

The Effectiveness of a Mini-CEX to Assess OMM Competency Among Family Medicine Residents

C. Morgan, EdD, L. LeBeau, DO, D. Heath, DO
A.T. Still University-School of Osteopathic Medicine in Arizona

Abstract

The purpose of this study was to investigate the use and perceived effectiveness of the Osteopathic Manipulative Medicine (OMM) Mini-Clinical Examination Exercise (Mini-CEX) tool in assessing OMM competency in an osteopathic family medicine residency program.

AOA and ACGME accredited training programs are required to evaluate six core competencies in the training and evaluation of residents: medical knowledge, patient care, interpersonal & communication skills, professionalism, practice-based learning & improvement, and systems-based practice. In programs seeking osteopathic recognition (OR), osteopathic principles and practice (OPP) must be fully integrated into the six core competencies and residents must demonstrate OMM skills appropriate to their medical specialty.

From 2015 to 2016, the GME research team at ATSU-SOMA developed and studied an OMM Mini-CEX to assess OMM competency of residents in The Wright Center National Family Medicine residency (TWC-NFMR) program. Our findings indicate that the OMM Mini-CEX is an effective tool for assessing OMM competency in our residency program and may be useful to other programs as well.

Objectives

1. Describe the purpose and use of a mini-CEX
2. Discuss the effectiveness of the OMM mini-CEX

Introduction

The Mini-CEX is a direct observation tool whereby the assessor observes a trainee during a single clinical experience and then provides immediate feedback on the trainee's performance.

- Validated as a useful formative assessment tool.¹⁻³
- Observation, evaluation, feedback can be completed in 15-20 minutes.
- Originally developed to assess IM residents, adapted for clinical competency skills assessment by other medical specialties⁴⁻⁵
- No Mini-CEX in literature to assess OMM competency

Methods

The GME research team at ATSU-SOMA developed an OMM-Mini-CEX then designed a study to evaluate its effectiveness, asking:

Do family medicine residents and their OMM preceptors find the OMM Mini-CEX to be an effective tool for assessing OMM competency?

Using other mini-CEX forms as a guide, an OMM Mini-CEX tool was drafted and distributed for input by 5 OMM faculty members. Content validity was established through OMM faculty feedback on relevance and coverage.

The tool assessed OMM competency in 6 core areas, plus overall competency:

1. Interpersonal & Communication skills
2. Medical Knowledge
3. Patient Care & Procedural skills
4. Practice-based Learning & Improvement
5. Professionalism
6. System-based Practices

A Likert-item survey was developed to study perceived effectiveness of the tool in assessing OMM competency among the family medicine residents and OMM preceptors

OMM Mini-CEX tool

Results

Survey response rate from 12/15/15 to 1/15/16:

- 86% of residents, n=50
- 67% of OMM preceptors, n=4

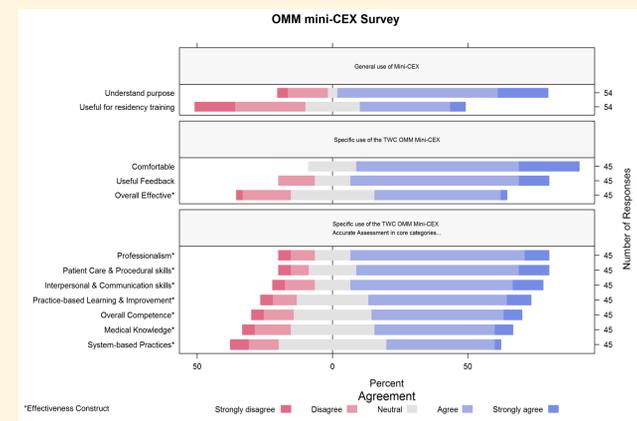
High reliability in effectiveness construct Likert-items in both groups, (all Cronbach's alphas >0.926)

Effectiveness Construct: Mean of 8 Effectiveness Likert-items (1=Strongly Disagree, 2=Disagree, 3=Unsure, 4=Agree, 5=Strongly Agree)					
N	Minimum	1 st Quartile	Median	3 rd Quartile	Maximum
45	1.3	3.3	3.6	4.0	5.0

- No difference between residents and preceptors (Wilcoxon rank-sum, $P=.57$)
- Across all respondents, significantly greater than 3=unsure (Wilcoxon signed-rank, $P<.001$)

Effectiveness Construct by general mini-CEX Perception				
General mini-CEX	N	1 st Quartile	Median	3 rd Quartile
Disagree/Unsure Purpose & Usefulness	8	2.6	3.4	3.9
Agree Purpose & Disagree/Unsure Usefulness	17	3.3	3.4	3.8
Agree Purpose & Useful	20	3.4	4.0	4.0

- More effective if agreement exists on purpose, usefulness of a mini-CEX in general (n=20, median=4.0); vs lack of agreement or unsure of general usefulness (n=17, median=3.4) (Wilcoxon signed-rank, Bonferroni-adjusted $P=.04$)



Bar graph of effectiveness by question or core competency

Discussion

- Early 2016 survey results indicate the perceived effectiveness in evaluating residents using OMM mini-CEX v.1 was 3.6 on 5 pt. scale
- Those that understood purpose and use of a mini-CEX in general, perceived greater effectiveness for the OMM Mini-CEX, vs those who did not agree or were unsure of general purpose and use
- OMM mini-CEX v. 1 was most effective in assessing patient care and professionalism, less effective in system-based practices (documentation & coding)
- In late 2016, minor modifications were made to improve the tool and increase alignment with the new OR milestones; version 2 is currently in use



References

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Acknowledgements

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