

All data will be kept completely confidential within a secure server and will not be shared with anyone other than internal EMRA Education Committee affairs

Age: \_\_\_\_\_

Year (Circle One): MS-II / MS-III / MS-IV

Degree Type (Circle One): MD / DO / IMG / Other

What number (first, second, third, etc) EM clerkship is this for you?: \_\_\_\_\_

Location of Clerkships Completed (including current): \_\_\_\_\_

Did you work as a scribe prior to medical school? Yes/No  
If yes, did you work in the ED or another capacity? ED/other (with open explanation)

Previous EM Scribe/EMS/Nursing Experience: Yes/No  
If so, how long? \_\_\_\_\_ months/years (Circle One)  
In what capacity? \_\_\_\_\_ (i.e. RN/Paramedic/Scribe/other)

How many notes have you written so far during your current clerkship?  
None / 1-2 / 3-4 / 5-6 / 7-8 / 9+ / N/A (We do not write notes on our clerkship)

**Image 1.** EMRA documentation survey.

Student Name:	Resident Grader:				
	1	2	3	4	5
MDM	May or may not include a brief summary  Provides a weak DDX including <u>none</u> or <u>some</u> reasoning for ruling in/out major life-threatening diagnoses  May/may not provide an ED course  May/may not justify the final disposition	Provides a brief summary  Provides a weak DDX including <u>none</u> or <u>some</u> reasoning for ruling in/out major life-threatening diagnoses  May/may not provide an ED course  May/may not justify the final disposition	Provides a brief summary  Provides a weak DDX including <u>none</u> or <u>some</u> reasoning for ruling in/out major life-threatening diagnoses  May/may not provide an ED course  Justifies the final disposition	Provides a brief summary  Provides an adequate DDX including <u>some</u> reasoning for ruling in/out major life-threatening diagnoses  Provides an ED course  Justifies the final disposition	Provides a brief summary  Provides a thorough DDX including <u>strong</u> reasoning for ruling in/out major life-threatening diagnoses  Provides an ED Course  Justifies the final disposition

Comments:

**Image 2.** EMRA emergency medicine clerkship note rubric.

## 4 Task Trainer Augmented Joint Reduction Training

*Jeremy Riekana, Kent Li, Justin Wang, William Chan, Richard Shin, Victor Huang*

**Learning Objectives:** To investigate whether augmenting joint reduction education with 3D printed task trainers will offer a learning benefit when paired with traditional teaching methods using lectures and videos. The application is focused on EM residents with potential expansion to surgical subspecialties.

**Introduction:** Prior studies and EM training programs have called for the need for innovation in the realm of orthopedic education. When compared to other core skills developed during EM residency, joint reductions are relatively infrequent. The development of 3D printing technology offers an opportunity for the development of task trainers to supplement resident experience. There are no current 3D printed task trainers available for joint reductions. We developed a series of 3D printed joint models with orthopedic curriculum to supplement exposure to dislocation reductions to improve emergency medicine residents' preparedness, confidence, and competency in joint dislocation

reductions. Models were designed to create tension and tactile feedback upon reduction. The supplemental curriculum summarized patient evaluation, anatomy, and techniques.

**Curricular Design:** We utilized the trainers in simulation sessions with reductions taught using Peyton's 4 step approach, and competency assessed through Miller's pyramid educational theory. A likert type survey was administered to assess resident learning, preference in teaching style, and confidence in reduction techniques. Baseline experience data was collected to assess prior clinical experience. Learning retention will be assessed during the follow up skill session. Given the variety of joints designed, we divided sessions to include 1-2 joints at a time. This allowed for more focus on specific joints as well as space repetition across multiple sessions throughout the academic year.

**Impact/Effectiveness:** The current set of data strongly supports the utilization and integration of 3D models into the education of emergency medicine residents in joint dislocation reductions. The vast majority of resident learners found benefit in the inclusion of 3D printed joint models. Although most learners preferred the 3D printed models compared to traditional teaching methods, we advocate for an integrated teaching model rather than choosing only one teaching technique.



**Image 1.**



**Image 2.**