



Improving Resident Education and Clinical Competency in Musculoskeletal Medicine Through Physical Therapy Integration Within an Interprofessional Primary Care Clinic

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Background

Musculoskeletal (MSK) conditions account for over 90 million office visits annually yet are underrepresented in medical curricula.^{1,2} Medical trainees express discomfort in accurately diagnosing and managing common MSK pathologies.³

The Center of Excellence in Primary Care Education (CoEPCE) integrates physical therapy services within an interprofessional primary care training program and clinic. In this integrated model, patients with MSK complaints are able to be concurrently evaluated by medical trainees and physical therapists (PT). This was shown to increase patient and trainee satisfaction in addition to likelihood for follow-up.⁴ Additionally, PT provides didactic sessions to the medical trainees.

However, delayed identification of appropriate patients results in an underutilization of co-evaluations, which are estimated to occur in less than 40% of eligible visits.

Objectives

- Increase the number of co-evaluations by implementing an early screening system
- Measure the impact on trainee confidence in evaluating and diagnosing MSK complaints
- Assess barriers to co-evaluation utilization

Patient Population

Number of Patients		
Male		46
Female		1
Age (years)		
Mean		68.6
Median		69.1
SD		16.4
Ethnicity		
White		72.3%
Black		17.0%
Hispanic		10.6%
Presentation		
Acute		36.2%
Chronic		63.8%

Process

Pre-intervention surveys were used to measure trainee confidence in examining and diagnosing MSK conditions. Surveys also assessed current barriers to co-evaluations and attitudes towards the MSK curriculum.

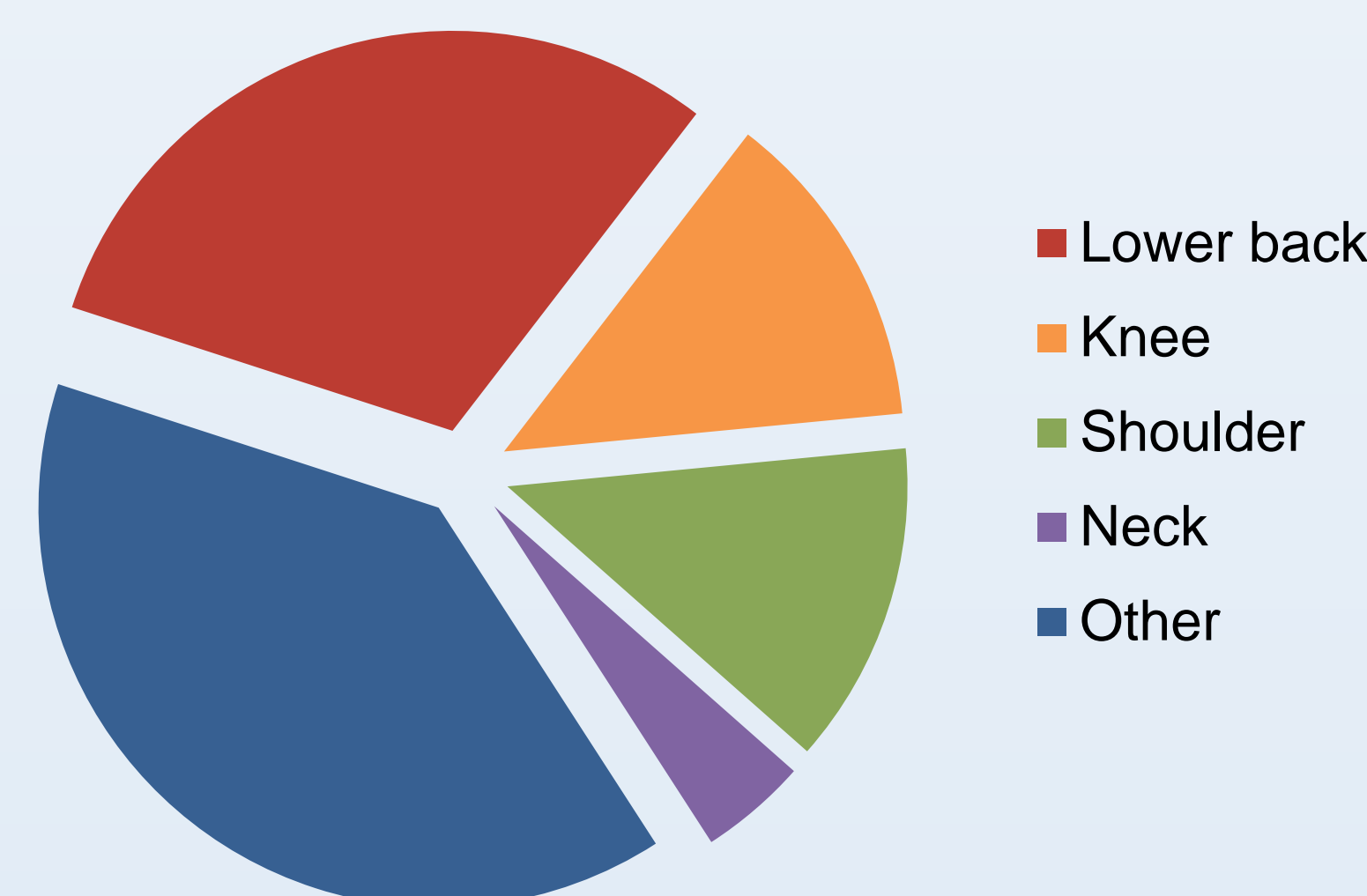
A two-question screening tool was implemented during patient check-in within the CoEPCE at the West Haven Veterans Affairs Hospital.

