

Using Academic Risk Assessment in a Mission-Driven Environment to Predict COMLEX Challenges

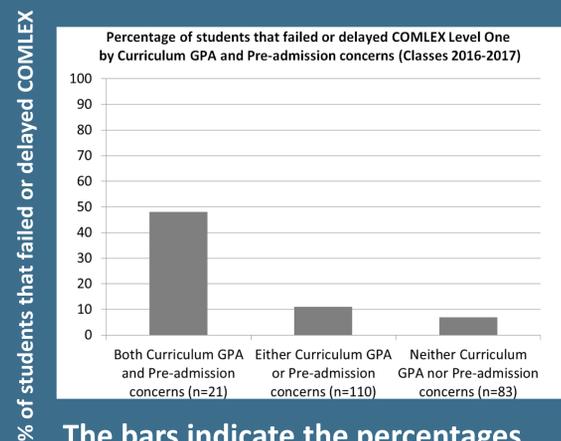
M Pong, K Brown, C Cross, DM Heath

ATSU School of Osteopathic Medicine in Arizona, Mesa AZ 85206

Introduction

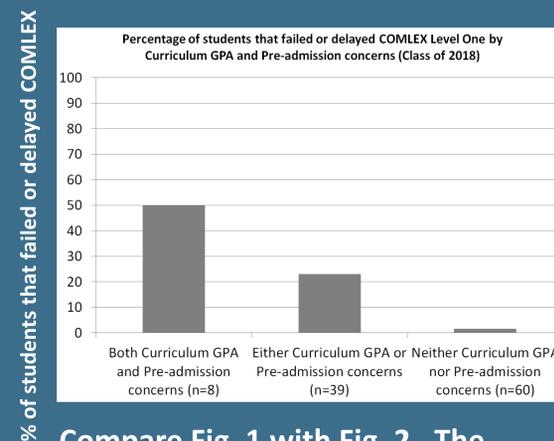
At AACOM 2016, we described an analysis of students in the ATSU-SOMA Classes of 2016 and 2017 that failed or delayed COMLEX Level One. The analysis used pre-admission concerns and the GPA of the students in each of the first three semesters in the ATSU-SOMA curriculum. Figure 1 shows the percentages of students in each of the different risk categories. In this presentation, we describe how we applied the same analysis to the Class of 2018 to identify students that may have challenges. We then took the next step and tried to help those students. We describe the results of that effort and discuss the challenges we encountered.

Fig. 1 Classes of 2016-17



The bars indicate the percentages of students in these categories. Note the total numbers (n) that make up each group.

Fig. 2 Class of 2018



Compare Fig. 1 with Fig. 2. The distributions are comparable between the two samples.

Methods

The analysis involves identifying students with pre-admission concerns and students with curriculum GPA concerns. The pre-admission concerns consider factors such as low undergraduate GPA and low MCAT scores. The curriculum GPA concern was defined as GPA falling below 75% in any of the first three semesters of the curriculum.

Both factors = highest risk group
Either factor = middle risk group
Neither factor = lowest risk group

We applied this analysis to the Class of 2018 to identify students that could face COMLEX challenges. In April 2016, we notified second-year advisors of students that were in either the highest or middle risk groups.

Conclusions

We have a useful test. We had challenges using it but the greatest benefit may have been the awareness the effort generated. Second-year advisors became more engaged in checking on the Board readiness of their advisees. A number of students were delayed in taking the exam but that delay may have been useful because they did not fail when they eventually took the exam. **At the end of the testing cycle, only two of the students that were analyzed actually failed COMLEX Level One.** Admittedly, there were other efforts occurring at the same time such as implementation of a formal Board prep program and various curricular modifications and supplementations.

Do we do use this analysis for the Class of 2019? There was a concern with the low positive predictive value of the analysis. In other words, there was less enthusiasm for checking in on so many of the students. The experience with the Class of 2018 did point out the need to better equip advisors to offer help to the students that are found to be struggling. This effort is currently underway.

Discussion and Interaction

How to help at-risk students from failing COMLEX Level One

Questions and Answers

What is the best way to use this early warning of Board challenges? The analysis is sensitive but the positive predictive value is low.

Does raising the mentioning the possibility of failure or delay before the exam negatively affect student confidence?

Does a distributed education model make helping the students more difficult? Our second-year students are spread out across 11 different Community Health Campuses across the country. Each campus has no more than 10 second-year students.

For students that are at-risk, what are effective strategies 3 to 6 months before the Board exam? Are residential courses useful?

Our experience suggests that simply reaching out to students to check on their readiness will have a positive impact on Board results.

Go to: <https://tinyurl.com/aacom2017-mp>

to share your ideas.



Results

Figure 2 shows the results for the Class of 2018. The percentages are comparable to the Classes of 2016 and 2017.

When the results of all three classes are put together, the analysis can be described as follows for predicting Level One failure or delay if the highest and middle risk groups are combined:

Sensitivity: 83.3%
Specificity: 48.7%
Positive Predictive Value: 19.7%
Negative Predictive Value: 95.1%

The analysis has some sensitivity but has a low positive predictive value: many of the students identified will not have a Board delay or failure.

The other result to consider is the reaction of the second-year advisors to these warnings. Reactions were mixed. Some agreed that the predictions matched their own estimations of the students based on their interactions and observations. In some cases, there was resistance to using the information because of the fear of discouraging students as they were preparing for the exams particularly for the middle group that had relatively low risk. There was also a sense of frustration by the advisors because they were being asked to do a task they were not specifically trained for.