Challenges in Pulmonary and Critical Care

NACE

LIVE CME CONFERENCE

Alpha-1 Antitrypsin Deficiency: New Horizons

Final Live Outcome Report

Prepared For CSL Behring.: Grant ID #: 19-20.016

January 21, 2020

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Executive Summary

- This activity focused on improving the recognition, diagnosis and treatment of Alpha-1 Antitrypsin Deficiency (AATD).
- 917 attendees in multiple professional specialties were reached in this program.
- Improvement across all learning domains was noted ranging from 43% to 136%.
- Overall, the program improved the ability of learners to recognize how to diagnosis and manage AATD.

Persistent Educational Gaps

- Though improvements were observed, learners demonstrated score slippage on the PCA indicating persistent gaps in the several areas including:
  - Pathophysiology of AAT Deficiency
  - Genetic phenotyping in AATD and its impact on risk for COPD
  - AATD screening strategies
  - Laboratory evaluation for AATD

The post-test scores, and self reported confidence regarding the management of patients with Alpha-1 Antitrypsin Deficiency, signifies a clear gap in knowledge and an unmet need among clinicians. It continues to be an important area for future educational programs.

*These numbers represent the total number of attendees, irrespective of assessment participation

Learning Objectives

1. Discuss the pathophysiology of AAT deficiency (AATD) and its impact on chronic obstructive pulmonary disease (COPD) risk
2. Interpret the clinical significance of laboratory test results for AATD
3. Discuss treatment options for AATD incorporating the latest guideline recommendations
4. Discuss strategies to enhance detection and treatment of AATD in clinical practice

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*Presented Alpha-1 lecture

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Challenges in Pulmonary and Critical Care

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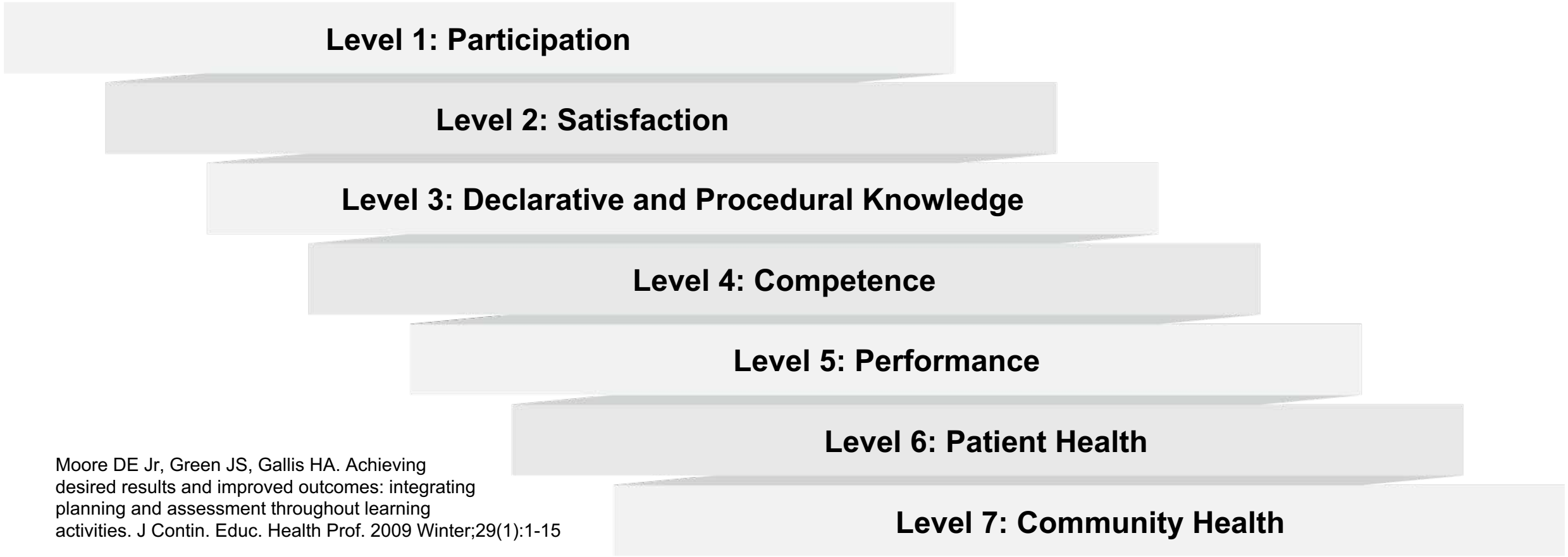
The Challenges in Pulmonary and Critical Care: 2019 CME activity was supported through educational grants or donations from the following companies:

