Challenges
in Pulmonary and Critical
Care: 2016

NACE NATIONAL ASSOCIATION FOR CONTINUING EDUCATION

Alpha One Anti-Trypsin Deficiency: Challenges in Diagnosis and Treatment

Final Outcome Report

Report Date: March 2, 2017

Course Director

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Course Accreditation

The National Association for Continuing Education is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The National Association for Continuing Education designates this live activity for a maximum of *8.0 AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

National Association for Continuing Education is approved as a provider of nurse practitioner continuing education by the American Association of Nurse Practitioners. AANP Provider Number 121222. This program has been approved for 8 contact hours of continuing education(which includes 2.0 pharmacology hours).

Commercial Support

Challenges in Pulmonary and Critical Care: 2016 CME activity was
supported through educational grants from
the following companies:

Actelion Pharmaceuticals US, Inc.
Baxalta US Inc.
Bayer Healthcare Pharmaceuticals Inc.
Biodesix
Bristol-Myers Squibb Company
CSL Behring
Grifols
Mallinckrodt Pharmaceuticals

Agenda

| Time	Session
7:15-7:45	Registration and Breakfast
7:45-8:00	Welcome Remarks Franck Rahaghi, MD, MHS, FCCP
8:00-9:00	Pulmonary Arterial Hypertension: Choice of Therapy Franck Rahaghi, MD, MHS, FCCP
9:00-10:00	Identifying and Managing Patients with Sarcoidosis Robert Baughman, MD
10:00- 10:15	Break/Exhibits
10:15-11:15	Idiopathic Pulmonary Fibrosis: Evolving Treatment Options Robert J Kaner, MD
11:15-12:15	Alpha One Anti-Trypsin Deficiency: Challenges in Diagnosis and Treatment Adam Wanner, MD
12:15- 1:00	Lunch and Exhibits
1:00-2:00	Lung Transplant: 2016 Update R. Duane Davis, MD, MBA
2:00-3:00	Update in the Diagnosis and Treatment of Lung Cancer Jinesh P. Mehta, MD
3:00-3:15	Break/Exhibits
3:15-4:15	COPD: Bridging the Gap to Improve Outcomes Anas Hadeh, MD, FCCP
4:15-5:15	Diagnosis and Treatment Strategies for DVT and PE-Where are we now? Carmel Celestin, MD
5:15-5:30	Concluding Remarks Franck Rahaghi, MD, MHS, FCCP

Levels of Evaluation

Consistent with the policies of the ACCME, NACE evaluates the effectiveness of all CME activities using a systematic process based on the following model:

