

Title: Improving evidence based medicine assessment of medical students

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Context and setting: At the University of Limpopo in South Africa, evidence based medicine (EBM) has been offered as a module for third year medical students since 2001. Students learn theory of EBM, electronic literature search, literature appraisal and application. Using case scenarios, they practice on these aspects. Groups of about 37 students are trained in 6 blocks, each lasting 6 weeks. The assessment consists of a report on a case study undertaken by each student and faculty during the block.

Why the idea was necessary: Faculty and students perceived the assessment as subjective and inconsistent. Additionally, it was impossible to distinguish between faculty involvement from the students' acquired knowledge and skills using this assessment method. There was need to improve the assessment of EBM through introduction of a standardized objective tool.

What was done: A pilot study using a descriptive, prospective design was conducted in June 2009 on a representative cohort of 37 students out of the available 214. Approval for conducting the study was granted by the Medunsa Research Ethics Committee and consent obtained from all participants. Following training, assessment was done using two methods. One method was made up of the case study assignment as previously done and the second consisted of a standard structured test with questions adapted from the Fresno Test of Evidence Based Medicine developed and validated by the University of California, United States of America. Standard rubrics were used to mark the structured test while the case study was marked using the unstructured scheme. Descriptive statistical analysis of the scores was done using SPSS package. Faculty and students provided feedback on the two assessment methods at the end of the study.

Evaluation of results and impact: The Fresno Test of Evidence Based Medicine mean score was 65.1% and that of the case study 70.8%. The scores of the Fresno Test of Evidence Based Medicine ranged from 27.0% to 87.0% and were spread across distinct values in the range. The scores in the case study ranged from 50.0% to 95.0% in multiples of 5. Student and faculty felt that the Fresno assessment tool was more objective and specific in the items it tested. However some students indicated that the Fresno test was more difficult than the case study as it focused on practical application of knowledge and skills rather than memorization of theoretical concepts tested by the case study.

Faculty felt that the Fresno Test tool differentiated student performance precisely and this provided the instructor with clear information to guide counseling and remediation of students not performing satisfactorily.

In summary, the Fresno Test of Evidence Based Medicine was successfully used as an objective tool for Evidence Based Medicine. The study highlighted the need for early integration of theoretical knowledge and practice. The university recommended the

adoption of the Fresno Assessment tool for Evidence Based Medicine at the University of Limpopo starting from 2010. It will also be shared with other departments and interested medical schools.

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