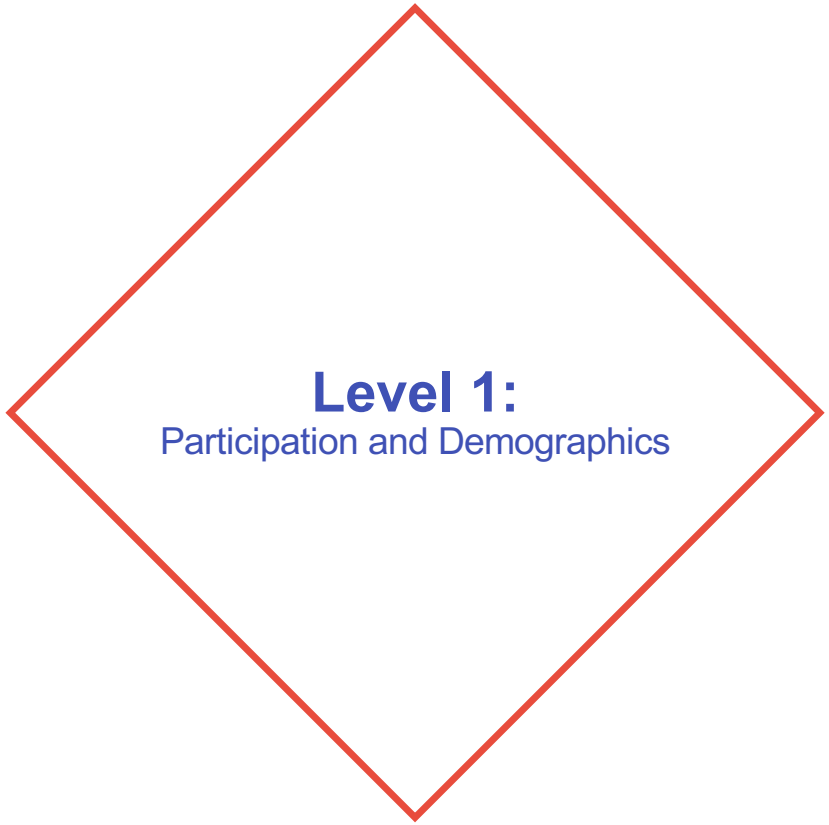
- Actelion Pharmaceuticals US, Inc.
- Genentech
- Novartis Pharmaceuticals Corporation
- CSL Behring, LLC.
- Grifols
- Mallinckrodt, LLC
- Shire

Levels of Evaluation

Consistent with the policies of the ACCME, NACE evaluates the effectiveness of all CME activities using a systematic process based on Moore's model. This outcome study reaches Level 5.



Moore DE Jr, Green JS, Gallis HA. Achieving desired results and improved outcomes: integrating planning and assessment throughout learning activities. J Contin. Educ. Health Prof. 2009 Winter;29(1):1-15


