Just in Time Procedural Resource Utilization in Emergency Medicine: A Needs Assessment

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Introduction

- The practice of Emergency Medicine (EM) requires that physicians be proficient in a vast array of procedures no matter how frequently or rarely they may occur.
- The Accreditation Council for Graduate Medical Education and The American Board of Emergency Medicine have established a series of milestones regarding procedural performance in order to establish a minimum level of physician competency in the field of EM[1,2].
- The methods EM physicians utilize to maintain their procedural competency are widely varied, and procedural skills inevitably degrade over time if not practiced regularly[3]. For rare procedures, "just in time" (JIT) refresher training can be useful.
- Our objective was to perform a needs assessment of EM physicians' current JIT procedural resource usage and to create a repository of easily accessible JIT procedural training guides.

Methods

An anonymous, online cross-sectional 12-question needs assessment was sent to faculty and residents in the Department of EM at Vanderbilt University Medical Center in December 2020. Resident and faculty responses were compared using Fisher's exact testing. Statistical analysis was performed using SPSS 27 (IBM).

The needs assessment evaluated:

- Current resource utilization during shift to learn and teach procedures
- Barriers to utilizing resources
- Frequency of specialty consultations for procedures due to lack of physician comfort in performing the procedure
- Ideas for new resources

Results

- Overall survey response rate: 49.5% (53/107); residents 51.3% (20/39); faculty 48.5% (33/68).
- Over the past year, a majority of respondents (31/53, 58.5%) requested a specialty consultation for at least one procedure due to lack of comfort in performing the procedure.

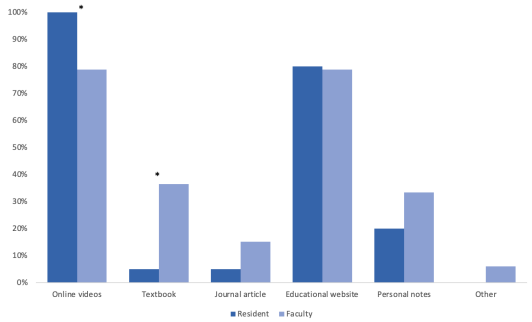

Figure 1. Percentage of faculty and residents indicating current JIT resource utilization on shift.
* Indicates statistically significant difference between faculty and resident responses, p value (p<0.05).

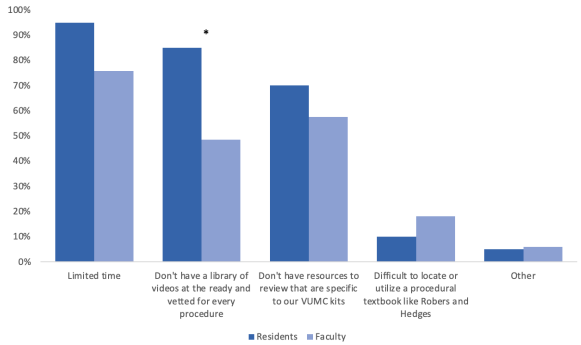

Figure 2. Percentage of faculty and residents indicating barriers to JIT resource utilization on shift.
* Indicates statistically significant difference between faculty and resident responses, p value (p<0.05).

- There was a statistically significant difference between the percentage of faculty and residents who reported using videos and textbooks as JIT resources on shift (Figure 1).
- There was a statistically significant difference between the percentage of faculty and residents who identified a lack of video library as a barrier (Figure 2).
- Of respondents, **88.7%** (47/53) **indicated their comfort level in performing a procedure would increase or significantly increase if detailed online procedural guides were available**.
- 54 procedural guides (Figure 3) were then successfully developed for core EM procedures detailing indications, contraindications, steps specific to our ED kits, complications to anticipate, and aftercare recommendations.

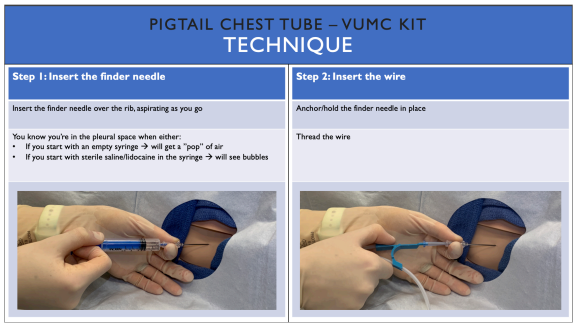

Figure 3. Pigtail Chest Tube – VUMC Kit procedure guide (initial steps).

Conclusions

- There is a clear need to have a readily accessible resource available for the purpose of JIT learning and teaching of EM procedures.
- While most physicians surveyed utilize online videos and educational websites, a majority of physicians stated an easily accessible JIT procedure guide would increase their comfort level with performing EM procedures.
- Limitations include a low survey response rate; survey conducted at a single academic institution which may limit generalizability; and survey anonymity will prevent following individual provider practice over time, thus results will be limited only to practice change at the population level.
- Further helpful areas of study after JIT procedural guide implementation would include data collection on procedure performance, procedural numbers, and patient outcomes.

References

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