Abstract

Background: Electronic Health Records (EHRs) are a core component of clinical care and medical education which shape how medical students review patient information and navigate the clinical setting. Despite their widespread use, students enter training with varying levels of comfort with EHR systems and often encounter multiple systems across different clinical settings.

Objective: This study aims to evaluate changes in medical students' comfort levels with EHR systems. This includes both the most familiar and least familiar systems encountered during training with the aim of identifying factors that may lead to quicker training and increased proficiency.

Methods: A retrospective pretest-posttest survey was administered to 21 second-year medical students at the end of the clerkship year in the Colorado Springs Branch, assessing their comfort levels with EHR systems at the beginning and end of the academic year. The survey was delivered online through Qualtrics at the end of the clerkship year and included ordinal Likert-type scale questions and semi-open-ended questions. Participants retrospectively rated their comfort with EHR at the beginning of clerkship year and at the time of survey completion. This was done for most familiar and least familiar EHR systems using a 4-point scale (1 = not comfortable, 2 = somewhat comfortable, 3 = mostly comfortable, 4 = completely comfortable).The survey also asked students to identify the EHR systems they had used, provide feedback on the usability of those systems, and describe any training experiences. Changes in comfort were analyzed using the Wilcoxon signed-rank test. Qualitative responses were reviewed descriptively to provide contextual support for quantitative findings.

Results: Students demonstrated statistically significant improvements in comfort with both their most familiar and least familiar EHR systems over the clinical year. No statistically significant difference was observed between the degree of improvement for most familiar and least familiar EHR systems.

Conclusions: These findings suggest that medical student comfort with EHR systems may improve over time through routine clinical exposure, regardless of the specific platform used. Early structured exposure to EHR workflows may help support longitudinal development of comfort and proficiency across multiple systems encountered during training. Future research should target elements of EHR that contribute to learner burnout and how to limit those factors.