

EMT Skill Videos: Gimmick or Gain?

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Introduction

Emergency Medical Services (EMS) education requires laboratory time or skill labs to ensure students are competent prior to field rotations. The use of skill videos in the initial healthcare education classroom has been demonstrated to assist psychomotor clinical skills, provide visual demonstration, and link classroom learning to skills performance (Forbes et al., 2016). However is there a potential trade off in competency due to time spent watching videos and not practicing discrete skills?

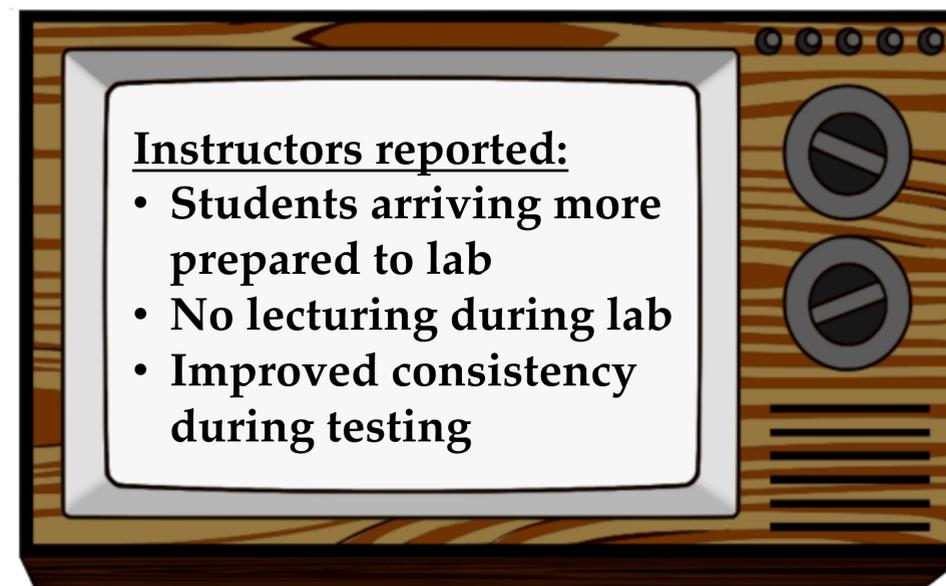
Objective

Evaluate whether the use of skill videos during EMT skill labs impacts first time psychomotor exam performance.

Methods

The UCLA hybrid EMT program is 182 hours with 68 hours spent in laboratory. A retrospective review of oxygen administration and supine spinal immobilization first-time psychomotor pass rates were evaluated. Three cohorts of students who did not use the skill videos were compared with 2 cohorts who watched the skill videos prior to the start of each of the respective skill laboratory rotations. The videos were also available online. A T-Test (Two-Sample Assuming Unequal Variances) was performed comparing first-time pass rates of the respective skills with and without videos. This study received IRB approval from the UCLA David Geffen School of Medicine.

| Skill | Use of Skills Video | Number of Students | First Time Pass Rate | Significance threshold .05 |
|------------------------------|---------------------|--------------------|----------------------|----------------------------|
| Oxygen Administration | No | 241 | 95.2% | P = 0.24 |
| | Yes | 145 | 91.8% | |
| Supine Spinal Immobilization | No | 237 | 82.7% | P = 0.42 |
| | Yes | 145 | 82.1% | |



I would like to thank the UCLA Students and Faculty for participating in this research project.

Results

The first-time pass rate for oxygen administration without and with the skill videos is 95.2% and 91.8% respectively. The first-time pass rate for supine spinal immobilization without and with the skill videos is 82.7% and 82.1% respectively. The p value for oxygen administration was 0.24 and supine spinal immobilization was 0.42.

Conclusion

There is no statistically significant difference in psychomotor first-time pass rate with or without skill videos. Showing a short, specific skill video which highlights important ideas, can increase learning acquisition and limit time spent lecturing in the laboratory (Blane, 2015). While not part of this study, there were improvements in consistency expressed by instructors when using the videos. EMS educators should use skills videos in lab without fear it will reduce first time psychomotor success.

Discussion

EMT programs should utilize skills videos in their skill laboratories. Videos in the UCLA EMT Program are shown prior to each skill lab in place of an instructor-led skill demonstration. This reviews the skill with students and eliminates any errors in imprinting from inconsistent demonstration. Students should be engaged during the video which should include an overall demonstration of the skill as well as a breakdown of each step required.

Limitations

The study is limited to the two skills based on the creation of those two skill videos first, only reviewing 5 cohorts, and not considering demographic factors which have been shown to impact learning outcomes. All data was acquired prior to the COVID19 pandemic.