Active Learning: Improving PACKRAT™ Scores

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Abstract

This is a quality improvement study to evaluate the integration of active learning strategies into a physician assistant (PA) didactic neurology module and the impact on the scores of the neurology section of the standardized Physician Assistant Clinical Knowledge Rating and Assessment Tool 1 (PACKRAT™ 1). PACKRAT™ 1 is a 225 question exam to assess student progress at the end of their didactic studies. Questions are typically presented in vignette format to allow the exam to assess students' capacity for problem solving and critical thinking. The PACKRAT™ 1 exam serves as a predictor of success on the PANCE for certification and eligibility for licensing. The purpose of the study is to quantify the impact of incorporating active learning strategies into the PA didactic curriculum on students scores on the PACKRAT™ 1 exam which is a predictor of success on the PANCE.

Background & Purpose

Healthcare providers are expected to become lifelong learners and employ critical thinking and problem-solving skills. There is a constant flux of dynamic challenges within the medical environment. Providers are expected to meet these challenges within the rapid pace of advancements in medicine. Medical educators must provide a curriculum to meet the demands of today’s healthcare providers.

Evidence suggests that active learning sessions are better than large-group didactic teaching, since they not only produce better educational outcomes, but also enhance one’s ability to think critically and work effectively in a team. However, the most often utilized form of teaching in medical education is the traditional lecture format which is passive and not as effective for learning. Providers are expected to become lifelong learners and employ critical thinking and problem-solving skills. There is substantial evidence showing improved exam scores and lower failure rates in active learning sections compared with traditional lecturing.

Methods

In 2018, the didactic neurology module in the Emory PA curriculum was changed to a hybrid of 50% traditional lecture based sessions and 50% active learning sessions. The active learning sessions consisted of flipped classroom, team based, and problem based learning activities. Participants included 53 Emory University Physician Assistant (PA) students enrolled in the Class of 2019 and 53 students enrolled in the Class of 2020. The Class of 2018, who received the traditional neurology module will serve as the comparison group (n=53). We will compare the Packrat I neurology examination scores from the Class of 2018 (pre-intervention baseline group), 2019, and 2020.

Results

After the implementation of the hybrid curriculum into the didactic neurology module, there was an improvement in scores on the PACKRAT 1 neurology section for the Class of 2019. The class average score increased by 4% while there was no change in the national average.

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<th>PACKRAT™ 1 SCORES: NEUROLOGY</th>
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Conclusion

Medical education literature demonstrates that active learning produces better educational outcomes, improves critical thinking skills, and promotes lifelong learning strategies. These are vitally important to our future physician assistant providers. It is the responsibility of medical educators to ensure that our students receive the best education and are prepared to pass their PANCE certification exam. Our limited quality improvement study demonstrated a small improvement in PACKRAT 1 scores which is a predictor of success on the PANCE examination. We will follow the Class of 2020 to see if this trend continues. Additionally, the implementation of a hybrid module with active learning was well received by the students. Future studies should include a larger cohort with multiple PA programs and a standardized curriculum.

References

1. Last Updated: August 12, 2019 URL: https://paeaonline.org