Annual Live Symposia Series
Clinical Updates for Nurse Practitioners & Physician Assistants

NACE

LIVE CONFERENCE SERIES

Impacting COPD Care: Addressing Alpha-1 Antitrypsin Deficiency

Final Outcome Report for 2 Live Activities

Grant ID 3750: • February 4, 2020

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Executive Summary

- This activity focused on improving the recognition, diagnosis and treatment of Alpha-1 Antitrypsin Deficiency (AATD).
- 771 attendees in multiple professional specialties were reached in this program.
- Improvement across all learning domains was noted ranging from 36% to 406%.
- 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
  - Criteria for initiation of AAT augmentation therapy

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

Course Director

Franck Rahaghi, MD, MHS, FCCP

Director of Advanced Lung Disease Clinic

Director, Pulmonary Hypertension Clinic

Head of Alpha-1 Foundation Clinical Resource Center

Chairman, Dept. of Pulmonary and Critical Care

Cleveland Clinic Florida

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Commercial Support

The Clinical Updates for Nurse Practitioners and Physician Assistants: 2018 series of CME activities were supported through educational grants or donations from the following companies:

- Actelion Pharmaceuticals US, Inc
- Sanofi US
- Grifols
- Boehringer Ingelheim Pharmaceuticals, Inc.
- GlaxoSmithKline
- Ferring Pharmaceuticals, Inc.
- Genentech

Curriculum Overview

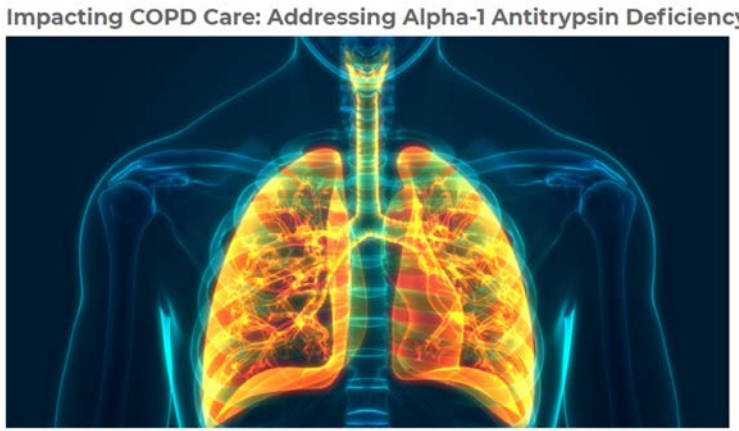
2 Accredited Live Regional Symposium:

September 7, 2019, October 19, 2019

Enduring CME eMonograph

Launch: December 25, 2019 | End: December 14, 2020

Available at: https://bit.ly/37ZYDsP



COURSE SUMMARY

Cost: Free

Start Date: 12/15/2019

Expiration Date: 12/14/2020

Target Audience: Pulmonologists, Primary Care Physicians, Nurse Practitioners and Physician Assistants

Format: Monograph

Estimated Time To Complete CME Activity: 1.0 hour

Credit(s):
1.0 *AMA PRA Category 1 Credit(s)*™
1.0 AANP Contact Hour which includes 0.75 pharmacology hours

Hardware/Software Requirements: Any web browser

1 Accredited Live Virtual Simulcast: October 19, 2019

Clinical Highlights eMonograph - eMonograph containing key teaching points from the CME Activity was distributed 1 week after the meeting to all attendees.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2019 Clinical Highlights

Impacting COPD Care: Addressing Alpha-1 Antitrypsin Deficiency

Faculty
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Franck Rahaghi, MD, MHS,

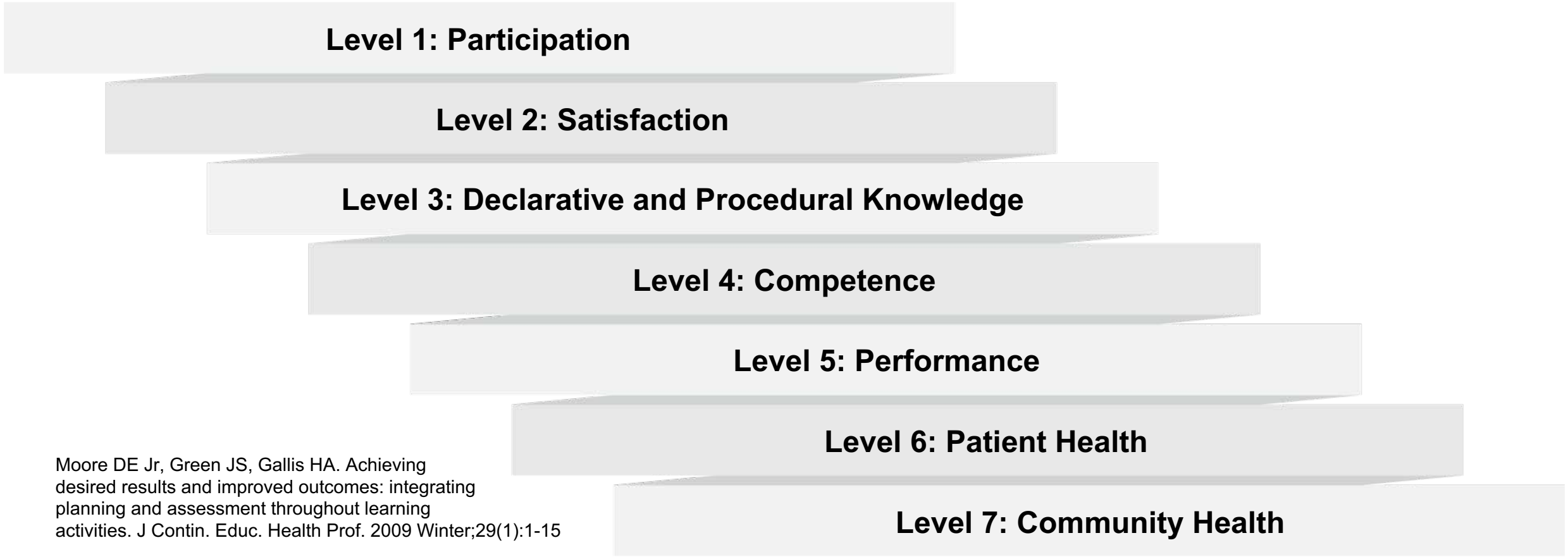
- Alpha-1-antitrypsin deficiency (AATD) is the most common genetic cause of COPD.
- In normal physiology, alpha-1-antitrypsin (AAT) inactivates neutrophil elastase; in AATD, unchecked neutrophil elastase activity leads to the breakdown of lung tissues.
- Of the ~26 million COPD patients, nearly 10% have an abnormal AAT gene.
- The most common AAT gene mutation associated with AATD is PI*Z.
- The most common molecular mechanism of AATD is the substitution glutamic acid for lysine at amino acid 342 that results in misfolding of AAT, rapid destruction of the protein, and accumulation in the hepatocytes.
- ~1:100-120 individuals with COPD are homozygous for PI*Z, i.e. PI ZZ.

