Assessing learning outcomes is an integral part of educational programs, though “all methods of assessment have strengths and intrinsic flaws” (Epstein, 2007). Irrespective of curriculum, finding how students are progressing in the medical training is important. Different qualifications and characteristics cause student failure. Based on those risk factors, we should provide proper remedies like meeting with learning specialists, providing instructional aides, one-to-one tutoring, and cost/benefit analysis of students' performance.

Using the results of this study, faculty and administrators can strategically deploy resources to students that may be at risk of failure and predict when this failure will happen.

### References


### Conclusion

The hazard ratio of MCAT biology indicates that a student who has a higher score on MCAT Biology will have 0.807 times greater hazard of experiencing academic difficulty as opposed to a student who did not.

- The hazard ratio of MCAT Verbal indicates that a student who has a higher score on MCAT Verbal will have 0.96 times greater hazard of experiencing academic difficulty as opposed to a student who did not.

- The hazard ratio of MCAT Physics indicates that a student who has a higher score on MCAT Physics will have 0.881 times greater hazard of experiencing academic difficulty as opposed to a student who did not.

- By increasing one unit of age (year) the risk of failure is increasing, i.e., as getting older, the students are more likely to fail the assessment.

- Those who had higher science GPA in their undergraduate, have 0.22 times greater hazard of experiencing academic difficulty.

### Methods

#### Design

There are three main research questions that this study is trying to address:

1) What proportion of individuals will remain free of the event after a certain time?

2) What is the probability that an individual will have a survival time less than or equal to \( t\)? \( Pr(T\leq t)\)

3) What risk factors can explain students encountering academic failure?

#### Data Collection and Sample

Data include demographic variables like (age, gender, and race) and pre-admission variables like previous degree and MCAT score. Along with these variables, all medical knowledge and clinical skills assessments records are also included. The data were collected with permission of Office of Institutional Assessment and Accreditation (OIAA) of HCOM along with IRB approval from Ohio University Office of Compliance.

#### Statistical Analysis

The Cox Regression model is used to investigate the timeline and the risk factors associated with student failure.

### Discussion

- Assessing learning outcomes is an integral part of educational programs, though “all methods of assessment have strengths and intrinsic flaws” (Epstein, 2007). Irrespective of curriculum, finding how students are progressing in the medical training is important. Different qualifications and characteristics cause student failure. Based on those risk factors, we should provide the proper remedies like meeting with learning specialists, providing instructional aides, one-to-one tutoring, and cost/benefit analysis of students' performance.

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### Predicting Academic Difficulty in Pre-Clinical Year

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