1. Participation
2. Satisfaction
3. Learning

    A. Declarative Knowledge

    B. Procedural Knowledge

4. Competence
5. Performance
6. Patient Health
7. Community Health

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

- 371 attendees (244 Remote Viewers)
- 37% Physicians; 51% NPs; 6% PAs; 2% RNs; 4% Other
- 36% in community-based practice
- 57% PCPs, 24% Pulmonology; 11% Cardiology; 3% Rheumatology 5% Other or did not respond
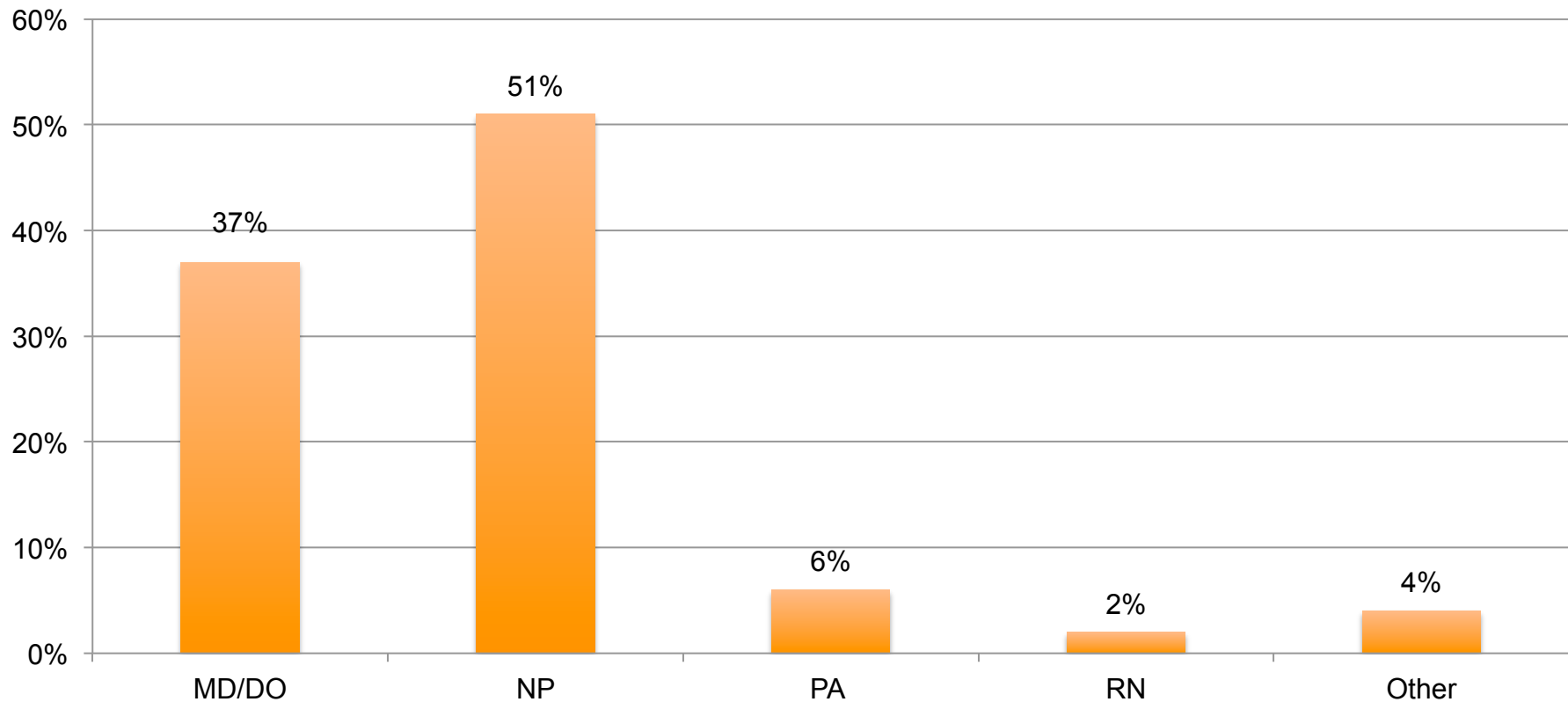
N =371

Did we reach the right audience?   Yes!

Level 2: Satisfaction

- 98% rated the activity as very good to excellent

- 97% indicated the activity improved their knowledge

- 93% stated that they learned new strategies for patient care

- 97% said they would implement new strategies that they learned in their practice

- 100% said the program was fair-balanced and unbiased

Were our learners satisfied? Yes!

