Write-a-Palooza

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Background: Scientific writing is an essential component of academic practice in emergency medicine (EM), yet formal methods for teaching this skill are lacking. In addition, traditional didactic lectures on manuscript preparation do not allow learners to practice new skills in a mentored setting. Further, many residency programs struggle to meet scholarly activity requirements, especially where robust resources are lacking.

Educational Objectives: To develop a structured, mentored academic writing skills workshop incorporating adult learning theory. Goals included: enhancing resident understanding of the process of preparing a clinical image for submission; enhancing faculty knowledge of the role of academic mentors; working in teams to prepare a clinical image submission; and completing the process of manuscript submission, revision, and publication.

Curricular Design: We developed a novel format using adult learning theory principles, team-based learning, and flipped classroom strategies. Workshop preparation began with assignment of brief reading for both residents and faculty, with residents focused on the basics of image and case preparation and faculty focused on academic mentoring. The 2-hour workshop consisted of a brief review of readings; discussion regarding manuscript and image preparation, formatting, author guidelines, and submission logistics; and team-based work, including 6 assigned roles, on preparing the submission. Handouts included examples; summaries describing team member roles; instructions for image preparation and manuscript submission; citation examples; and cases for submission. Mentors and a medical librarian were present at the workshop.

10 See One, Articulate One, Simulate One - Teaching Procedural Skills in Small Training Groups

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Background: Skills lab training is a common modality for teaching procedural skills in emergency medicine residency curriculum. There is no formalized way to teaching these procedures. In addition, there is variability in the size of learning groups, and teacher-student ratios. Peyton's four-step approach to skills-lab training has gained much recognition in medical education literature, however it is designed to follow a 1:1 teacher-to-student ratio, which is not practical for most training sessions. A

modified Peyton's four-step approach was developed to allow for smaller group training, ensuring engagement of all learners, and maintaining the core steps of Peyton's original approach.

Educational Objectives: To increase engagement and efficacy during small group skills training lab for emergency medicine procedures.

Curricular Design: The modified Peyton's approach (table 1) was applied to a 4-station skill lab training session which included the following procedure stations: tube thoracostomy, cricothyrotomy, pericardiocentesis, and transvenous cardiac pacing. There were a total of 5 groups, consisting of 3-6 learners per group, who rotated through each of the 4 stations. There was one faculty instructor per station. Learners included emergency medicine residents, off service residents, and 4th year medical students. A survey was distributed to all learners after the training session to evaluate engagement and efficacy.

Impact/Effectiveness: 100% of learners (n=26) stated that they improved their skills during the training session. Out of this response, 65% strongly agreed that the session improved their skills. 57.7% (n=5) strongly agreed that they were continuously engaged. The majority of the remaining learners (n=10) agreed that they were continuously engaged. 88.5% (n=23) strongly agreed that repetitive observation was helpful and no learners had disagreed. All learners agreed that teaching the skills was helpful in learning. The majority of learners agreed that they feel comfortable performing the procedures after the session. (Figure 1) The modified Peyton's four-step approach for small groups is a practical method for teaching procedural skills and will likely increase engagement and efficacy of small group training sessions.

Table 1. Modified Peyton's¹ approach for small group teaching.

STEP 1:

The teacher demonstrates the skill at a normal pace without any comments (Demonstration)

STEP 2:

The teacher repeats the procedure, this time describing all necessary sub-steps (Deconstruction)

STEP 3:

The teacher performs the procedure following the instructions of Trainee 1, while all other Trainees are observing (Comprehension, tutor's performance and observation)

STEP 4:

Trainee 1 now performs the procedure with Trainee 2 providing instructions, while the other trainees are observing (Comprehension, trainee performance and observation)

STEP 5:

Trainee 1 receives feedback by peer trainees, followed by tutor feedback (Feedback)

STEP 6:

All trainees move through the model of providing instruction and performing the procedure, followed by feedback, until all trainees have completed the procedure and received feedback. (Circulation, completion, and conclusion)

¹ Nikendei et al. BMC Medical Education 2014, 14:68