Level 1:
Participation and Demographics

Level 1:Participation

November 23, 2019 Coral Springs, FL

90%

Provide direct patient care

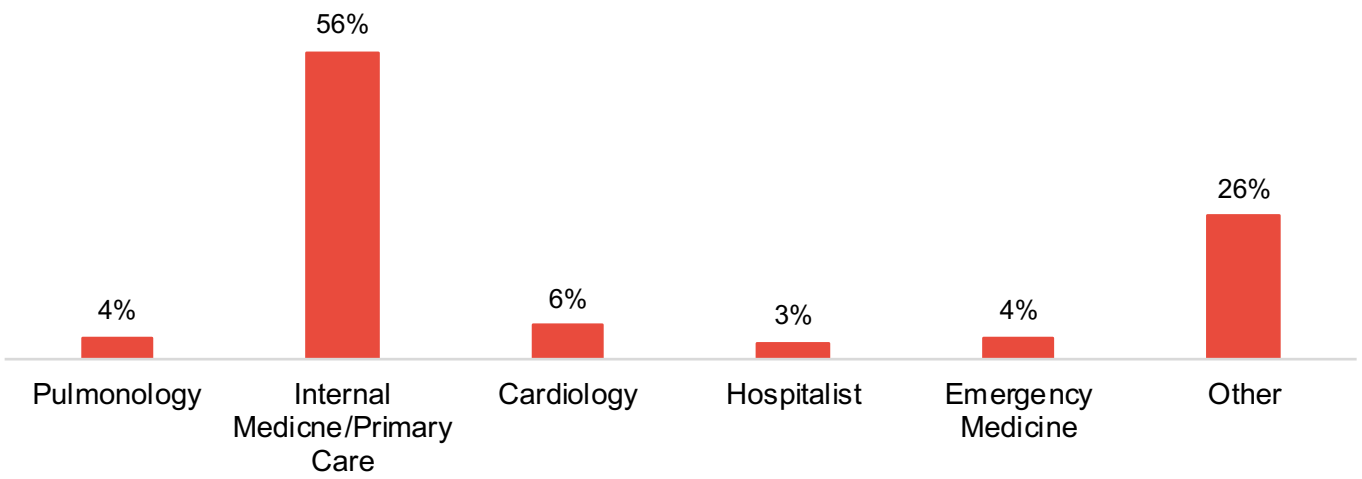
917 total attendees

On site: **97** attendees

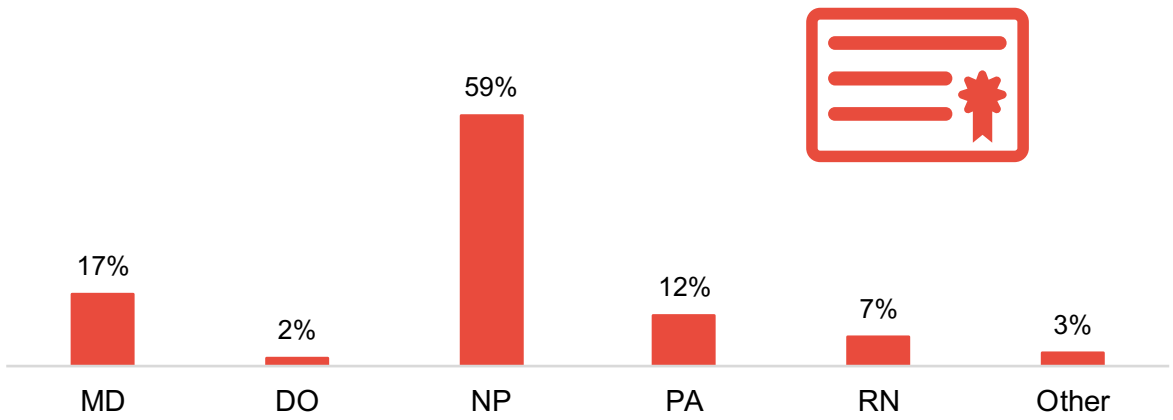
National online simulcast : **820** attendees

Level 1: Demographics and Patient Reach

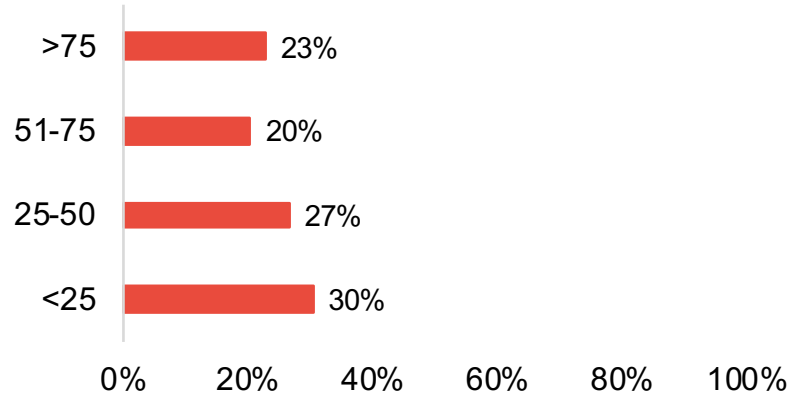
Specialty



Profession

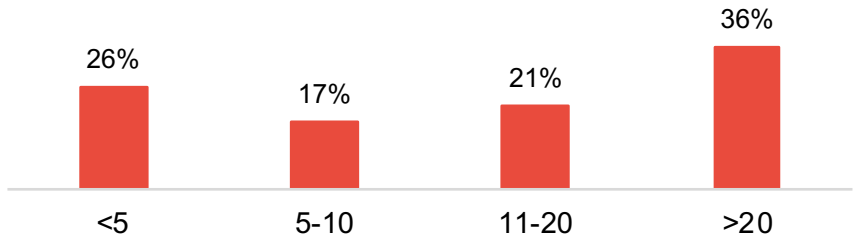


Patients seen each week, in any clinical setting:



