

Marginal Utility of Additional Clinical Shifts on Milestone-Based Competency in an Emergency Medicine Clerkship

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Background:

Emergency medicine clerkships are a required element of medical school programs. The optimal rotation structure is unknown, and in particular the number of clinical shifts required to achieve basic competency is unknown. In this analysis of one year of evaluations at an academic center, we assess the marginal utility of clinical shifts on competency, as assessed by historical preceptor milestone-based competency evaluations.

The goal of the experiment is to observe the trend of passing rates throughout the course of an EM rotation using competencies including medical knowledge, data interpretation, and clinical judgement. The null hypothesis is that the percentage of students meeting the developmental milestones does not increase throughout the length of the clerkship.

Methods:

Clerkship evaluations of 200 students were retrospectively examined. A short form grading rubric was used to score students across eight developmental milestones. The average percentage of students meeting the developmental milestones were calculated and analyzed over the course of 14 shifts. A one-way ANOVA was used to compare the mean passing rates at different times of the clerkship.

Results:

The average percent of students achieving basic competency increased throughout the length of the clerkship, e.g. medical knowledge competency passing rates increased from 44.2% to 56.0%, first to last shifts respectively. Similar trends were observed in other competencies. The one-way ANOVA gave a p-value of less than 0.05; the null hypothesis was rejected.

Conclusion/Potential Impact:

The results can aid clerkship directors improve current grading rubrics to better assess student competency in their EM clerkships.