Following the implementation of this tool, the frequency of co-evaluations by medical trainees and PT were measured from December 2017 to April 2018 and compared to baseline rates prior to the intervention. Results were compared to a standard primary care clinic (Firm A) without an integrated PT model.

Post-intervention surveys were used to measure trainee confidence and attitudes towards MSK evaluation/education. The data is presented below as a normalized change in ratings between the pre and the post intervention surveys.

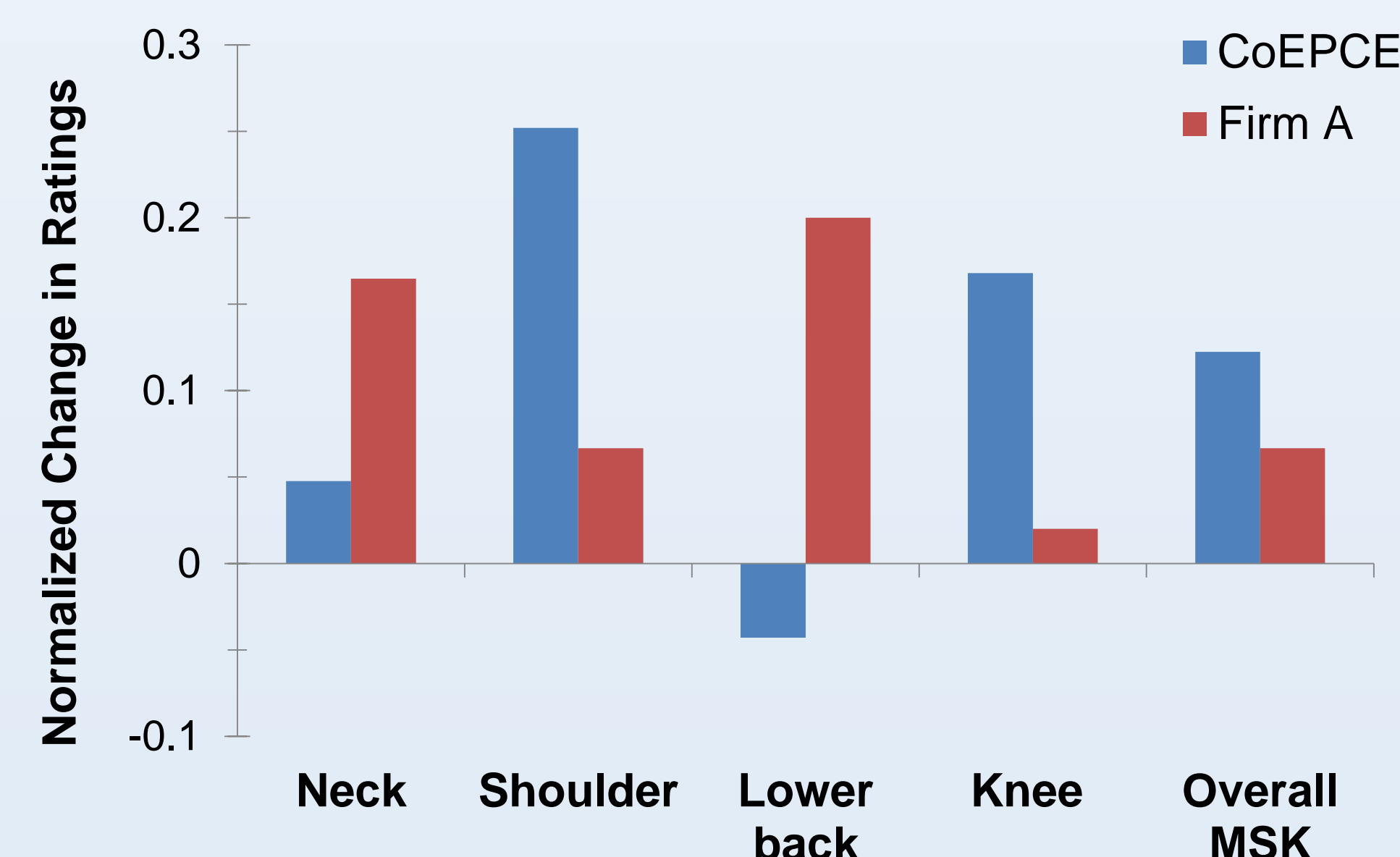
Results

MSK Concern Evaluated

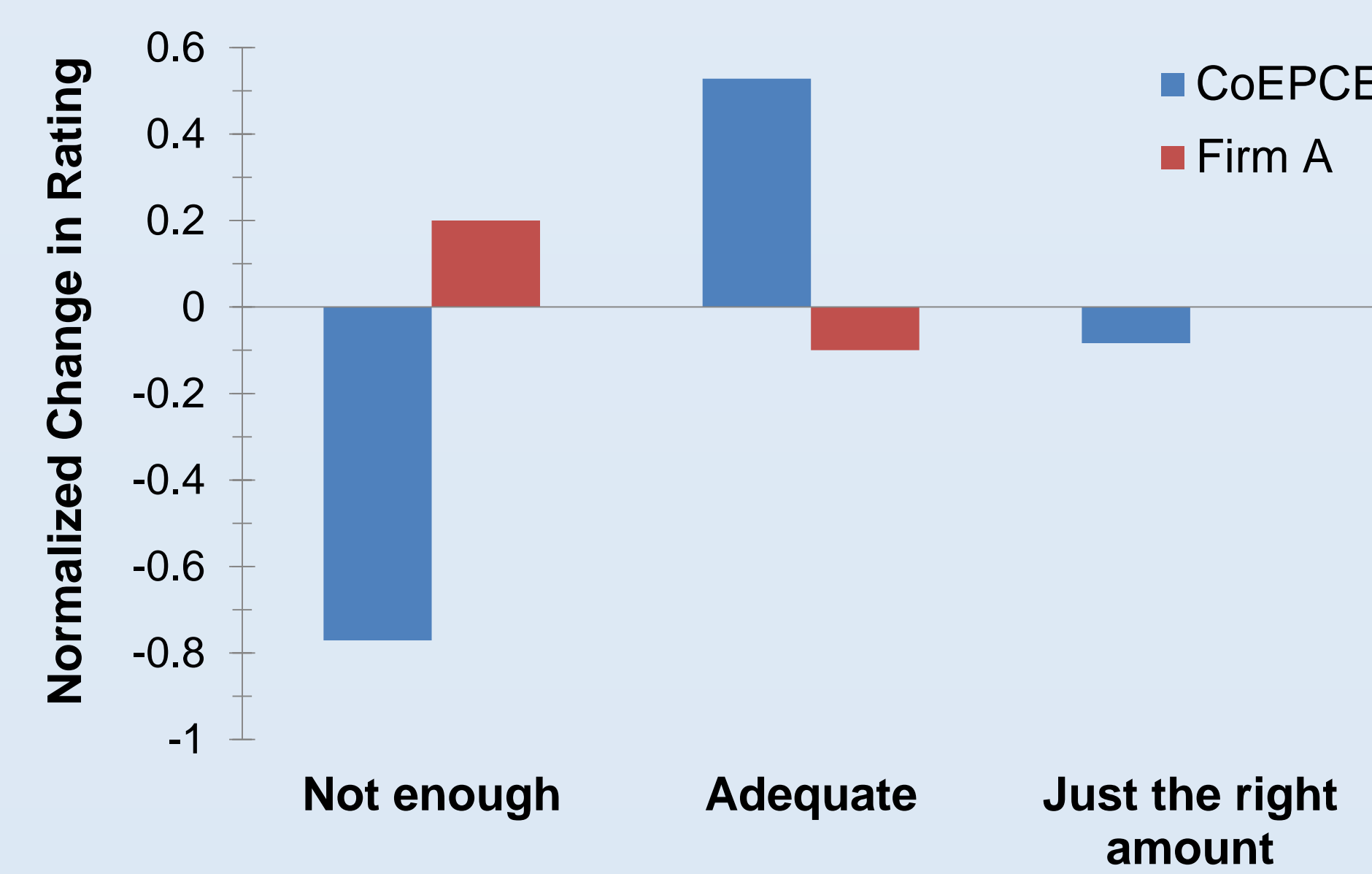