Patient Care Focus: 90%

Years in Practice




Level 2-5:
Outcomes Metrics

Level 2: Satisfaction

88% rated the activity as excellent

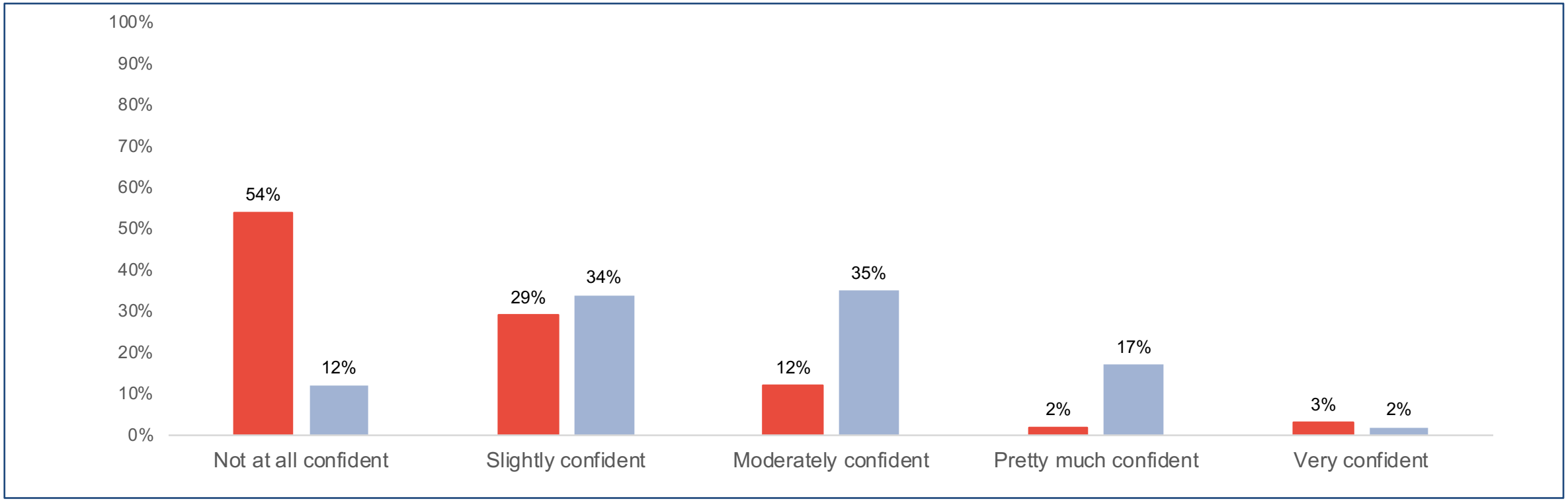
89% indicated the activity improved their knowledge

88% stated that they learned new and useful strategies for patient care

91% said they would implement new strategies that they learned

98% said the program was fair-balanced and unbiased

Please rate your confidence in your ability to integrate the assessment and management of AATD into the care of patients with COPD:
(Learning Objectives 1, 2, 3, 4)

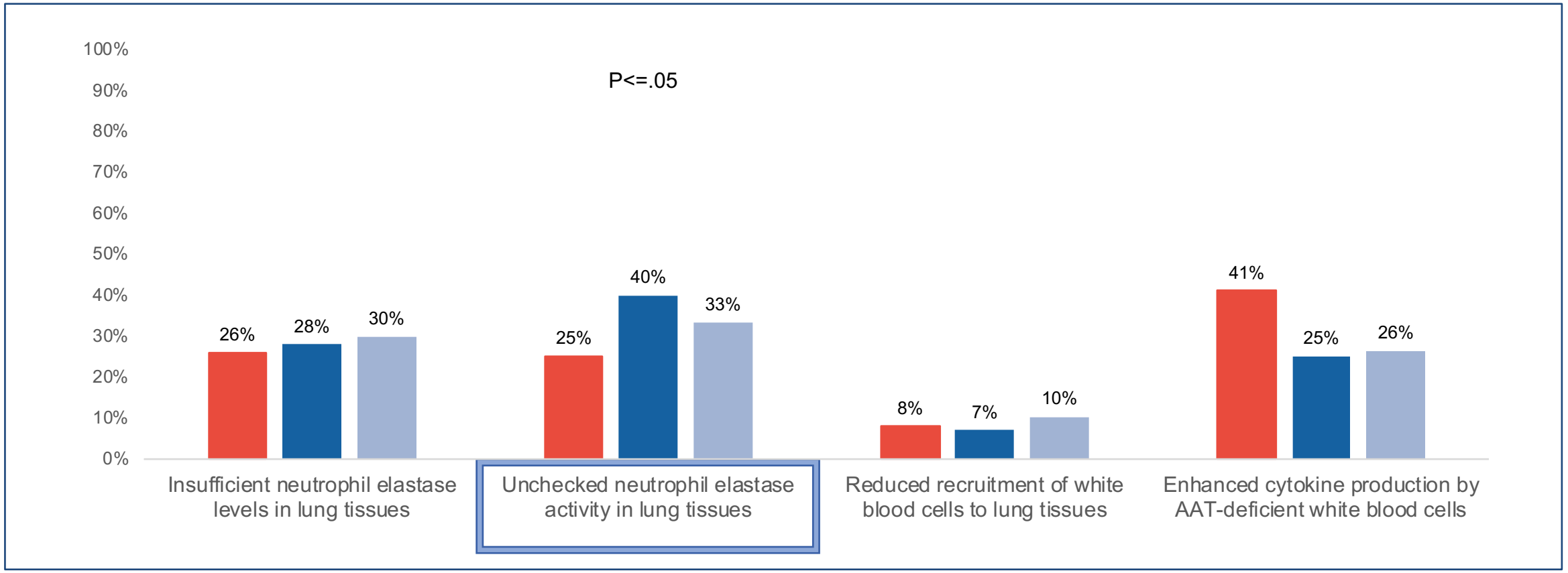


N= Pre: 316 PCA: 161

Knowledge Assessment

In patients with AAT deficiency, which of the following mechanisms contributes to breakdown of lung tissue?