Learning Objectives

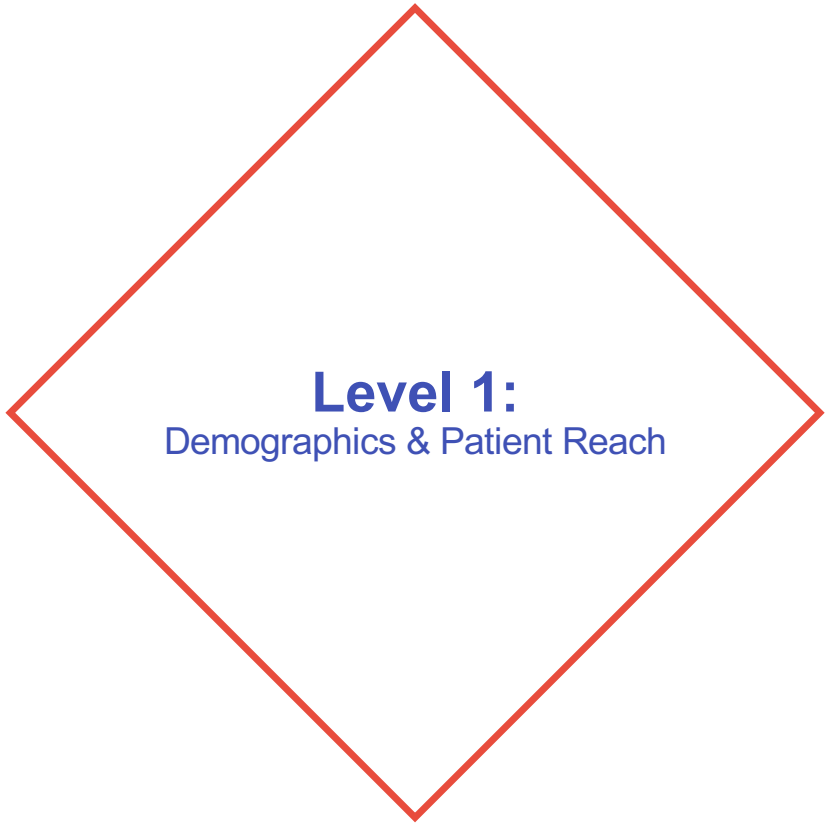
1. Discuss the pathophysiology of Alpha-1 antitrypsin deficiency (AATD) and its impact on chronic obstructive pulmonary disease (COPD) risk.
2. Interpret the clinical significance of laboratory test results for AATD.
3. Discuss treatment options for AATD and latest GOLD guideline recommendations.
4.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

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:
Demographics & Patient Reach

Level 1:Participation

771 total attendees

2 cities: **245** attendees

1 Live Virtual Simulcast: **526** attendees

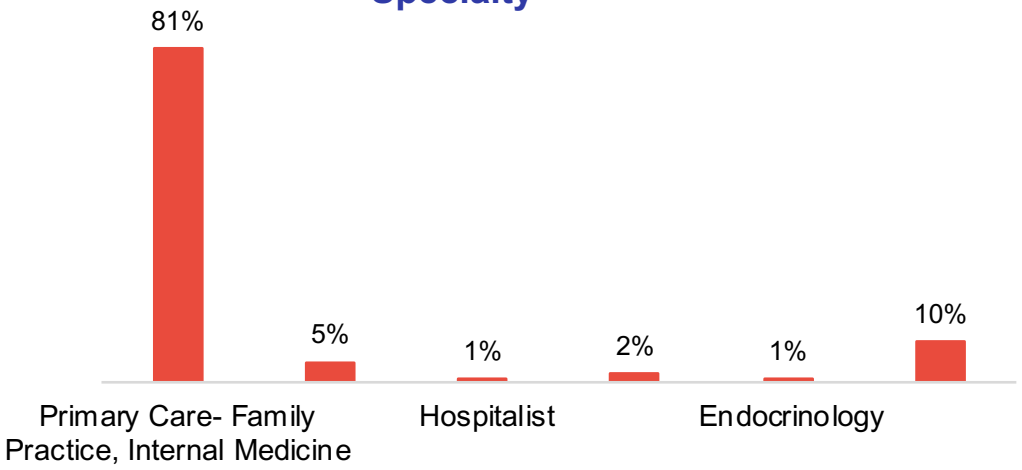
City	Date	Attendees
Orlando, FL	9/28/19	162
Anaheim, CA (Live & Simulcast)	10/19/19	83 + 526