Level 2: Satisfaction

Upon completion of this activity, I can now – Discuss the pathophysiology of alpha1-antitrypsin deficiency (AATD); understand the importance of screening; incorporate AATD testing into chronic obstructive pulmonary disease (COPD) management algorithms; and discuss the treatment options in AATD.
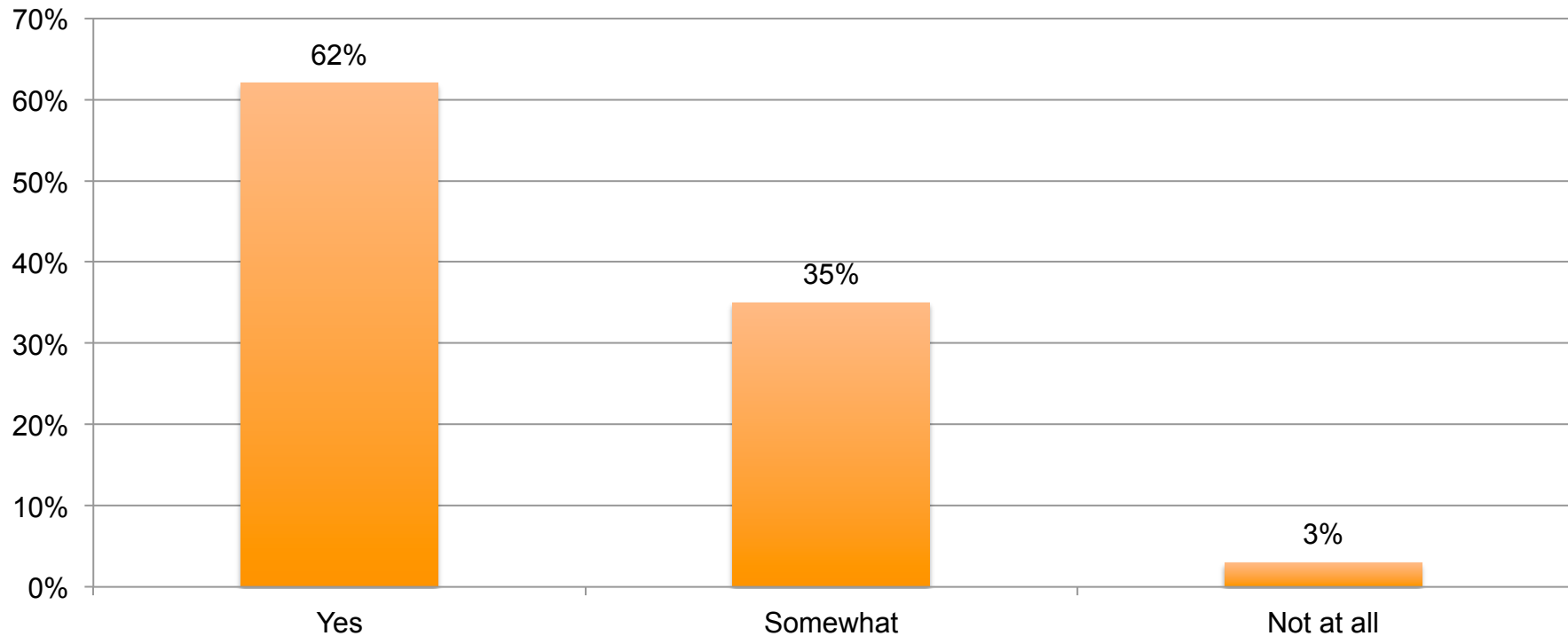
N =190

Did learners indicate they achieved the learning objectives?
Yes! 97% believed they did.

Outcome Study Methodology

Goal

To determine the effect this CME activity had on learners with respect to competence to apply critical knowledge, confidence in treating patients with diseases or conditions discussed, and change in practice behavior.

Dependent Variables

1. **Level 3-5: Knowledge, Competence, and Performance**

   Case-based vignettes and pre- and post-test knowledge questions were asked with each session in the CME activity. Identical questions were also asked to a sample of attendees 4 weeks after the program to assess retention of knowledge. Responses can demonstrate learning and competence in applying critical knowledge. The use of case vignettes for this purpose has considerable predictive value. Vignettes, or written case simulations, have been widely used as indicators of actual practice behavior. [1]

2. **Practitioner Confidence**

   Confidence with the information relates directly to the likeliness of actively using knowledge. Practitioner confidence in his/her ability to diagnose and treat a disease or condition can affect practice behavior patterns.

3. **Level 5: Self-Reported Intent to Make Changes in Practice Behavior**

1. Peabody, J.W., J. Luck, P. Glassman, S. Jain, J. Hansen, M. Spell and M. Lee (2004). *Measuring the quality of physician practice by using clinical vignettes: a prospective validation study.* Ann Intern Med14(10): 771-80.

Alpha One Anti-Trypsin Deficiency: Challenges in Diagnosis and Treatment

Faculty

Adam Wanner, MD
Joseph Weintraub Professor of Medicine
Division of Pulmonary & Critical Care Medicine
University of Miami Miller School of Medicine
Scientific Director
Alpha-1 Foundation
Miami, FL

Learning Objectives

- Discuss the pathophysiology of alpha1-antitrypsin deficiency (AATD)

- Understand the importance of screening

- Incorporate AATD testing into chronic obstructive pulmonary disease (COPD) management algorithms

- Discuss the treatment options in AATD.

Key Findings
Alpha One Anti-Trypsin Deficiency:
Challenges in Diagnosis and Treatment

Knowledge/Competence	Learners demonstrated improvement from pre to post-testing in their answers to two out of four of the case-based questions, both of which achieved statistical significance regarding Alpha One Anti-Trypsin Deficiency.
Confidence	Moderate to very confident levels regarding the diagnosis and/or treatment of Alpha One Anti-Trypsin Deficiency rose from 9% to 35% as a result of this program.
Intent to Perform	As a result of this program, 89% of learners state they are likely to implement the strategies for the diagnosis and/or treatment of Alpha One Anti-Trypsin Deficiency taught in this program.
Change of Practice Behavior	98% of learners who responded to our four week survey indicated that they had changed their practice behavior based on this program.