(Learning Objective 1)



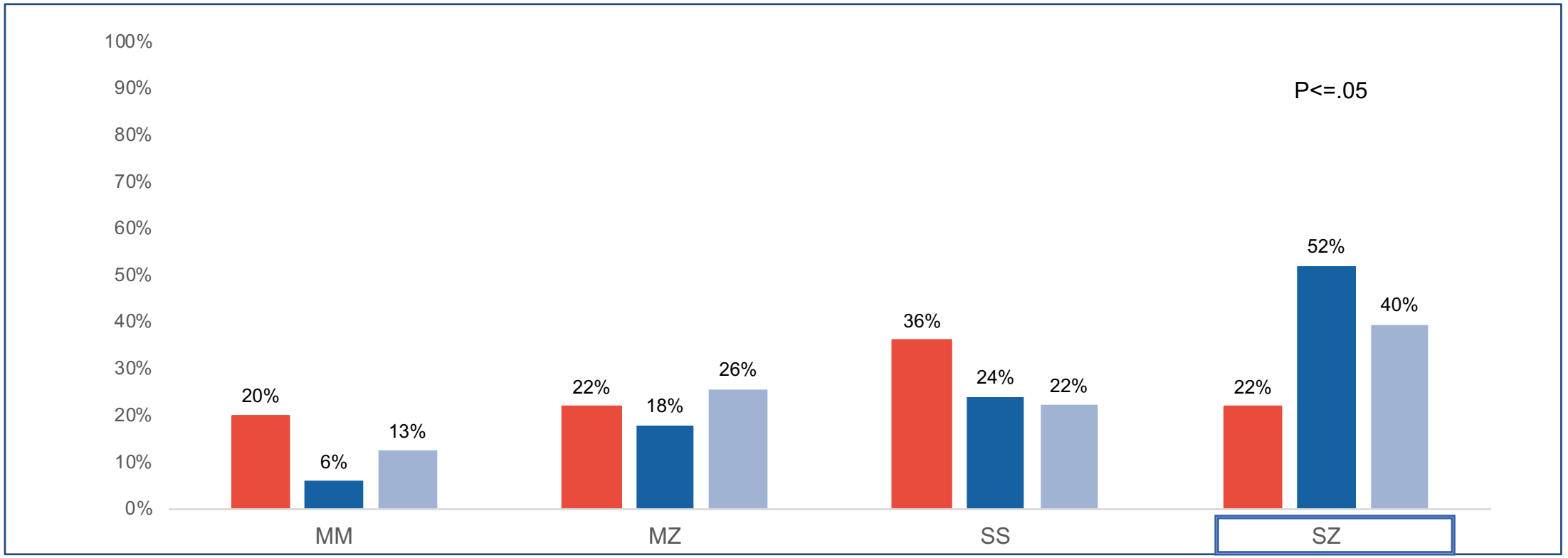
N= Pre: 246 Post: 249 PCA: 161

Pre to Post Change	**60%**
Pre to PCA Change	**32%**

Knowledge Assessment

On genetic testing for AAT deficiency, which of the following genotypes is associated with greatest risk for development of COPD?

(Learning Objectives 1, 2)