94%

Provide direct patient care

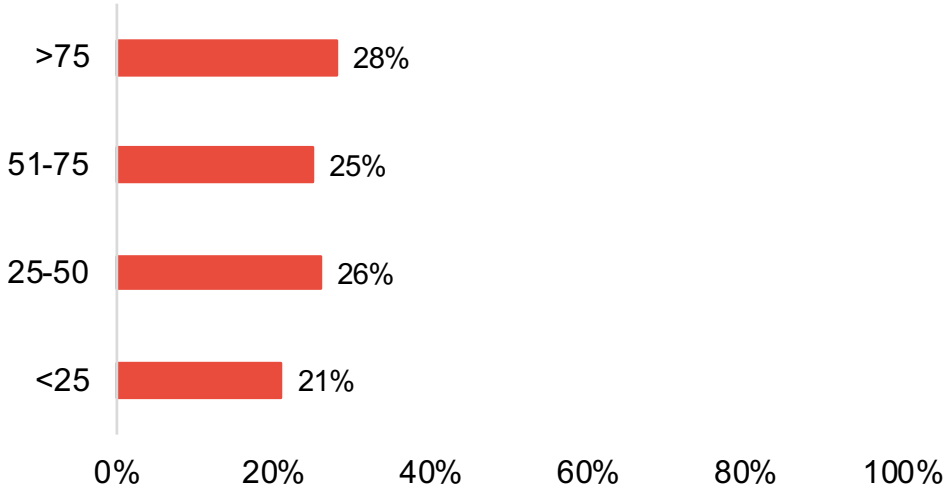
Level 1: Demographics and Patient Reach

Specialty

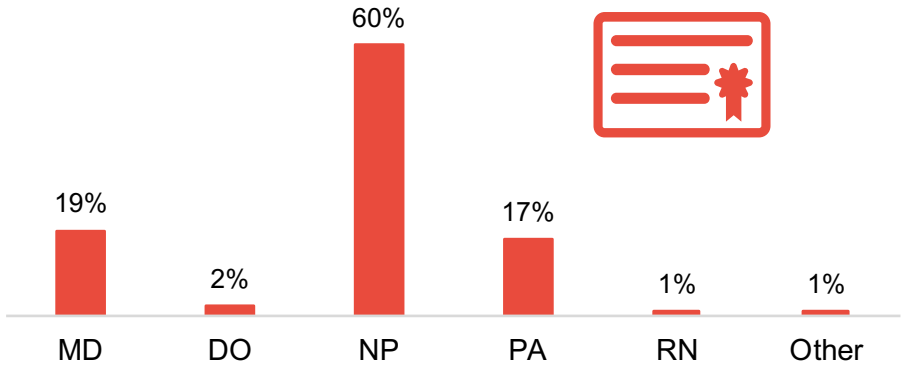


Patient Care Focus: 95%

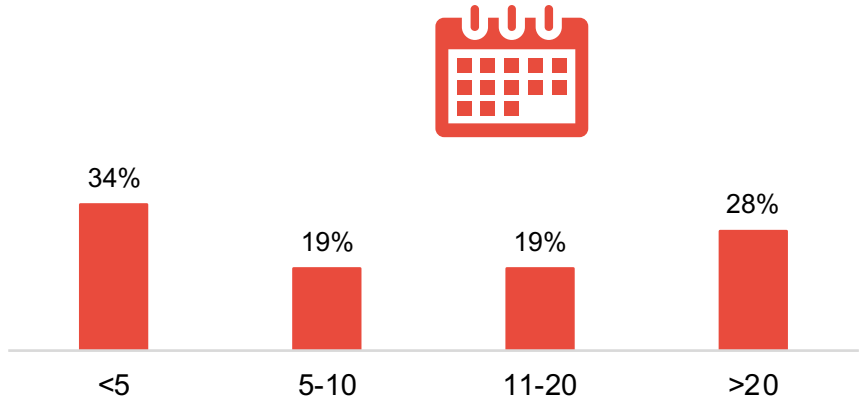
Patients with seen each week, in any clinical setting:



Profession



Years in Practice




Level 2-5:
Outcomes Metrics

Level 2: Satisfaction

99% rated the activity as excellent

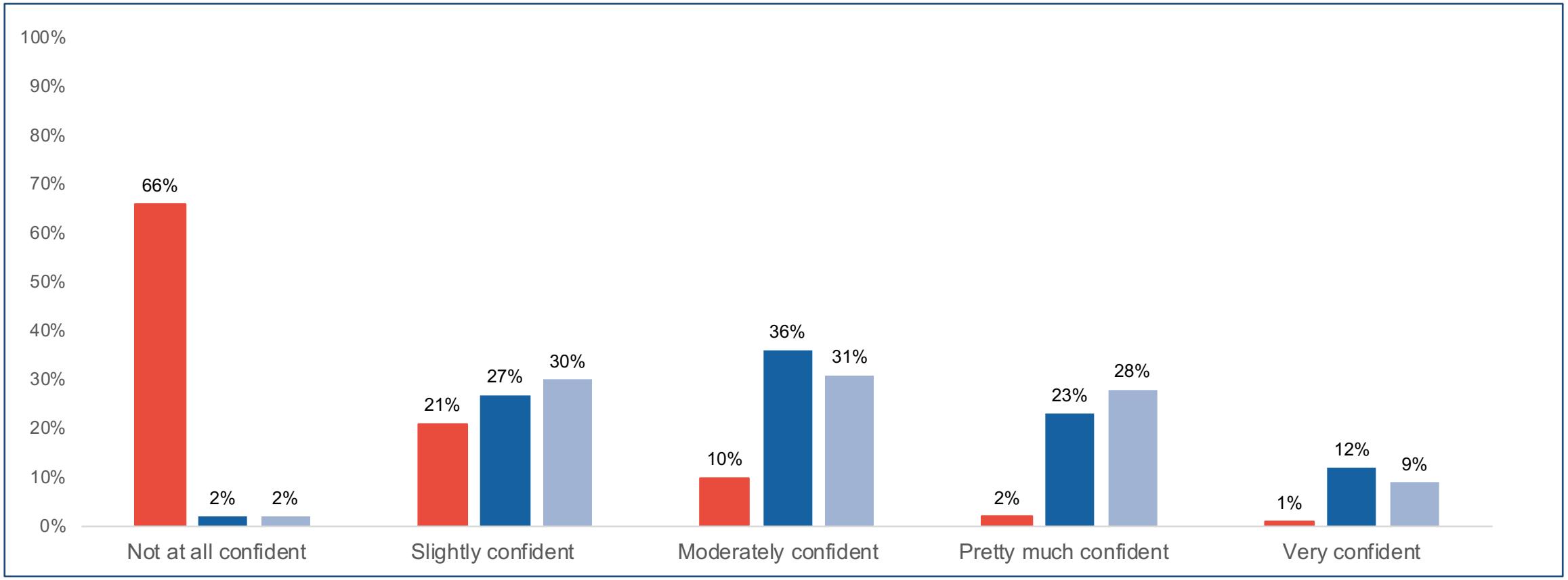
99% indicated the activity improved their knowledge