N = 52

Case Vignette Knowledge and Competence Assessment Questions
presented before and after lecture. Boxed answer is correct

Two carriers of the alpha-antitrypsin gene have children. The statistical chance they will have a child with alpha-1 antitrypsin deficiency disease is:
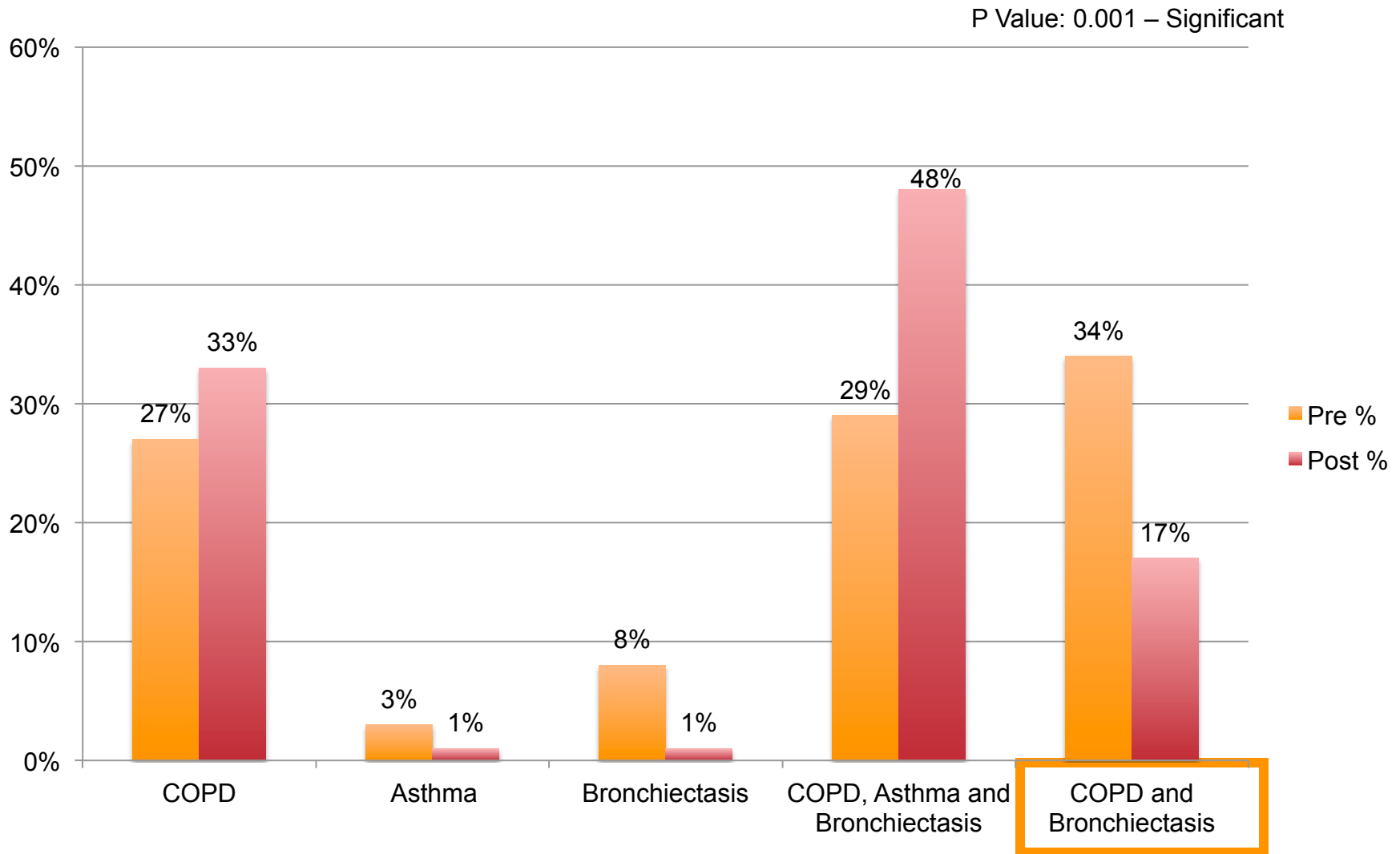(Learning Objective 2)