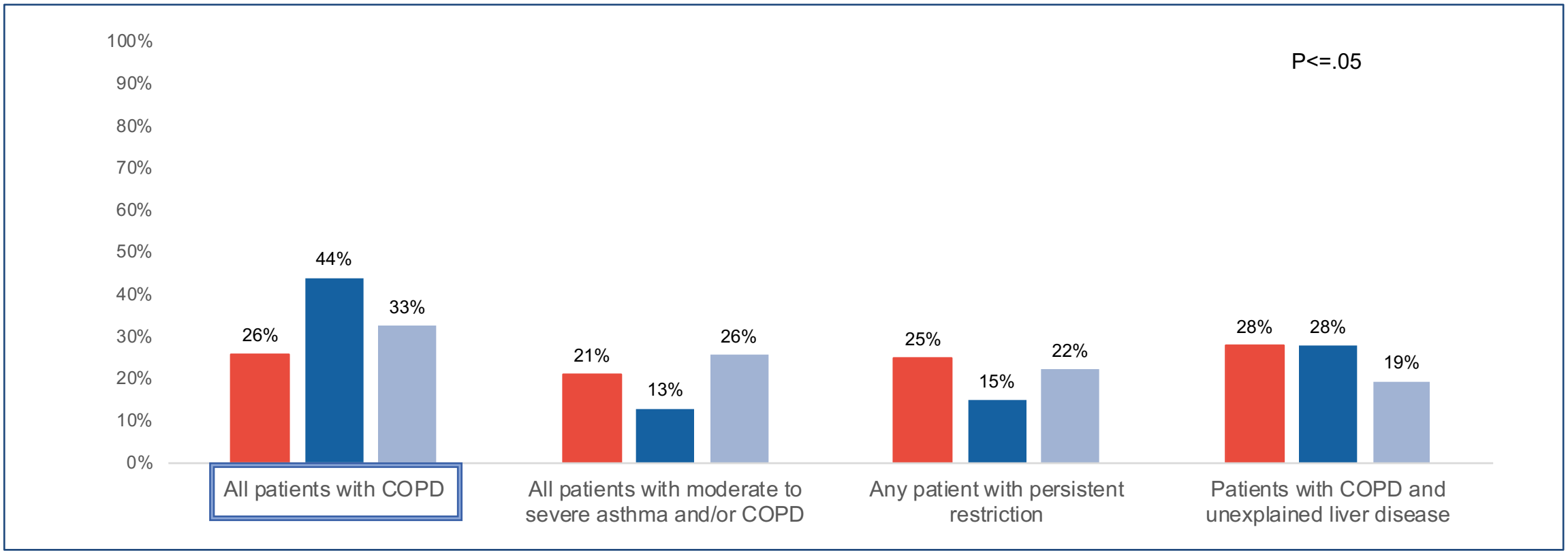
N= Pre: 288 Post: 325 PCA: 161

Pre to Post Change	136%
Pre to PCA Change	82%

Knowledge Assessment

According to current guidelines, which of the following groups should be screened for AAT deficiency?

(Learning Objective 4)



N= Pre: 300 Post: 316 PCA: 161

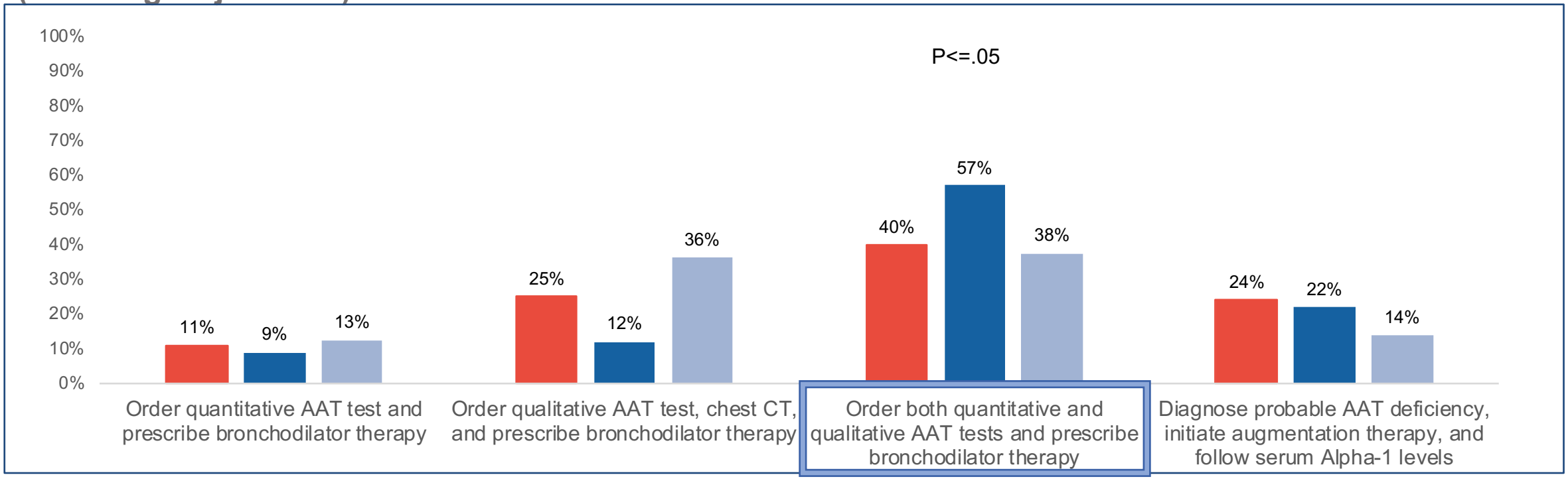
Pre to Post Change	**69%**
Pre to PCA Change	**27%**

Competence Assessment

A 62-y/o woman presents with progressive dyspnea and productive cough. She has no smoking history. Workup identifies FEV_1/FVC of 0.50 and FEV_1 40% predicted. Chest X-ray shows mild emphysema with apical predominance. Other findings are WNL.

