CAEP GEMeS

Great Evidence in Medical education Summary

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EDUCATIONAL DILEMMA OR QUESTION

Emma is a PGY-2 resident in Emergency Medicine. She feels overwhelmed with all her assessment data – she feels like she has had a lot of EPAs completed this year and the feedback has been good, however, she isn't sure if she is doing what she needs to in order to progress in her program or what she should be focusing on as she moves through her training. She reaches out to her Program Director, Jennifer, who realizes that they need to do a better job communicating with the residents regarding their progress and expectations. She heard about learning analytics at a recent conference and wonders if some of those techniques might help.

Article Reference

Why Is This Paper Relevant to Emergency Medicine Education?

The volume of assessments has increased substantially with the implementation of the Competence by Design (CBD) curriculum in Emergency Medicine residency programs. Residents rely on these assessments to track progress as well as for self-directed learning. Developing a visual dashboard that effectively analyzes and presents the assessment data that residents need can enhance their experience.

Level of Evidence/Level of Learning

Not applicable (Qualitative Research)

Funding Sources

Study Design

This study used a qualitative content analysis to develop a thematic framework describing what residents need from the presentation of their assessment data. Four focus group discussions with 7 to 10 residents were held over 10 months within the Emergency Medicine residency program at the University of Saskatchewan to identify resident needs. A design-based process was used to develop a dashboard that contained elements (data, analytics and visualization) that support their interpretation of the data.

Setting

Emergency Medicine Residency Program at the University of Saskatchewan

Synopsis

A thematic analysis of focus group discussions with EM residents that evaluated resident perspectives and examined how they used the dashboard demonstrated three broad needs. These themes are described below and demonstrated in a video published alongside the article (video link):

Synopsis (continued)

1.Guidance through the assessment program
Most residents used the dashboard to obtain a sense of their overall progress throughout the residency program. They appreciated a birds-eye view of their rotation schedule in a calendar, as well as a graph incorporating competence committee decisions and narrative feedback at different timepoints. Data surrounding EPAs including EPAs observed per week, EPA acquisition percentage per rotation and tracking overall EPA achievement was also deemed helpful in assessing progression.

2.Present workplace-based assessment
Residents wanted a graphical visualization of their assessment data. Individualized EPA scores with concomitant access to the narrative comment associated with each EPA observation was found to be most effectively visualized through a line chart. This information was offered in different timeframes to assess progression. Contextual information was also incorporated including the number of EPAs that needed to be observed within the assessment program, the number that had been observed, the number that still needed to be observed, and the number of each EPA that expired.

3.Present other assessment data
Residents acknowledged the usefulness of presenting all their assessment data, including written and oral exam scores, in a single place to track their learning and progress through residency. General, non-EPA related narrative assessments were also presented under one tab for ease of access.

Although previous research in the field has mostly been theoretical, a design-based process allowed for the creation of a dashboard in collaboration with its end-users. The dashboard has been utilized by local residency programs and garnered attention from other Canadian programs.

BOTTOM LINE

The increase in assessment data in CBME presents an exciting opportunity to utilize sophisticated analytical and visualization techniques to present assessment data to residents. A dashboard that effectively addresses their needs may improve resident reflection, learning, and self-regulation.