

# Remediation of Oral Presentations Skills for Third-Year Osteopathic Medical Students During Internal Medicine Clerkships at Distant Sites



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## Introduction

- Prior studies demonstrated between 7-28% of medical students require remedial teaching to achieve American Council for Graduate Medical Education (ACGME) competencies.
- Most learners struggle with the application of medical knowledge and clinical reasoning.
- The oral case presentation is a significant means by which medical students are evaluated for their competence in medical knowledge and clinical reasoning.
- There are several examples in the literature of evaluation tools and remediation programs to assist student achieve competencies in the skill of orally presenting a case.
- However, there does not appear to be evidence of an effective remediation program that has been administered for students located at distant sites during their internal medicine clerkships.

## Aim

- This study's aim is to determine if remediation for student oral presentation skills can be successfully accomplished while they are on internal medicine clerkships at distant sites.

## Methods

- Participants were third-year osteopathic medical students from WesternU/COMP's DO class of 2017.
- At the start and at the end of an internal medicine in-patient rotation block, students performed oral presentations immediately after an objective structured clinical examination (OSCE) and were graded using a rubric designed by the internal medicine faculty (IM raters).
- Students requiring remediation, based on a score < 30, were then asked to present a de-identified case over the phone to a different IM rater during their IM clerkship.
- If deemed necessary by the IM rater, repeat phone appointments are arranged to critique other case presentations until the student achieves competency.

## Outcome Measures

- The mean OSCE oral presentation score of remediated students compared to the mean score of non-remediated students.
- The overall mean OSCE oral presentation scores before and after the internal medicine clerkship rotation.
- The percent of all students requiring and not requiring remediation of the OSCE oral presentation before and after the internal medicine clerkship rotation.

## Results

- Data was analyzed using SPSS version 24
- Group means and standard deviations are given in Table 1.
- Repeated measures analyses were conducted to determine if significant differences emerged between the total group, initial remediated/non-remediated groups pre-rotation and post-rotation (Figure 1).
- Repeated measures analyses were also conducted to determine if significant differences emerged between the remediated/non-remediated outcome pairings (Figure 2).
- Level of significance was set at alpha = 0.05.

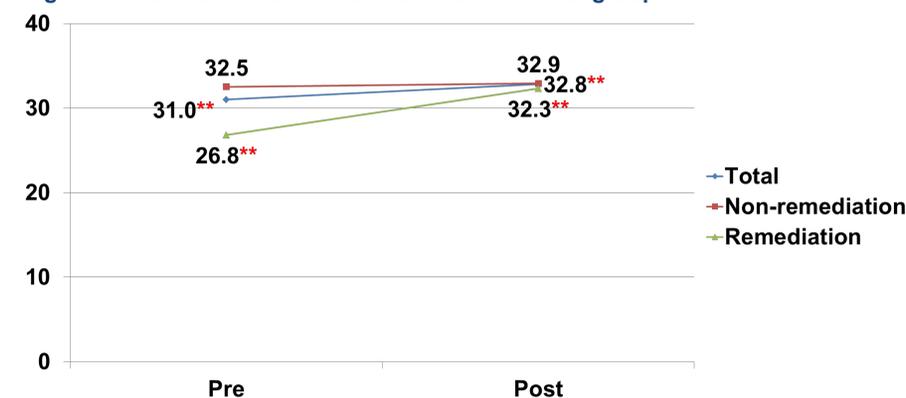
Table 1

Pre-rotation/post-rotation means and standard deviations

Initial Groups	n	%	Pre-Rot. Mean (SD)	Post-Rot Mean (SD)
Non-remediation	125	74.4	32.5 (2.7)	32.9 (2.7)
Remediation	43	25.6	26.8 (3.8)	32.3** (3.5)
Remediated and Non-remediated outcome pairings	n	%	Pre-Rot. Mean (SD)	Post-Rot Mean (SD)
Remediation to Remediation	5	3.0	27.0 (6.2)	26.0 (3.2)
Non-remediated to Remediation	8	4.8	33.4 (2.2)	27.6* (4.0)
Remediation to Non-remediated	38	22.6	26.8 (3.5)	33.1** (2.7)
Non-remediated to Non-remediated	117	69.6	32.4 (2.7)	33.3 (2.2)
Total	168		31.0 (3.9)	32.8** (3.0)

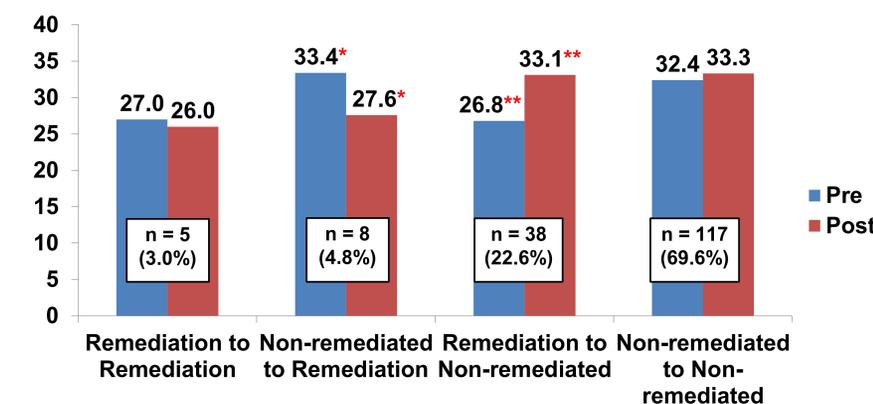
Note: \* Indicates p <.01 \*\* p <.001

Figure 1. Pre/Post-rotation means of total and initial groups



Note: \*\* Indicates p <.001

Figure 2. Pre/Post-rotation means of remediated and non-remediated outcome pairings



Note: \* Indicates p <.01 \*\* p <.001

## Discussion

Overall pre-rotation and post-rotation mean scores significantly improved (31 vs. 32.8).

- Mean score for remediated students significantly improved (26.8 vs. 32.8) compared to students who did not undergo remediation (32.5 vs. 32.9).
- Overall percent of those needing remediation decreased from 26.8% pre-rotation to 7.8% post-rotation.

- Of the 7.8% needing remediation post-rotation, 4.8% of these students did not need remediation pre-rotation.
- Of the 7.8% needing remediation post-rotation, 3% also needed remediation pre-rotation.

### Strengths of the study include:

- One standardized grading rubric for each case was created and agreed upon by all raters.
- Raters never graded the same student for both pre-rotation and post-rotation oral presentations.
- Remediation took place while students were on IM rotations, using cases the students were following at the distant site.

### Weakness of the study include:

- The percentages of students who need remediation may be underestimated because the OSCE cases used for the pre and post-rotation oral presentations may not reflect the complexity of cases experienced by students on rotation.
- A standardized method of remediation was not used.
- The most common cause(s) of needing remediation was not determined
- Because preceptors were not involved in this program, grading students' oral presentation skills may not correlate with oral presentation skills on rotations.

### Next steps include:

- Correlating oral presentation scores rated by preceptors during a student's rotation with their post-rotation OSCE oral presentation score.
- Creating a standardized method for remediation.
- Determining the largest cause(s) for remediation.
- Creating grading rubric that is adaptable for any of a student's case, while a student is on rotations (i.e. without the use of an OSCE case) – therefore making the program more adaptable for entrustable professional activities (EPA's) in terms of evaluation and remediation.

## Conclusion

- Remediation of oral presentation skills may be successfully accomplished for medical students at distant clerkship sites.
- A remediation program such as the one in this study may be more applicable to evaluating EPA's and remediating a student's skills.