Continuing Medical Education Microlearning Intervention Improves Mastery in Chronic Obstructive Pulmonary Disease Management Across the Care Team

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BACKGROUND

Chronic obstructive pulmonary disease (COPD) affects approximately 30 million people in the United States and is projected to be the third leading cause of disability and death worldwide by 2030. While most patients with COPD will experience exacerbations, these exacerbations are not frequently reported by the patient and are therefore left untreated. In parallel, members of the COPD care team have difficulty promptly recognizing and managing exacerbations, missing important opportunities to individualize treatment and improve outcomes for patients with moderate to severe COPD.

METHODS

To address these gaps, an online CME microlearning intervention was developed featuring 4 video chapters on different aspects of COPD management, allowing learners to choose which chapters to complete.

- Educational effects were assessed using a repeated pairs pre-/post-assessment study design, where individual participants served as their own control.
- McNemar's tests ($P < .05$) determined statistical significance overall in level of mastery of the content (made at least 1 more decision correctly or improved confidence in their correct decision from pre- to post-education).
- At the question level, a paired-analysis, confidence-based assessment measured changes in competence and confidence in learners' responses to identify learners who are correct and confident (mastery), correct but not confident (doubt), incorrect or confident (uninformed), and incorrect but confident (misinformed). 1 question was asked per chapter.
- The activity was launched on 3/29/24, and data were collected through 6/25/24.

Pulmonologists (n = 60-69)

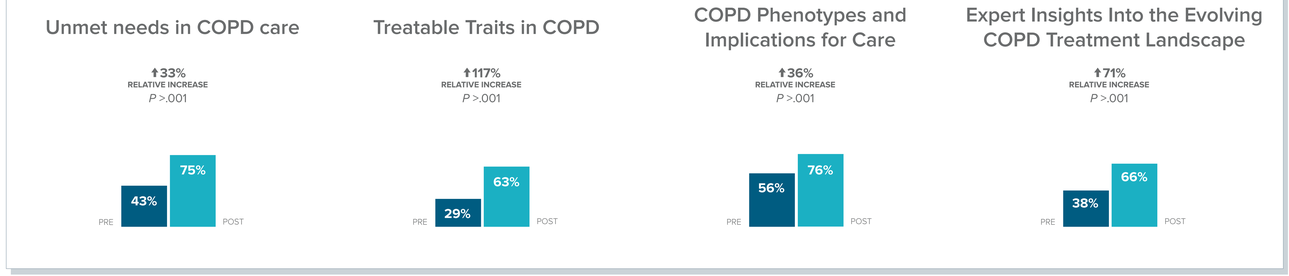
Primary Care Physicians (PCPs) (n = 150-187)

Nurse practitioners/ Physician assistants (NPs/PAs) (n = 89-101)

RESULTS

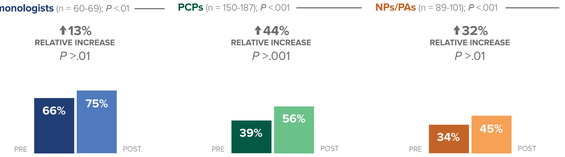
The following gains in mastery were observed:

OVERARCHING IMPACT FOR LEARNERS WHO DEMONSTRATED MASTERY

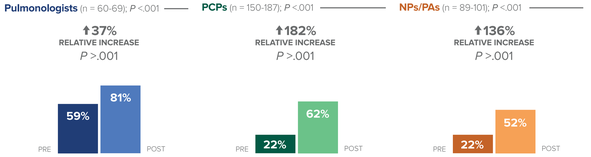


Stratified data show that across topics, pulmonologists had higher baseline mastery levels than PCPs and NPs/PAs, though gains were observed for all groups:

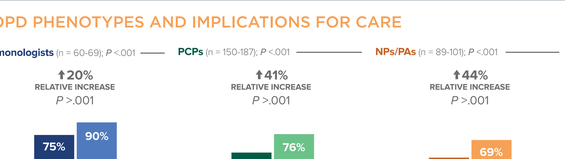
UNMET NEEDS IN COPD CARE



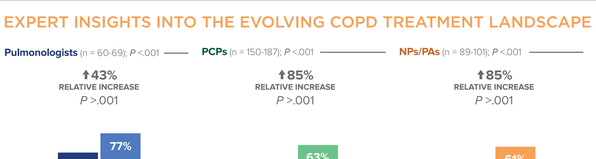
TREATABLE TRAITS IN COPD



COPD PHENOTYPES AND IMPLICATIONS FOR CARE



EXPERT INSIGHTS INTO THE EVOLVING COPD TREATMENT LANDSCAPE



*Note: Mastery = demonstrate knowledge/competence and are confident

CONCLUSIONS

This analysis shows the success of online microlearning in improving mastery of the COPD care team in disease management, demonstrating the effectiveness of this format in meeting diverse learning needs. PCPs and NPs/PAs had lower levels of baseline mastery than pulmonologists, highlighting a need for education to reinforce these concepts and strengthen referral pathways.

ACKNOWLEDGEMENTS

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