Lecture capture technology is widely available in classrooms at institutions of higher learning. This enables automated recording of classroom activities that can be viewed asynchronously. Lecture capture technology has given students the choice to experience lecture content in a live or recorded medium without attending the classroom. The influence of lecture capture on medical education is not fully characterized.

### Objectives

**Specific Aim 1:** To evaluate the relationship between class attendance and academic performance.

**Specific Aim 2:** To characterize factors that influence student attendance decisions when recorded lectures are available.

**Specific Aim 3:** To evaluate faculty perceptions and attitudes towards student attendance.

### Methods

**Voluntary Longitudinal OMS-I Attendance Tracking and Survey of OMS-1 and Faculty Attitudes:**

**Class Attendance Tracking**
- Fall semester ATSU-SOMA OMSI classes: Basic Structural Foundations (BSF, 3 wks), Foundations of Health (FOH, 4 wks), Neuromusculoskeletal-A (NMSK-A, 5 wks), Neuromusculoskeletal-B (NMSK-B, 7 wks), Cardiopulmonary 1 (CP-1, 3 wks)
- Attendance recorded using audience response technology

**Academic Record Review**
- Exam scores, discipline scores, cumulative averages
- Linked to attendance records
- All collected data de-identified

**Student Survey and Faculty Survey**
- Designed to evaluate attitudes towards attendance
- Administered via Tk20™ (students) or SurveyMonkey® (faculty)

**Preliminary Quantitative Analysis**
- All data analyzed using Microsoft Excel and GraphPad Prism
- One-way analysis of variance (ANOVA) followed by Tukey’s post-hoc test performed to compare groups (see Fig. 1 and Fig. 2).

### Results

**Course attendance drops significantly over the first semester**

Figure 1: Average student attendance in first semester courses. All values represent the mean ± SEM. **** Different from BSF, *P < 0.0001

**Attendance versus academic performance: Fall 2015**

Figure 2: Student attendance by average academic performance in fall semester courses. Students were divided into four groups (n=25-26/group) based on averaged fall semester course grades. All values represent the mean ± SEM. * Different from Lowest, *P < 0.05

**Student perception: Lecture capture is more convenient, efficient, and effective compared to class attendance**

Figure 3: Student survey results based on 93 responses (90% response rate).

**Faculty perceptions of student attendance**

Figure 4: Faculty were asked to rate their level of agreement (strongly agree, agree, neutral, disagree, strongly disagree) for statements related to student attendance. Survey results based on 26 responses (74% response rate).

### Conclusions

- Limitations: Preliminary analysis of partial data set, one class/institution, not generalizable
- Trends have been observed with highest performers attending class on average more than lowest performers.
- Students view classroom attendance as less efficient and effective than using lecture capture.
- Faculty have mixed perceptions on student attendance.

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