97% stated that they learned new and useful strategies for patient care

91% said they would implement new strategies that they learned

100% said the program was fair-balanced and unbiased

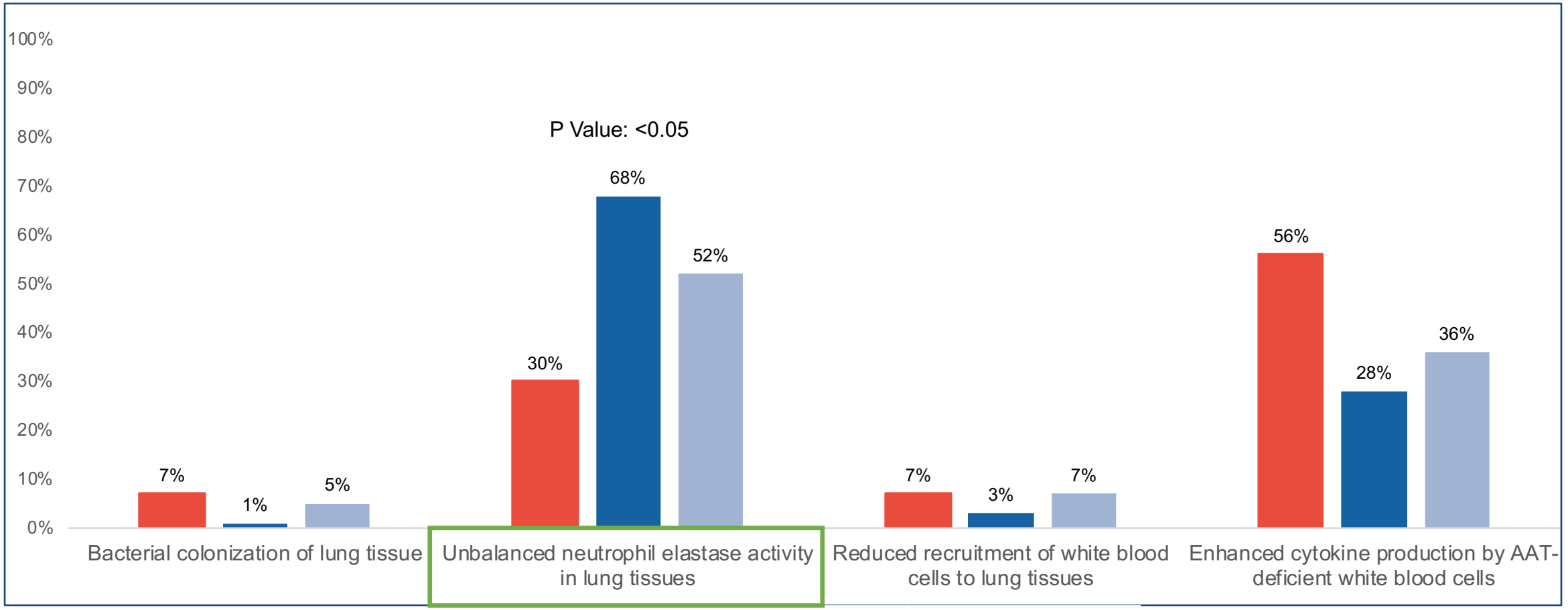
Please rate your confidence in your ability to integrate the assessment and management of AATD into the care of patients with COPD:(Learning Objective 1, 2, 3, and 4)



Pre: 337 Post: 340 PCA: 187

Knowledge Assessment

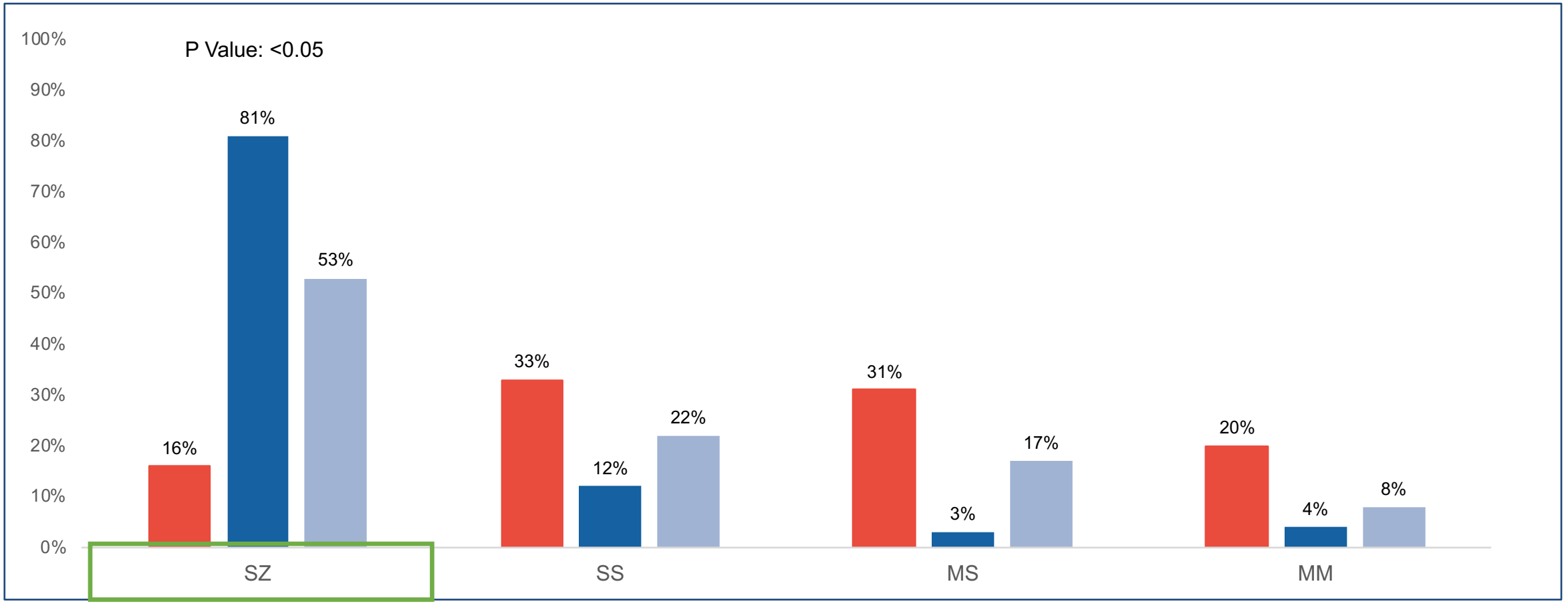
In patients with Alpha-1 antitrypsin deficiency (AATD), which of the following mechanisms contributes to breakdown of lung tissue? (Learning Objective 1)



