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Librarian Involvement in Medical Students' EBM Assessment: Does It Help?

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Introduction:

- The multi-station, summative Objective Structured Clinical Examination (OSCE), at the Sanford School of Medicine (SSOM), includes a case designed to assess third-year medical students' ability to access information at the point of care using Evidence-Based Medicine (EBM) resources
- Over the years, students have perceived this case to be difficult and confusing, which resulted in low performance

Purpose:

- To address these concerns, a librarian-led EBM case learning session was developed and integrated into the formative, practice OSCE starting in 2018. The goals of the session were to:
 - Increase understanding of how to search the vetted resource effectively and efficiently
 - Incorporate evidence into practice
 - Emphasize the importance of EBM in clinical care



Figure 1: Three Pillar Curriculum at USD Sanford School of Medicine

Demonstration:

- The hour-long learning session is taught by health sciences librarians to rotating small groups of students
- Librarians demonstrate the CDC website as a consumer and clinician-focused resource. Subscription resources such as UpToDate and DynaMed, are not available to the students during the EBM case
- In addition to an overview and discussions, the learning session follows the EBM case format used in the high stakes OSCE:
 - Literature search
 - Quiz designed to answer a clinical question
 - Standardized patient encounter (shown via video)
 - Mock evaluation of performance during the patient encounter

Results:

- The student evaluation of the practice OSCE includes an item that addresses the perception of the value of the EBM case learning session
- Each evaluation is based on a scale of Strongly Disagree (1) to Strongly Agree (5)
- Since the start of the learning session, students have rated the EBM demonstration and discussion at an average of 4.4

Practice OSCE Evaluation: The EBM demonstration and discussion provided new information that will help me prepare for the high stakes OSCE.

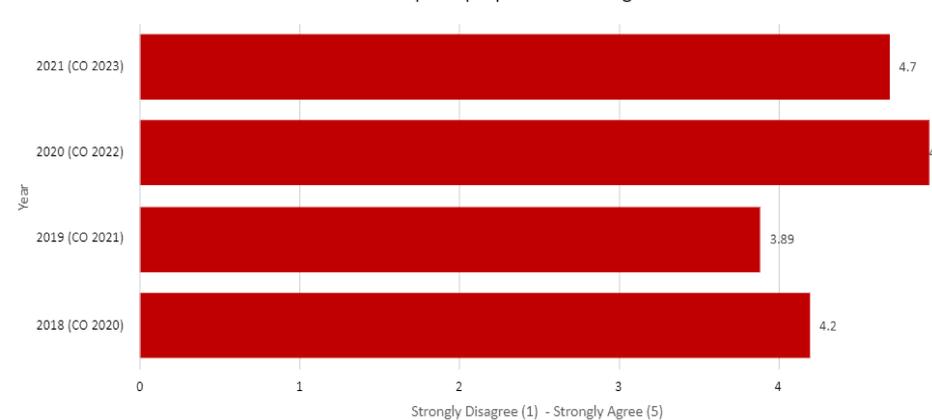


Figure 2: Practice OSCE evaluation of EBM learning session

- Cohorts who participated in the learning session tended to score higher and more consistent overall than those who did not have the learning session

Mean grades per year

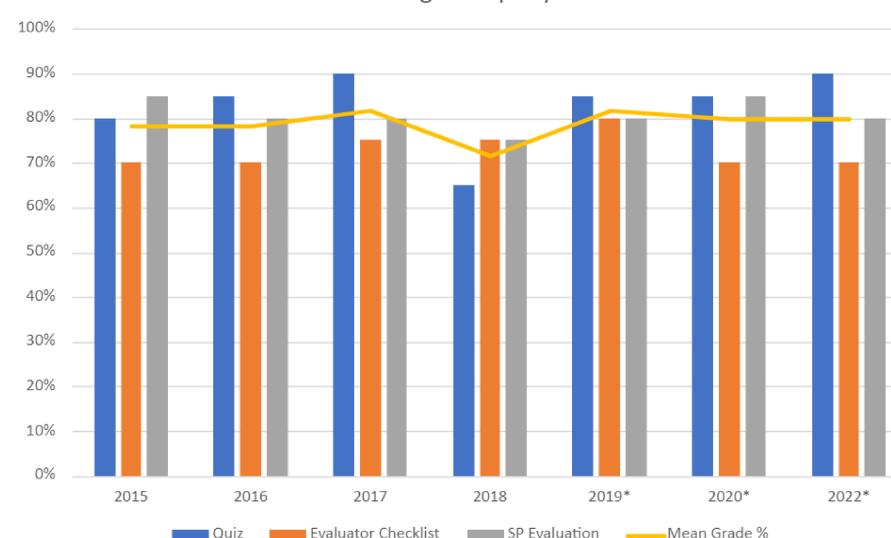


Figure 3: EBM case mean grades per year broken down by the three graded parts.

*Denotes years where a practice OSCE EBM learning session was given to the students
**Due to COVID restrictions, an EBM case was not part of the 2021 OSCEs

Discussion:

- The EBM case learning session provides students an opportunity to use computer-accessed information at the point of care
- Limitations to comparing scores to previous years:
 - The rating of difficulty per case, as it was not consistently part of the evaluation before 2017
 - A different scenario is used each year to limit the information shared between each student cohort
- Further studies may help determine if exposure to EBM at the point of care during clinical rotations has a relative impact on student performance during the OSCEs

Conclusion:

- To date, 268 students have participated in the EBM case learning session
- Results indicate that:
 - Students' understanding of the EBM case after the implementation of the learning session increased
 - Perception of case difficulty decreased
 - Overall case performance increased
 - The librarian-led EBM case learning session will continue to be part of the practice OSCE
 - In addition, student exposure to EBM is being enhanced in other activities, such as journal clubs

Disclosures:

None of the authors has any conflict of interest to disclose. The University of South Dakota Institutional Review Board found that this study did not meet the regulatory definition of human subjects research and did not require IRB approval on October 18, 2018.