P Value: <0.001 – Significant
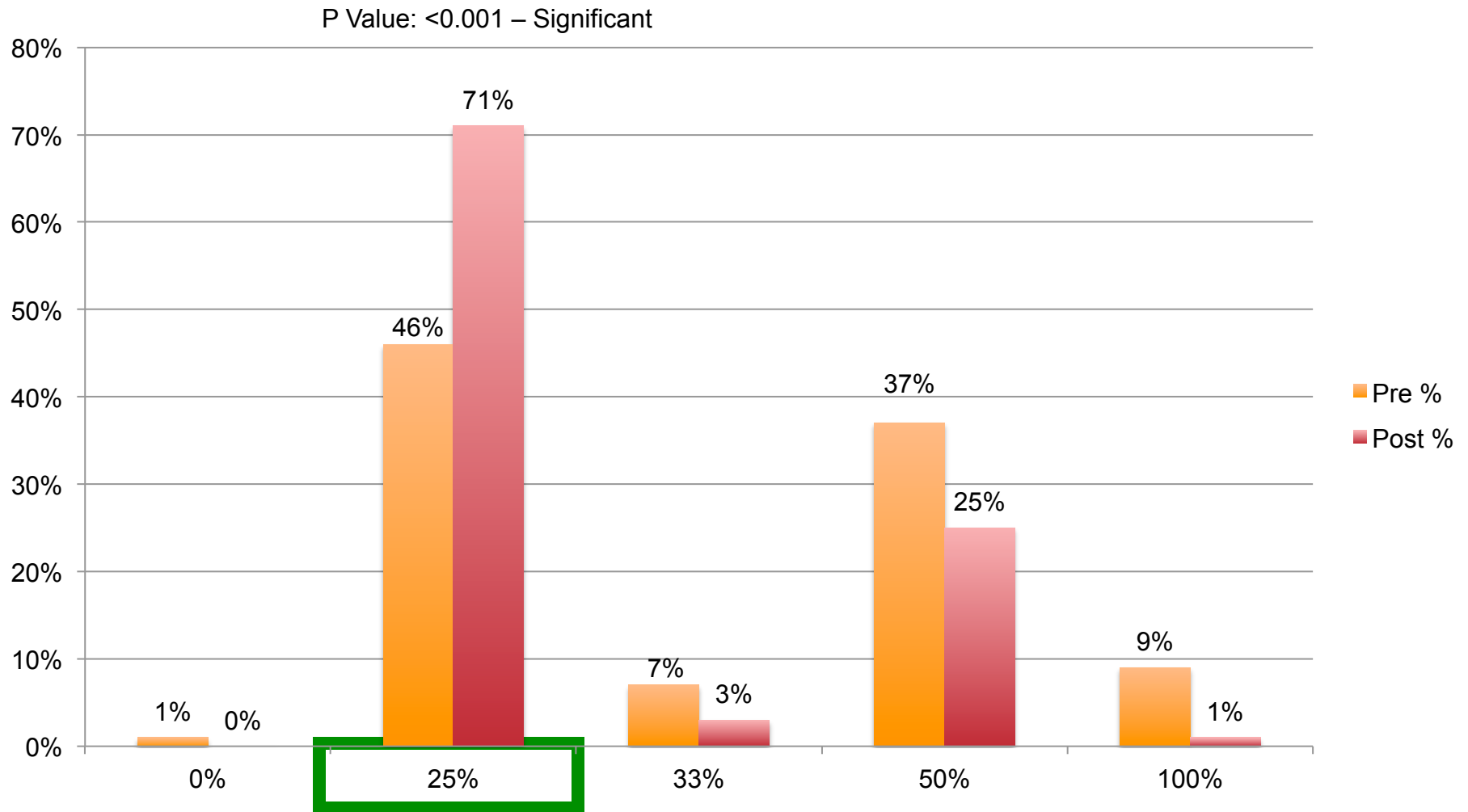
Pre N =138   Post N = 136

Green highlight indicates significant difference between pre and post testing.

Case Vignette Knowledge and Competence Assessment Questions
(Presented before and after lecture. Boxed answer is correct.)