Based on this information, what might be an appropriate next step?

(Learning Objective 4)



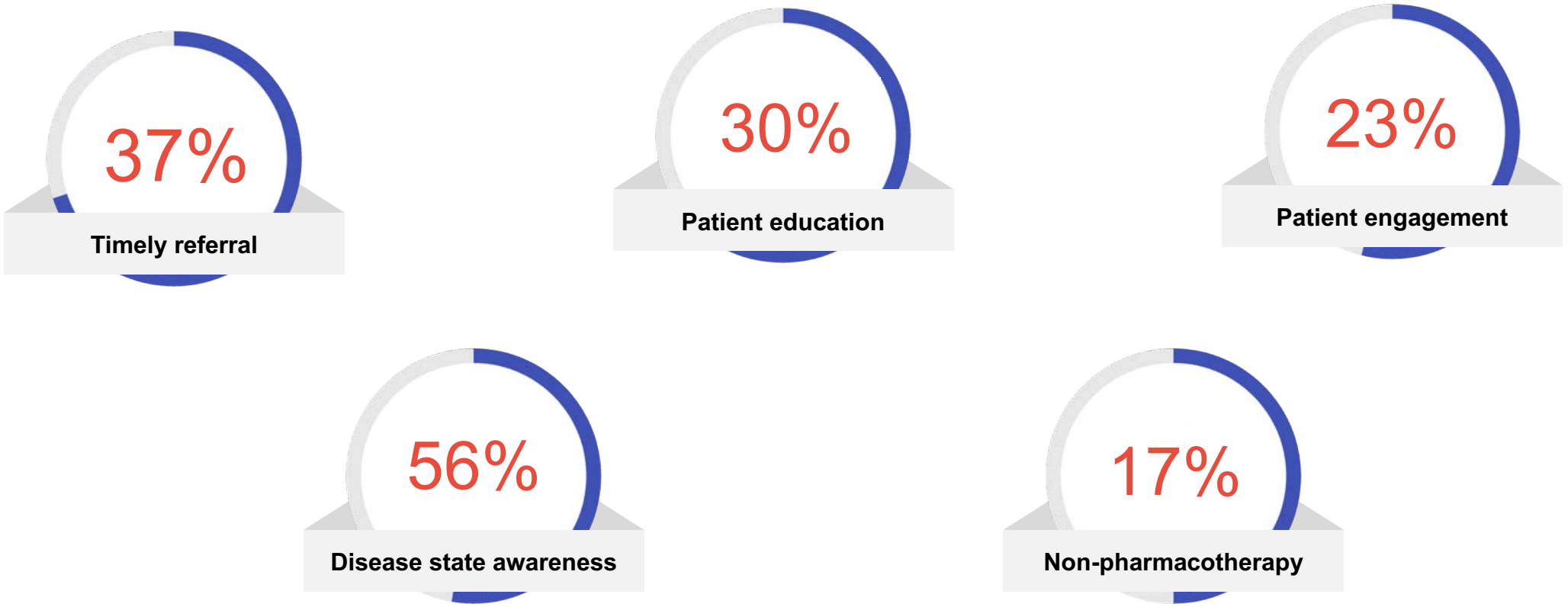
N= Pre: 175 Post: 162 PCA: 161

Pre to Post Change	**43%**
Pre to PCA Change	**-5%**

(4-week Post Assessment)

Please select the specific areas of *skills, or practice behaviors*, you have improved regarding the screening, diagnosis and treatment of Alpha-1 Antitrypsin Deficiency since this CME activity. (Select all that apply.)