*Other included elbow, hip, ankle, foot, gait evaluations

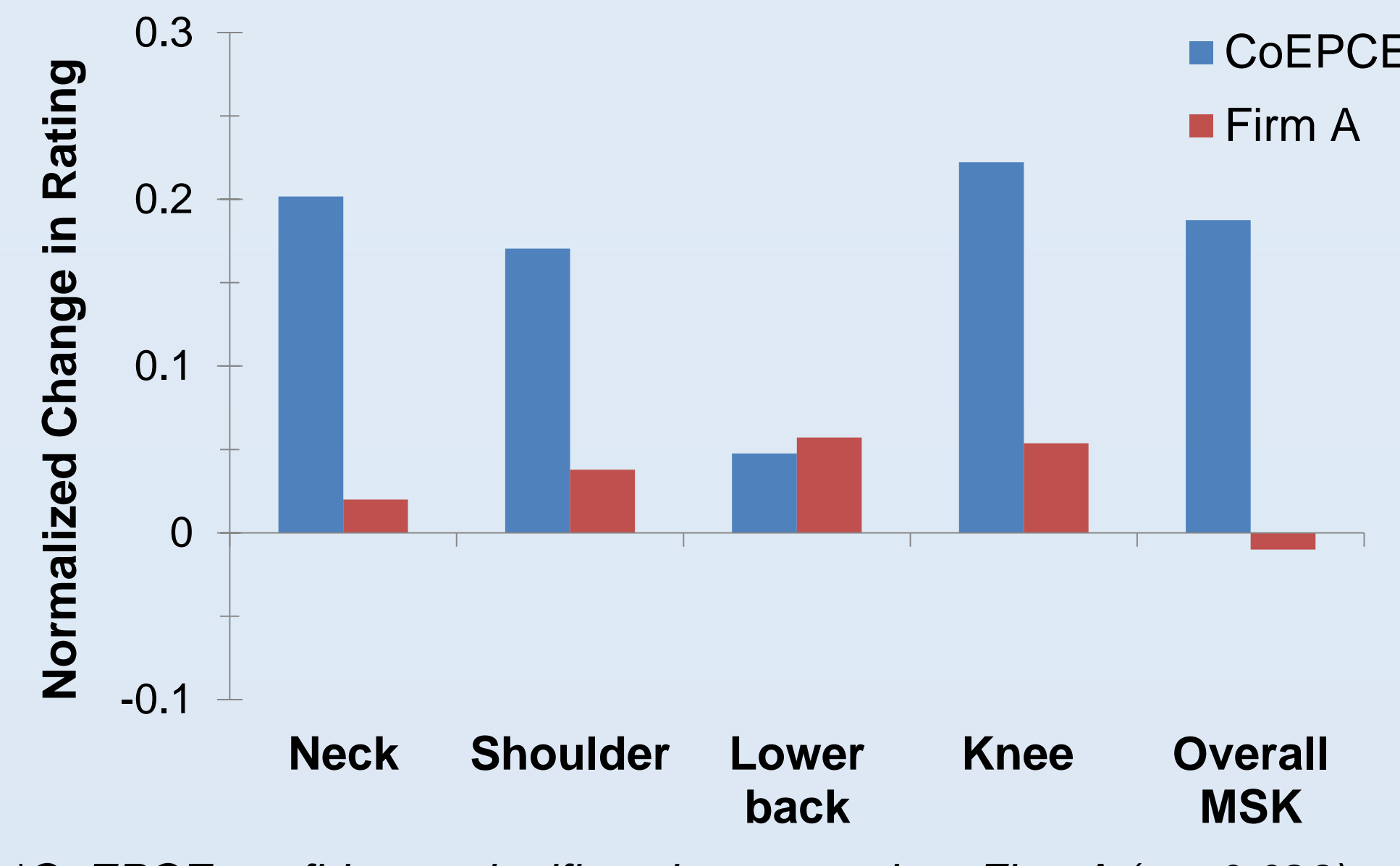
Confidence in MSK Examination



Perception of MSK Education



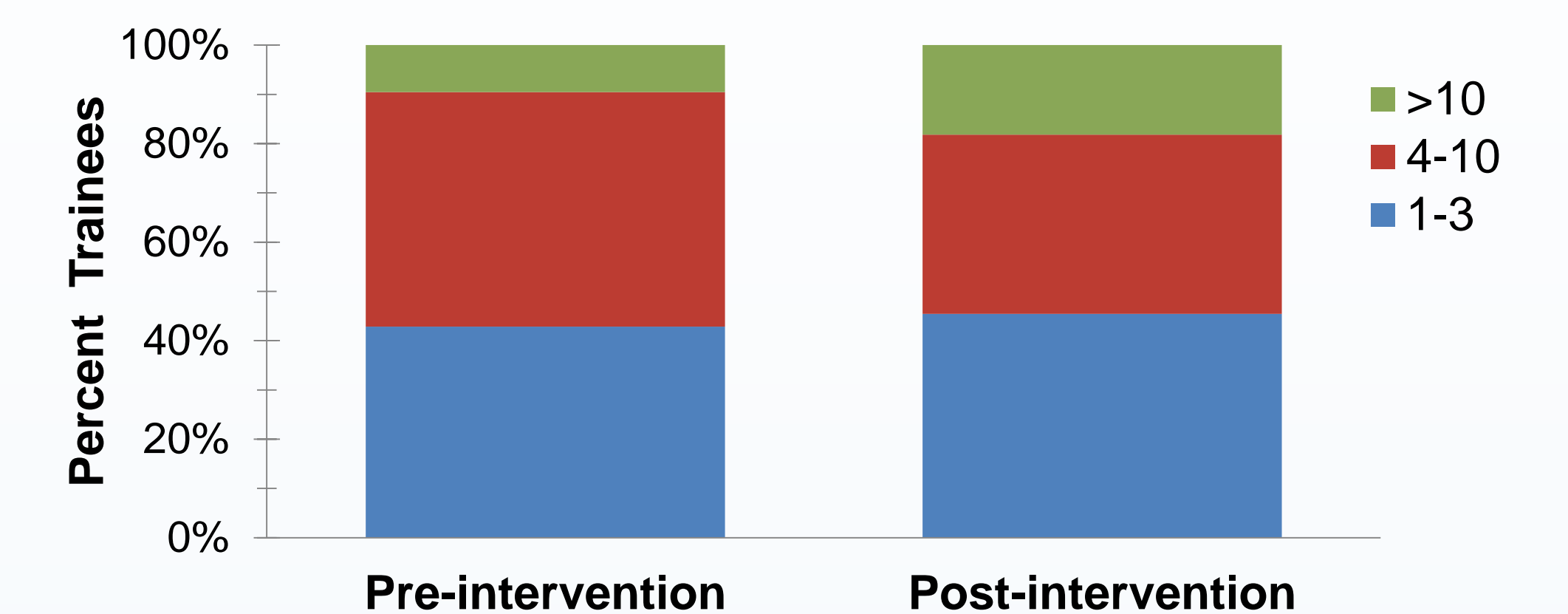
Confidence in MSK Diagnoses



*CoEPCE confidence significantly greater than Firm A (p = 0.023)

Co-evaluations

Co-evaluations Performed



- The proportion of co-evaluations after the intervention increased from <40% to **76.5%**
- The proportion of trainees with >10 co-evaluations increased

Challenges

- Inconsistent screening tool utilization resulting in continued late recognition of MSK issues
- Short length of time of interventions