What lung conditions are clearly associated with alpha-1 antitrypsin deficiency?
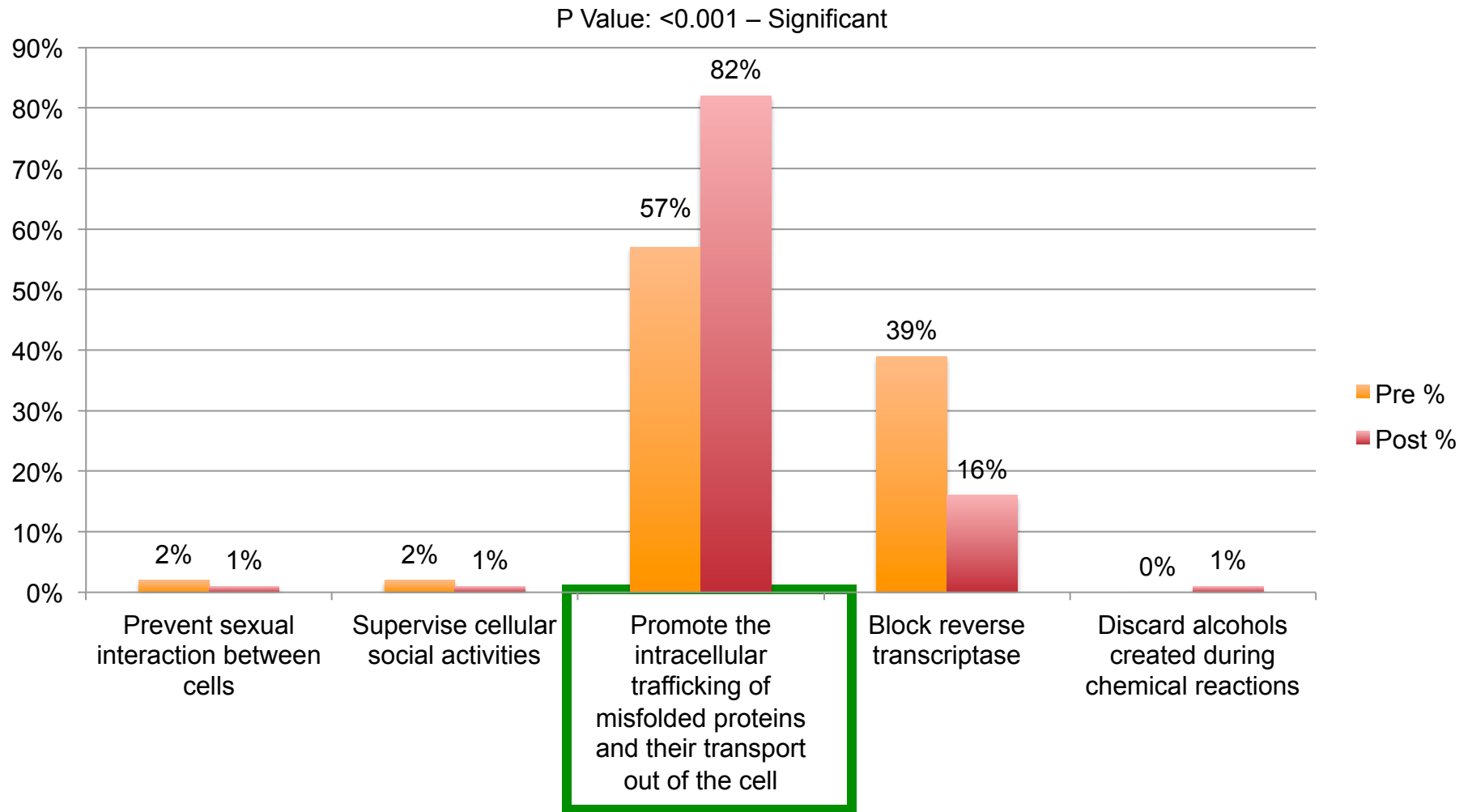(Learning Objective 3)

P Value: 0.001 – Significant

Pre N =146   Post N = 135

Orange highlight indicates significant decrease in learning between pre and post testing.

Case Vignette Knowledge and Competence Assessment Questions
(Presented before and after lecture. Boxed answer is correct.)

