# Mental Health Assessments in Emergency Department Patients: Assessing Longitudinal Follow-up and Retest Reliability (MCAT-2) [Provisional Baseline Analysis]

Andres Alarcon<sup>1</sup>, Naman Satsangi<sup>2</sup>, Paul Musey<sup>3</sup>

<sup>1</sup>Indiana University School of Medicine, <sup>2</sup>Indiana University Bloomington, <sup>3</sup>Indiana University School of Medicine, Department of Emergency Medicine

### Background/Objective:

The prevalence of anxiety and depression in adults in the United States is high with many experiencing ≥1 episode of anxiety or depression over a given year. Despite this, diagnoses of anxiety and depression in patients presenting to the ED for somatic complaints are seldom, relative to the population prevalence. Current fixed-item anxiety and depression screening tools have variable specificity and sensitivity, but adaptive screening tools such as the Computerized Adaptive Testing-Mental Health tool (CAT-MH) are thought to provide improved diagnostic characteristics and precision over fixed item tools. Our objective is to establish the reliability of its depression and anxiety severity assessments in patients initially screened in an ED setting and reassessed over 30 days.

#### Methods:

We are conducting a longitudinal observational study among adult ED patients presenting with somatic, non-mental health complaints. The CAT-MH, Generalized Anxiety Disorder-7 (GAD-7), and Patient Health Questionnaire-8 (PHQ-8), are administered to randomly selected patients meeting enrollment criteria after informed consent. Participants are reassessed at 1-, 2-, and 4 weeks after ED discharge and analyzed for longitudinal test-retest reliability and sensitivity to change in score severity over time.

#### Results:

In this ongoing study, we present baseline anxiety and depression severity assessments for the first 49 enrolled patients (Mean age of 37, 73% female, 49% white, 47% black). Fixed item tools (GAD-7 and PHQ-8) categorized 16% and 6% of patients as moderate and severe anxiety respectively vs 19% and 15% as moderate, and moderately-severe/severe depression. In comparison, CAT-MH categorized 8% and 10% as moderate and severe anxiety.10% and 6% were categorized as moderate and severe depression.

## **Conclusion:**

In this longitudinal observational study, we present baseline data for the first 49 out of 100 planned patients. Upon completion of the study, we hope to find that the severity assessments from CAT-MH remain stable over 30 days.