Pre: 385 Post: 366 PCA: 187

Pre-Post Change	**127%**
Pre-PCA Change	**73%**

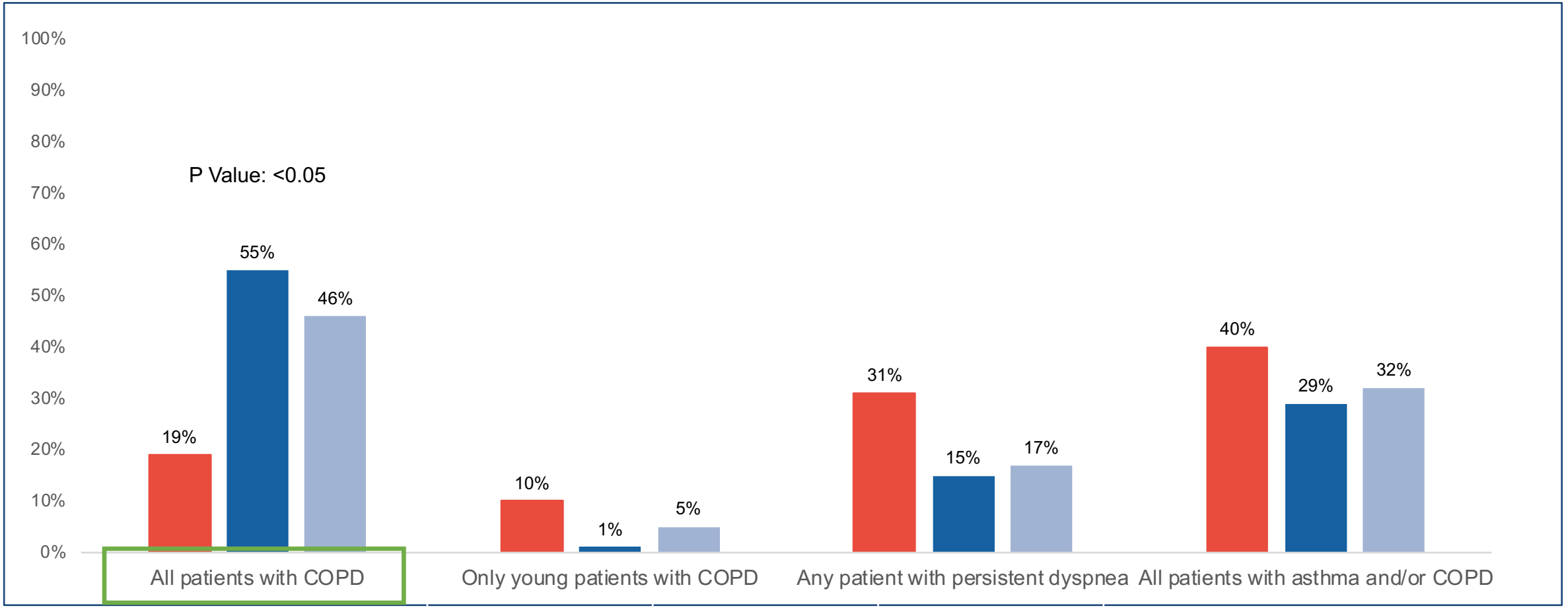
On genetic testing for AATD, which of the following genotypes has the strongest predisposition for an increased risk of AATD? (Learning Objective 1 and 2)



Pre: 370 Post: 395 PCA: 187

Pre-Post Change	**406%**
Pre-PCA Change	**231%**

According to current guidelines, which of the following groups should be screened for AATD? (Learning Objective 4)