What are chemical chaperones thought to do in alpha-1 antitrypsin deficiency?
(Learning Objective 1)

P Value: <0.001 – Significant


Pre N =128   Post N = 130

Green highlight indicates significant difference between pre and post testing.

Case Vignette Knowledge and Competence Assessment Questions
(Presented before and after lecture. Boxed answer is correct.)

Are there other treatments for lung disease due to alpha-1 antitrypsin deficiency, in addition to augmentation therapy?
(Learning Objective 4)

P Value: 0.404 – Not Significant
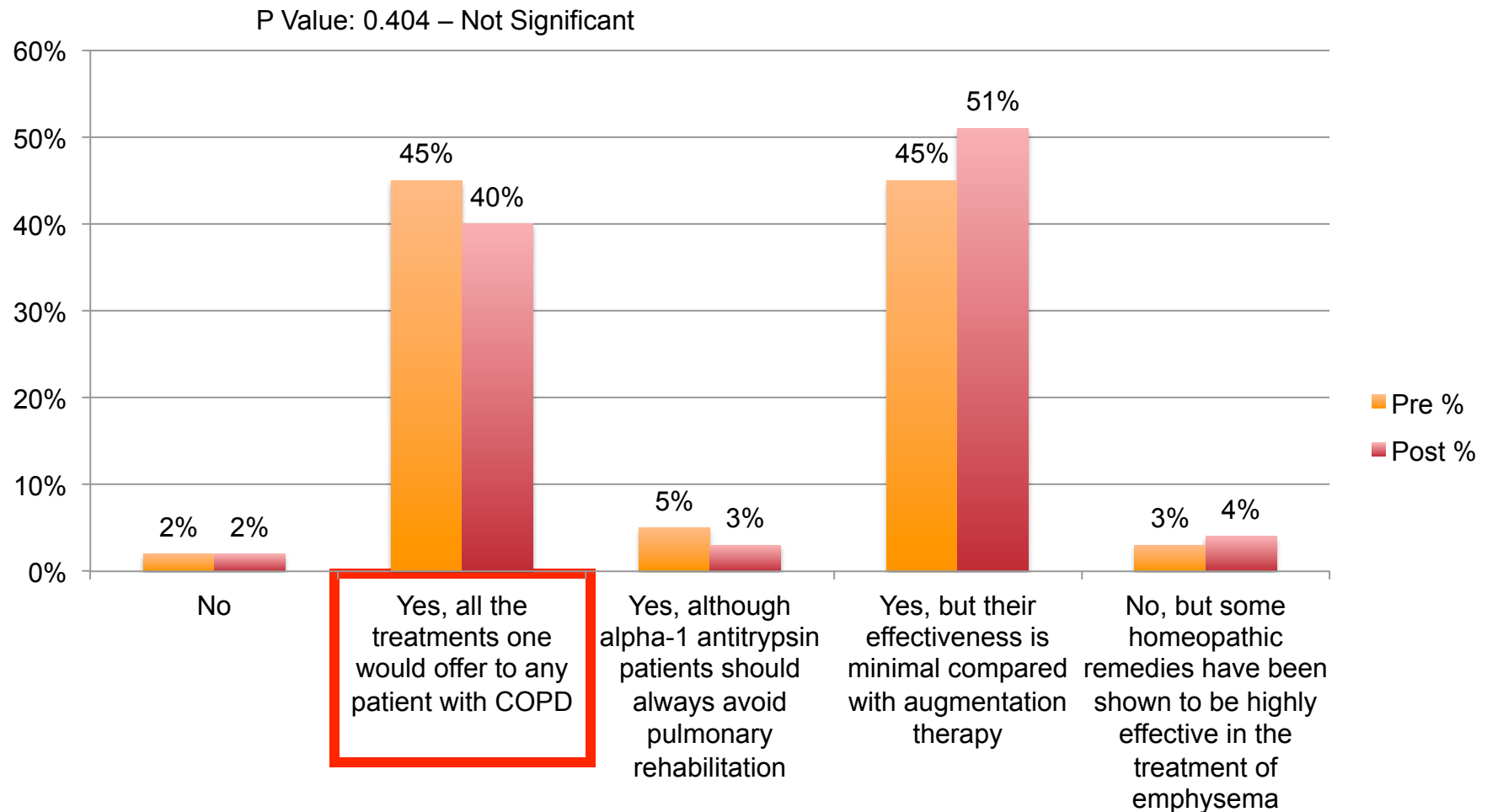
Pre N =144   Post N = 144

Red highlight indicates no significant difference between pre and post testing.

