



PURPOSE

- While competency-based medical education has become commonplace in the past 20 years, many clinical educators have not been trained to use competencies when instructing and evaluating medical learners.^{1,2,3}
- This is an essential issue in PA education as many programs have undergone curricular reform to integrate competency-based education principles in the didactic and clinical settings.⁴

The following research questions were addressed:

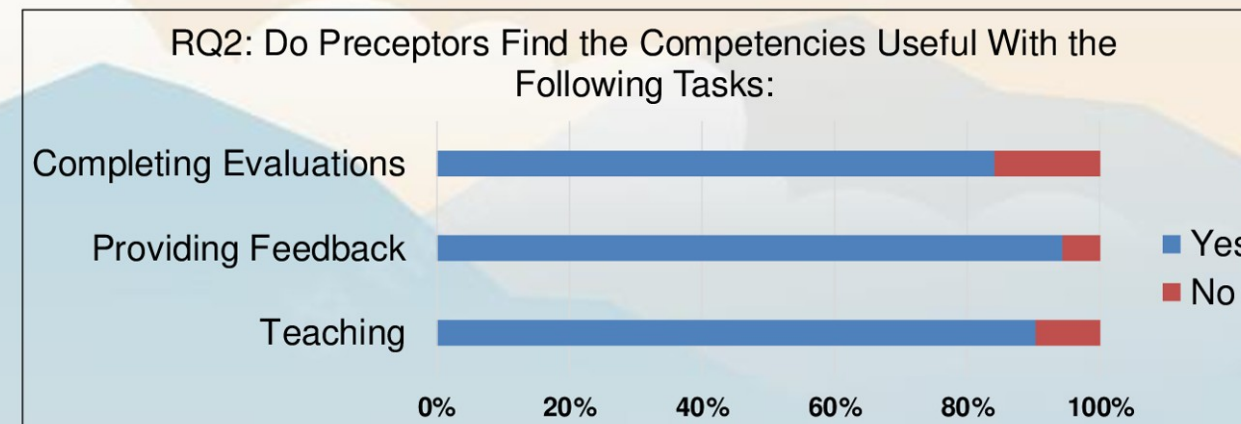
- How familiar are preceptors with program-defined competencies?
- Do preceptors find the program-defined competencies useful when teaching, providing feedback to clinical trainees, and completing end-of-rotation clinical evaluations?
- How do preceptors describe the influence of program-defined competencies on their self-efficacy?

METHODS

- 400 survey participants were invited to participate as they had supervised at least one PA student for a Rocky Mountain Region PA program in the past five years
- The Qualtrics survey collected demographic information, knowledge of program-defined competencies, and whether using the competencies was useful when teaching, providing feedback, and completing clinical evaluations
- Respondents were also asked to complete a validated Preceptor Self-Efficacy Questionnaire^{5,6} in a pre-post-design after reviewing the program-defined competencies information document and a revised student clinical evaluation tool with integrated competencies and sub-competencies
- Using criterion sampling of survey respondents, six participants who were experienced with using the competencies were interviewed. Through Zoom interviews, additional information was collected regarding how they use the competencies with their learners, how competencies may best be utilized, and how PA programs can educate preceptors about the competencies

RESULTS/DISCUSSION

- There were 71 completed surveys, but 20 had partial responses, so this data was removed (n=51, 13% response rate)
- The average respondent was a female PA with a master's degree, working in a primary care urban or suburban outpatient setting between 15-19 years, volunteering as a preceptor for <10 years, and without preceptor training
- RQ1: 52% of respondents expressed familiarity with the program-defined competencies before this study. Approximately 48% of respondents have been preceptors for ten years or more, and more than half of these indicated they were unfamiliar with the competency domains. This suggests a need for PA programs to provide more guidance to all preceptors about their competencies



- Exploratory factor analysis was performed to determine an underlying structure for the 21-item Preceptor Self-Efficacy Questionnaire
- The analysis generated four significant components that matched four of the PAEA Educator Competency⁷ domains:
 - Teaching
 - Learner-Centeredness
 - Professionalism and Role-Modeling
 - Interpersonal and Communication Skills
- These components also matched the themes revealed in the one-on-one interviews
- Paired T-tests of the 21-item Preceptor Self-Efficacy Questionnaires demonstrated statistically significant improvement ($p < .05$) in 15 of 21 pairs after reviewing the program-provided documents
- Pre-item self-efficacy mean scores for each factor domain significantly predicted the associated post-item self-efficacy mean scores
- Two other independent variables predicted their factor domain post-item mean score
- Teaching a higher number of PA students predicted a higher post-Teaching score
- A higher level of education (MD/DO) predicted a higher post-Communication score

RESULTS/DISCUSSION

- RQ3: Qualitative analysis of interview transcripts included coding and thematic analysis
- The broad phenomenon explored in this study was the interview participants' knowledge of program-defined competencies and how their feedback could improve how PA programs inform and educate their clinical education partners.
- All interviewees agreed the competencies were helpful when teaching, providing feedback, and completing evaluations

CONCLUSION

- This mixed-methods study was the first to document the effectiveness of providing instruction about competencies to preceptors who teach PA students and measured an improvement in their self-efficacy
- Experienced PA educators found the program-defined competencies and student evaluation tools that integrate sub-competencies helpful. These preceptors also reported that PA programs should provide frequent communication and instruction to clinical educators about competency-integrated evaluation tools, as these may help to improve their confidence in teaching and mentoring soon-to-graduate PA students
- This study may demonstrate how PA programs can reduce barriers to recruiting and retaining busy clinicians as clinical educators

REFERENCES

- Frenk, J., et al. (2010). Health professionals for a new century: Transforming education to strengthen health systems in an interdependent world. *The Lancet*, 376, 1923-1958. [https://doi.org/10.1016/S0140-6736\(10\)61854-5](https://doi.org/10.1016/S0140-6736(10)61854-5)
- Sirianni, G., Takahashi, S., Myers, J. (2020). Taking stock of what is known in faculty development in competency-based medical education: A scoping review paper. *Medical Teacher*, 42(8), 909-915. <https://doi.org/10.1080/0142159X.2020.1763285>
- Srinivasan, M., et al. (2011). Teaching as a competency: Competencies for medical educators. *Academic Medicine*, 86, 1211-1220. <https://www.doi.org/10.1097/ACM.0b013e31822c5b9a>
- Kanofsky, S. (2020). Competency-based medical education for physician assistants. The development of competency-based medical education and competency frameworks in the United States and Canada. *Physician Assistant Clinics*, 5(1), 91-107. <https://doi.org/10.1016/j.cpha.2019.08.005>
- Parsons, R. (2007). Improving preceptor self-efficacy using an online educational program. *International Journal of Nursing Education Scholarship*, 4(1), Article 21. <https://www.doi.org/10.2202/1548-923X.1339>
- Larsen, R. & Zahner, S.J. (2011). The impact of web-delivered education on preceptor role self-efficacy and knowledge in public health nurses. *Public Health Nursing*, 28(4), 349-356.
- Zaweski, J., et al. (2019). Physician assistant educator competencies. *Journal of Physician Assistant Education*, 30(1), 47-53. <https://www.doi.org/10.1097/JPA.0000000000000240>