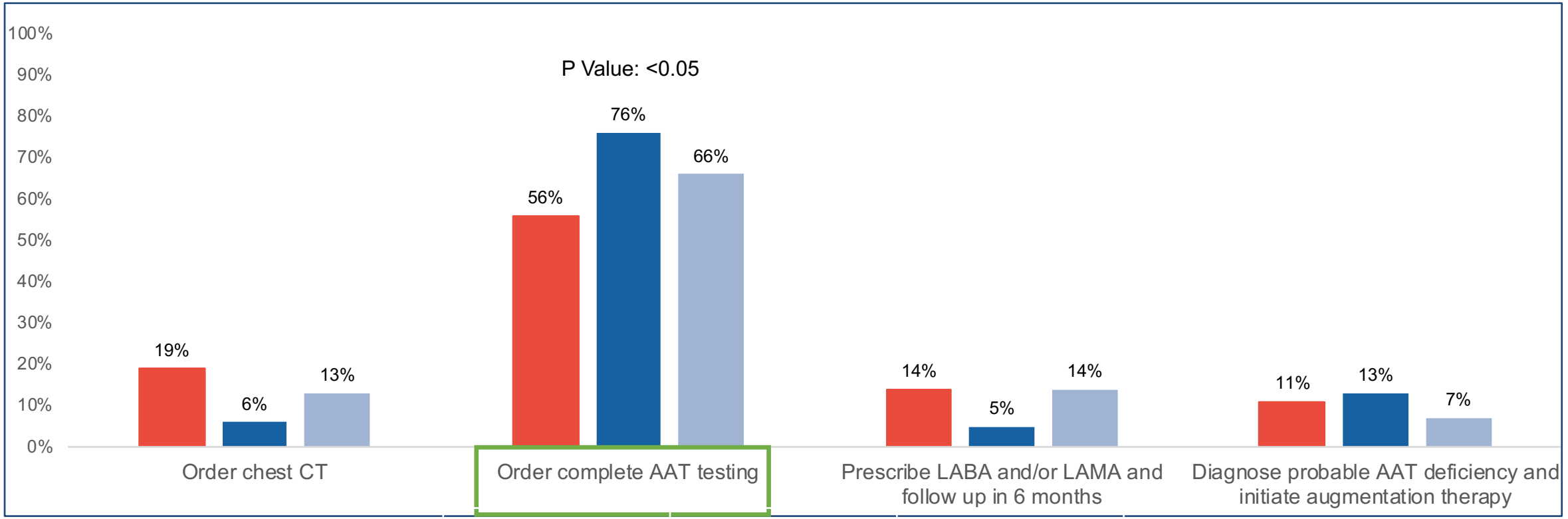
Pre: 396 Post: 404 PCA: 187

Pre-Post Change	**189%**
Pre-PCA Change	**142%**

Competence Assessment

A 62-y/o woman presents with progressive dyspnea and productive cough. She has no smoking history. Workup identifies FEV1/FVC 0.50 and FEV1 40% predicted. Chest X-ray shows mild emphysema with basilar predominance. Other findings are WNL.

Based on this information, what might be an appropriate next step? (Learning Objective 2, 3, and 4)



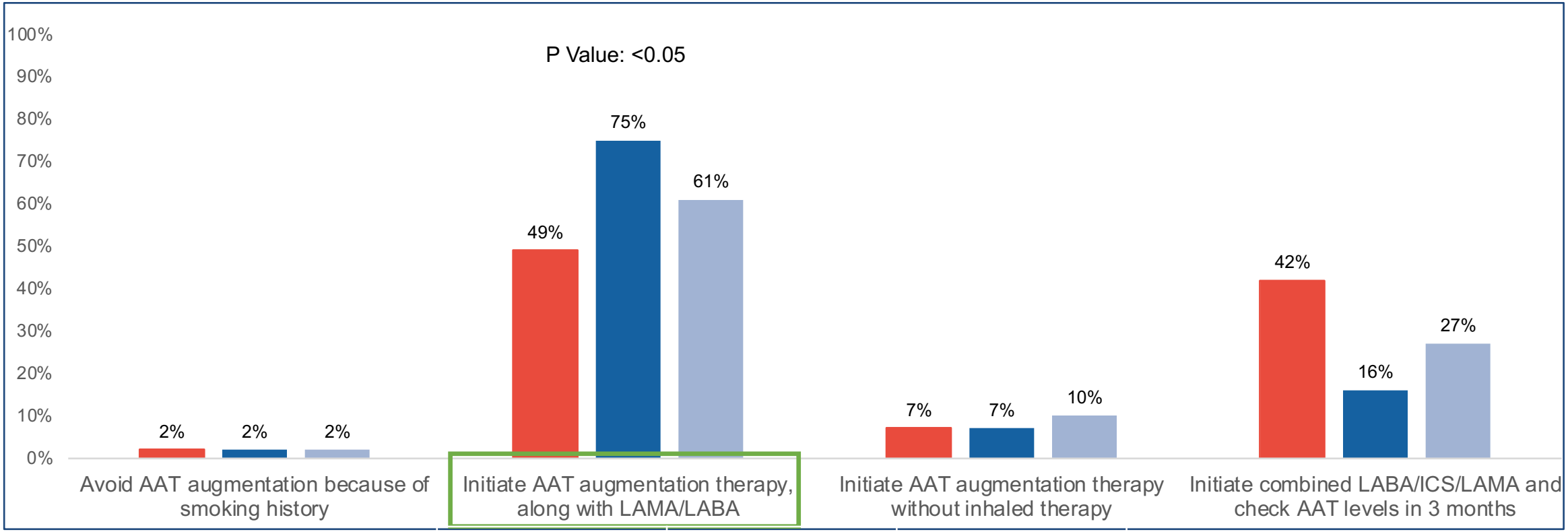
Pre: 386 Post: 400 PCA: 187

Pre-Post Change	**36%**
Pre-PCA Change	**18%**

Competence Assessment

A 51-y/o man who presents with progressive significant dyspnea is diagnosed with COPD on workup. He had one exacerbation and no hospitalizations. FEV1/FVC is 0.60 and FEV1 is 45% predicted. Testing for AAT deficiency identifies ZZ genotype and low serum AAT levels (7μM). He is a former smoker (10 pack-years, quit 20 years ago).

Based on this information, what might be an appropriate next step? (Learning Objective 2 and 3)