- Perceived time barriers
- Limited PT availability

Conclusions

- There was an increase in overall utilization of co-evaluations
- CoEPCE trainee confidence in performing targeted MSK exams correlated with structured didactic sessions (shoulder/knee vs. other)
- Overall trainee confidence in performing MSK exams increased
- CoEPCE trainees had a significantly greater increase in diagnostic confidence
- CoEPCE trainee perception of MSK curriculum improved following the intervention

Future Directions

- Elicit feedback on screening tool utilization
- Maximize PT availability
- Expand on balanced didactic and bedside teaching

References

1. Rui P, Hing E, Okeyode T. National Ambulatory Medical Care Survey: 2014 State and National Summary Tables. Available from: http://www.cdc.gov/nchs/ahcd/ahcd_products.htm
2. DiCaprio MR, Covey A, Bernstein J. Curricular Requirements for Musculoskeletal Medicine in American Medical Schools. *J Bone Joint Surg.* 2003;85-A(3):565-7.
3. Clawson DK, Jackson DW, Ostergaard DJ. It's past time to reform the musculoskeletal curriculum. *Academic Medicine.* 2001; 76(7):709-10.
4. Walker, J, Buono, FD, Croteau, C., Printz, D.M.B., & Brienza, R.S. (in preparation) Integration of Physical Therapy into an Interprofessional Primary Care Training Clinic (in preparation)