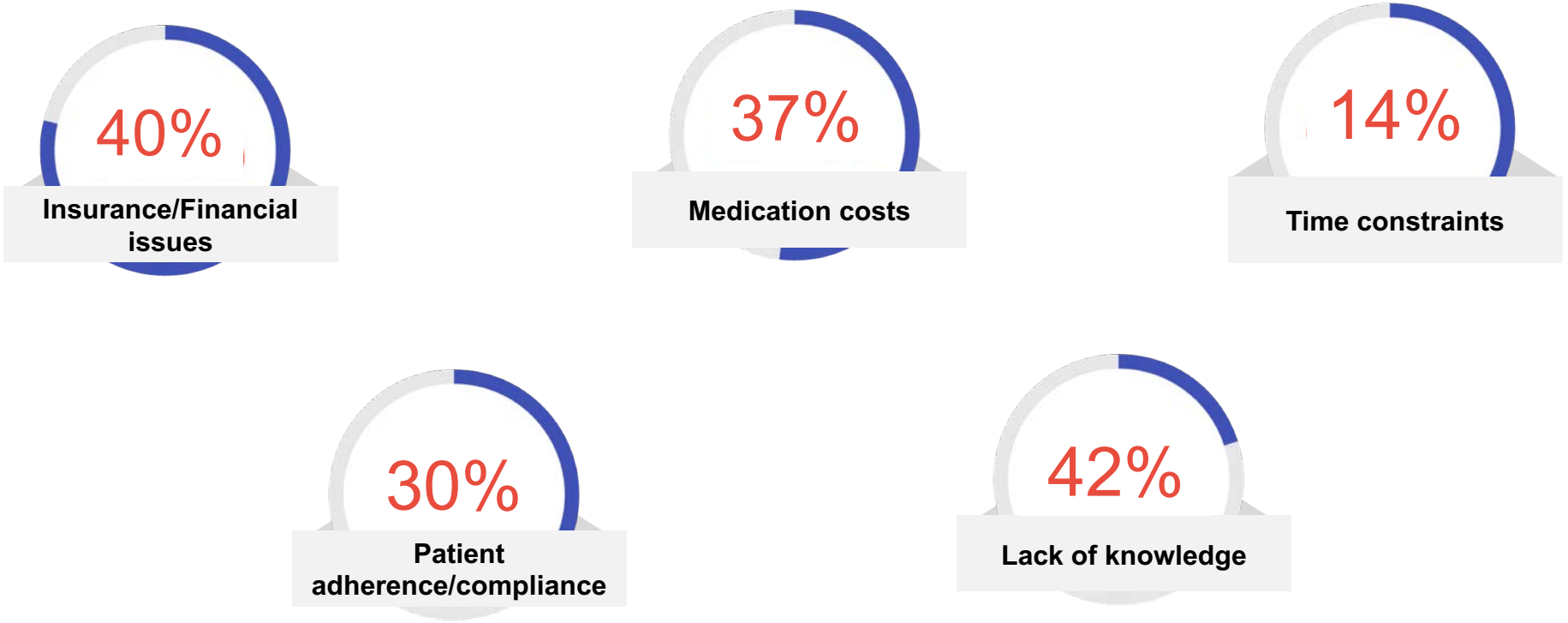
N=117



(4-week Post Assessment)

What specific *barriers* have you encountered that may have prevented you from successfully implementing screening, diagnosis and treatment of Alpha-1 Antitrypsin Deficiency since this CME activity? (Select all that apply)

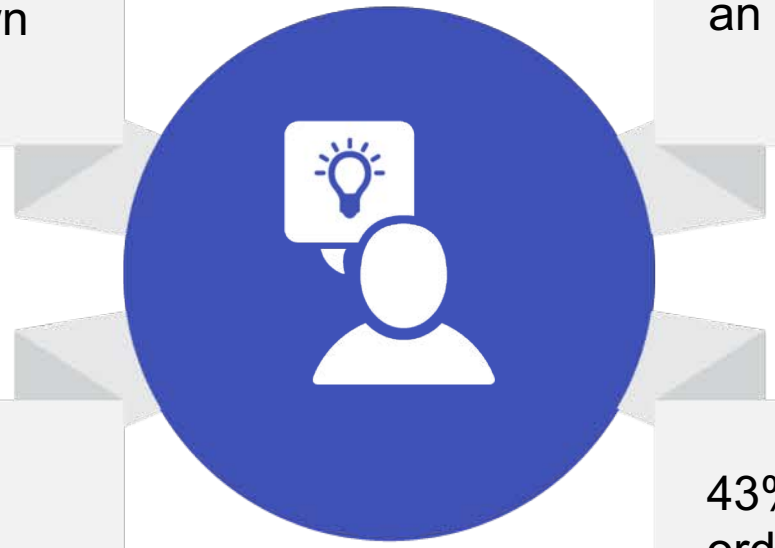
N=117



Participant Educational Gains

60% increased recognition of the mechanism by which AATD contributes to lung tissue breakdown

136% increased awareness of the AATD genotype most associated with an increased risk of COPD



69% increased recognition of the need to screen all patients with COPD for AAT Deficiency

43% increased competence in ordering appropriate quantitative and qualitative AAT tests for a patient with symptomatic COPD, in addition to appropriate bronchodilator therapy

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Persistent Educational Gaps After 4 Weeks

- Pathophysiology of AAT Deficiency
- Genetic phenotyping in AATD and its impact on risk for COPD
- AATD screening strategies
- Laboratory evaluation for AATD

Key Take-home Points

Significantly increased confidence in the ability to integrate the assessment and management of AATD into the care of patients with COPD

After 4 weeks, participants reported the following improved skills regarding the screening, diagnosis and treatment of AATD: 56% disease state awareness,37% timely referral, and 30% patient education

90% of learners are engaged in direct patient care and 91% reported that they will implement new strategies they learned

After 4 weeks, participants reported the following barriers regarding the screening, diagnosis and treatment of AATD: 42% lack of knowledge, 37% medication costs, and 40% insurance/financial issues