Pre: 374 Post: 391 PCA: 187

Pre-Post Change	**53%**
Pre-PCA Change	**24%**

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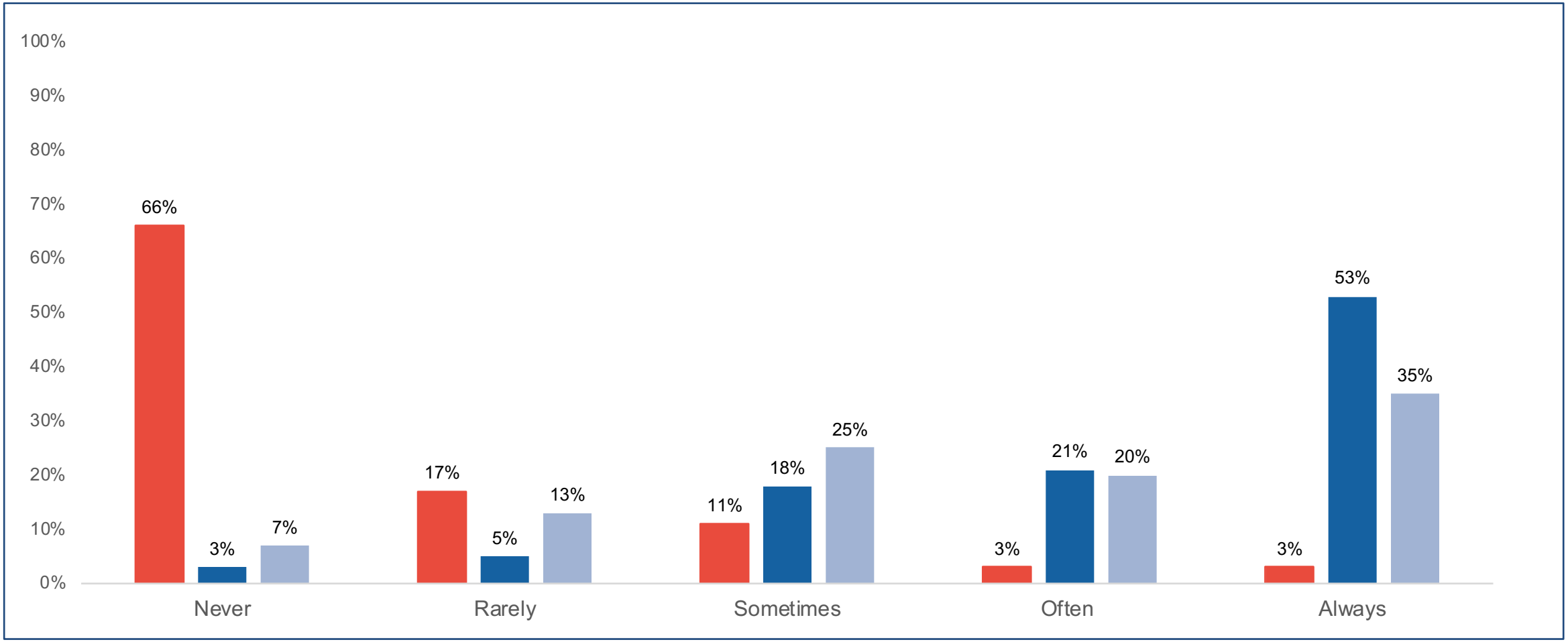
Practice Assessment

How often do you order one-time AAT testing for your patients with COPD?

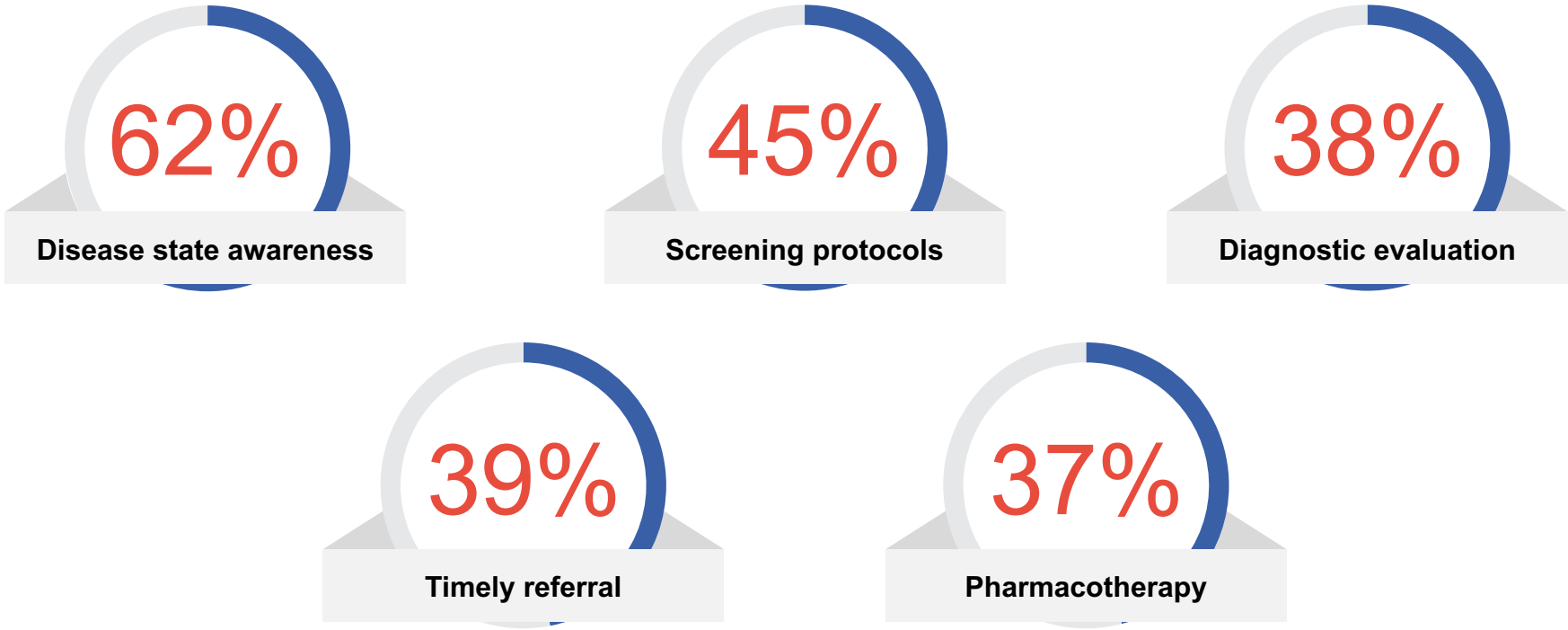
(Learning Objective 1 and 2)



Pre: 445 Post: 443 PCA: 187

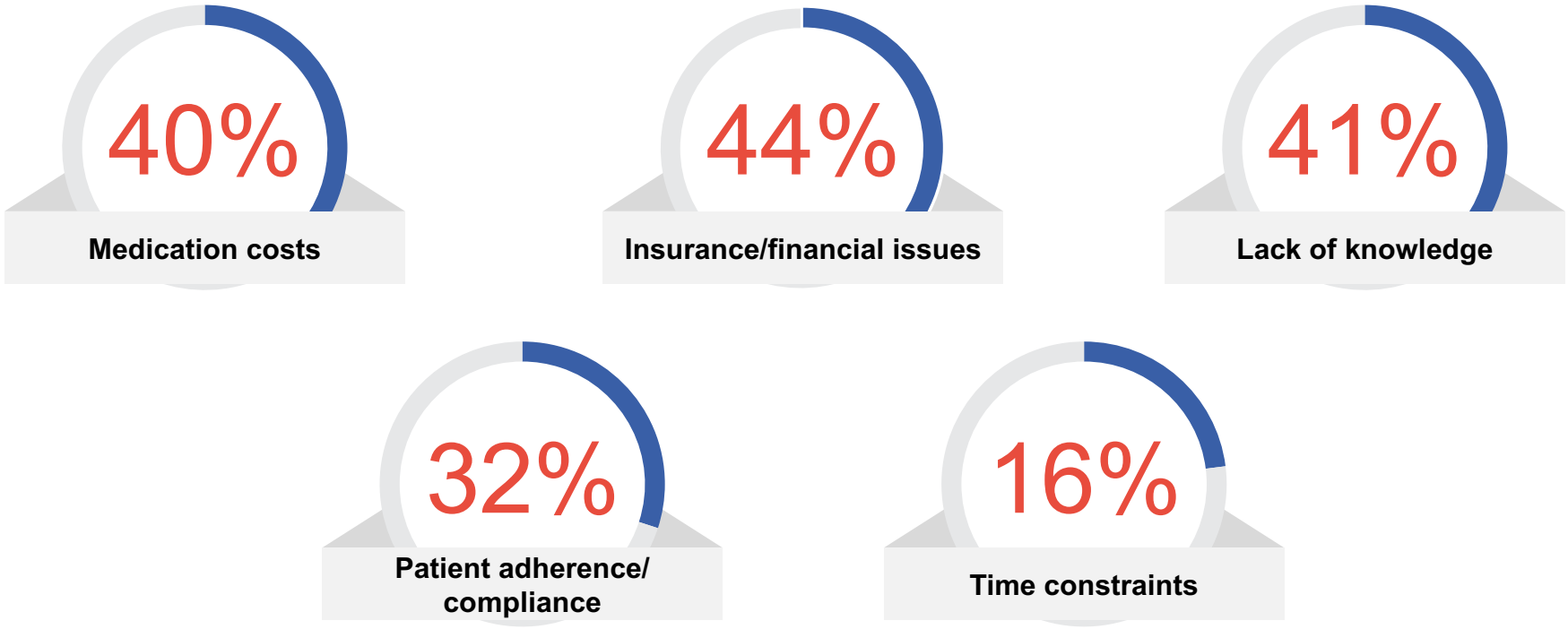
(4-week Post Assessment N=187)

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



((4-week Post Assessment N=187)

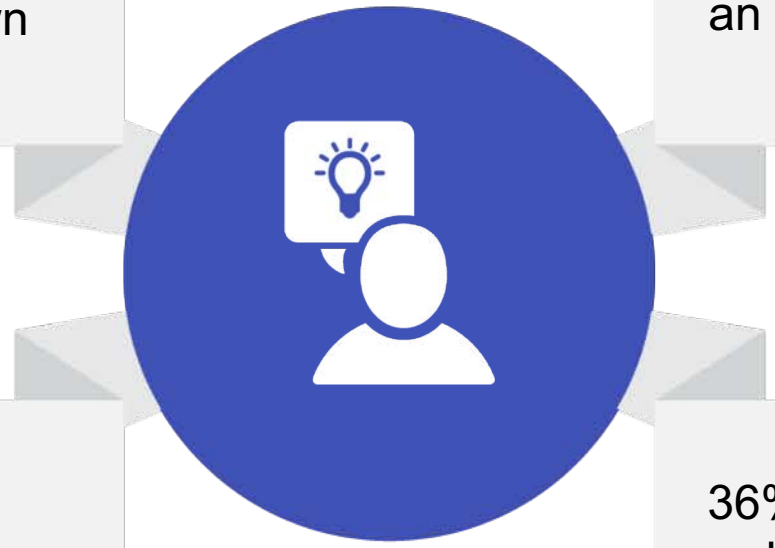
What specific barriers have you encountered that may have prevented you from successfully implementing strategies for patients with AATD since this CME activity? (Select all that apply)



Participant Educational Gains

127% increased recognition of the mechanism by which AATD contributes to lung tissue breakdown

406% increased awareness of the AATD genotype most associated with an increased risk of COPD



189% increased recognition of the need to screen all patients with COPD for AAT Deficiency

36% increased competence in ordering appropriate quantitative and qualitative AAT tests for a patient with symptomatic COPD

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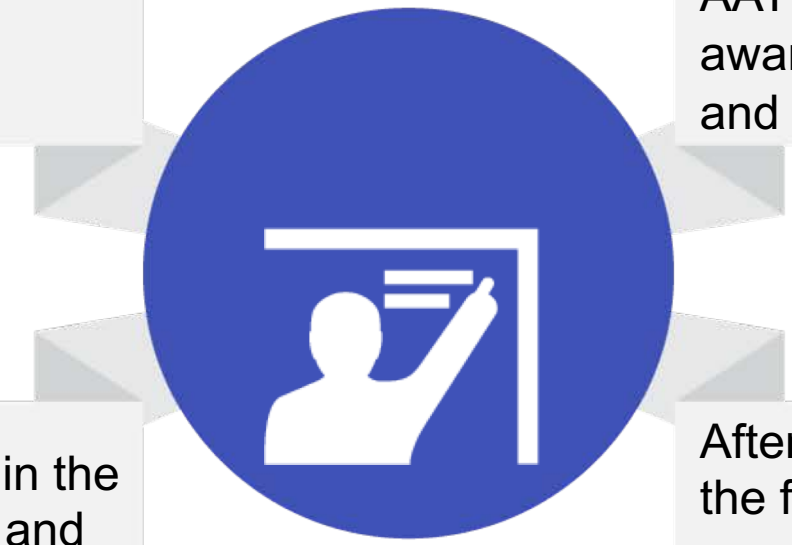
Persistent Educational Gaps After 4 Weeks

- Pathophysiology of AAT Deficiency
- Genetic phenotyping in AATD and its impact on risk for COPD
- AATD screening strategies
- Criteria for initiation of AAT augmentation therapy

Key Take-home Points

53% increased competence in recognizing appropriate patients for AAT augmentation therapy

After 4 weeks, participants reported the following improved skills regarding the screening, diagnosis and treatment of AATD: 62% disease state awareness,45% screening protocols, and 39% timely referrals



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 barriers regarding the screening, diagnosis and treatment of AATD: 44% insurance/financial issues, 41% lack of knowledge, and 40% medication costs