Changes in Confidence from Pre to Post-Testing
Alpha One Anti-Trypsin Deficiency:
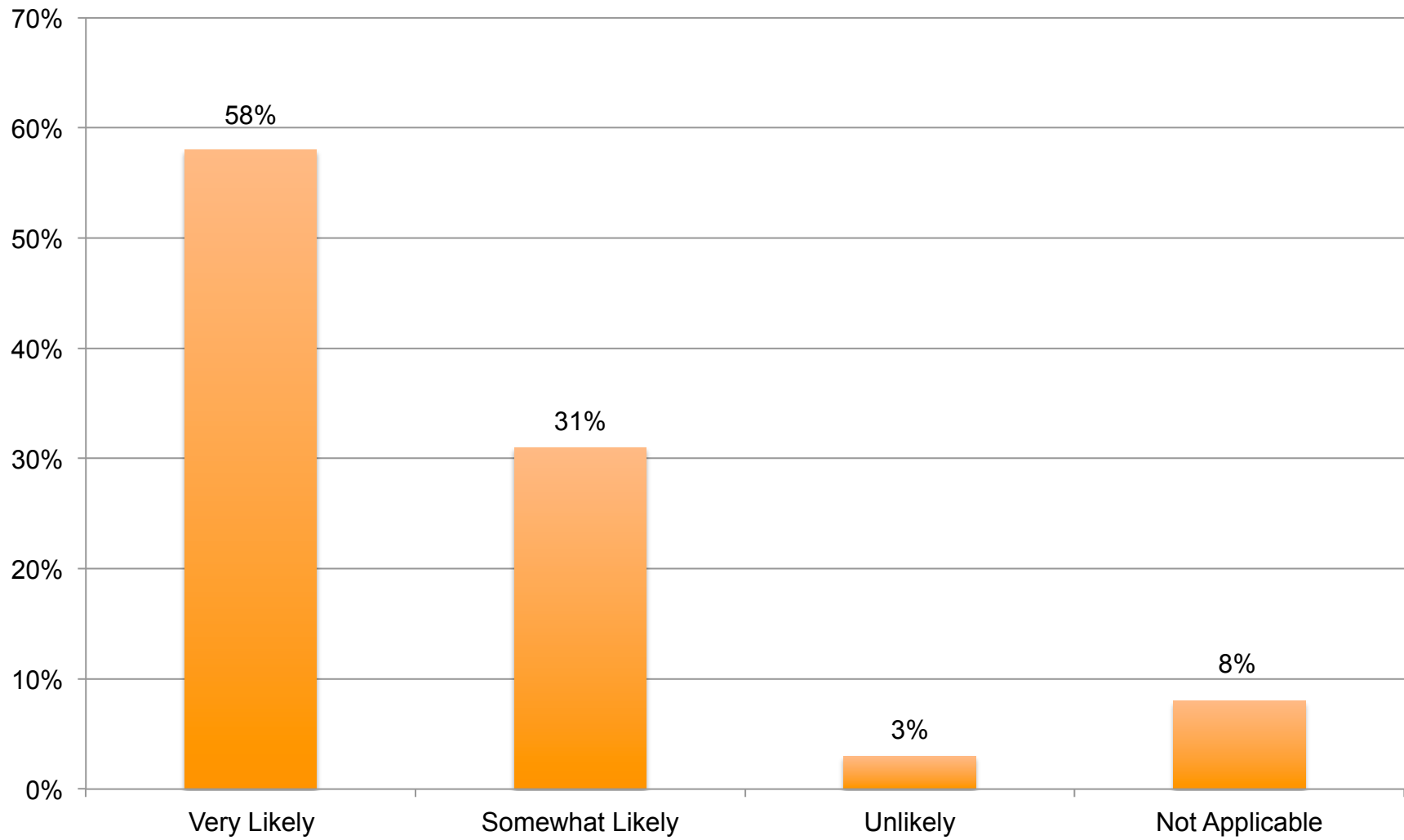# Challenges in Diagnosis and Treatment

On a scale of 1 to 5, please rate how confident you would be in the diagnosis and/ or treatment of Alpha One Anti-Trypsin Deficiency:
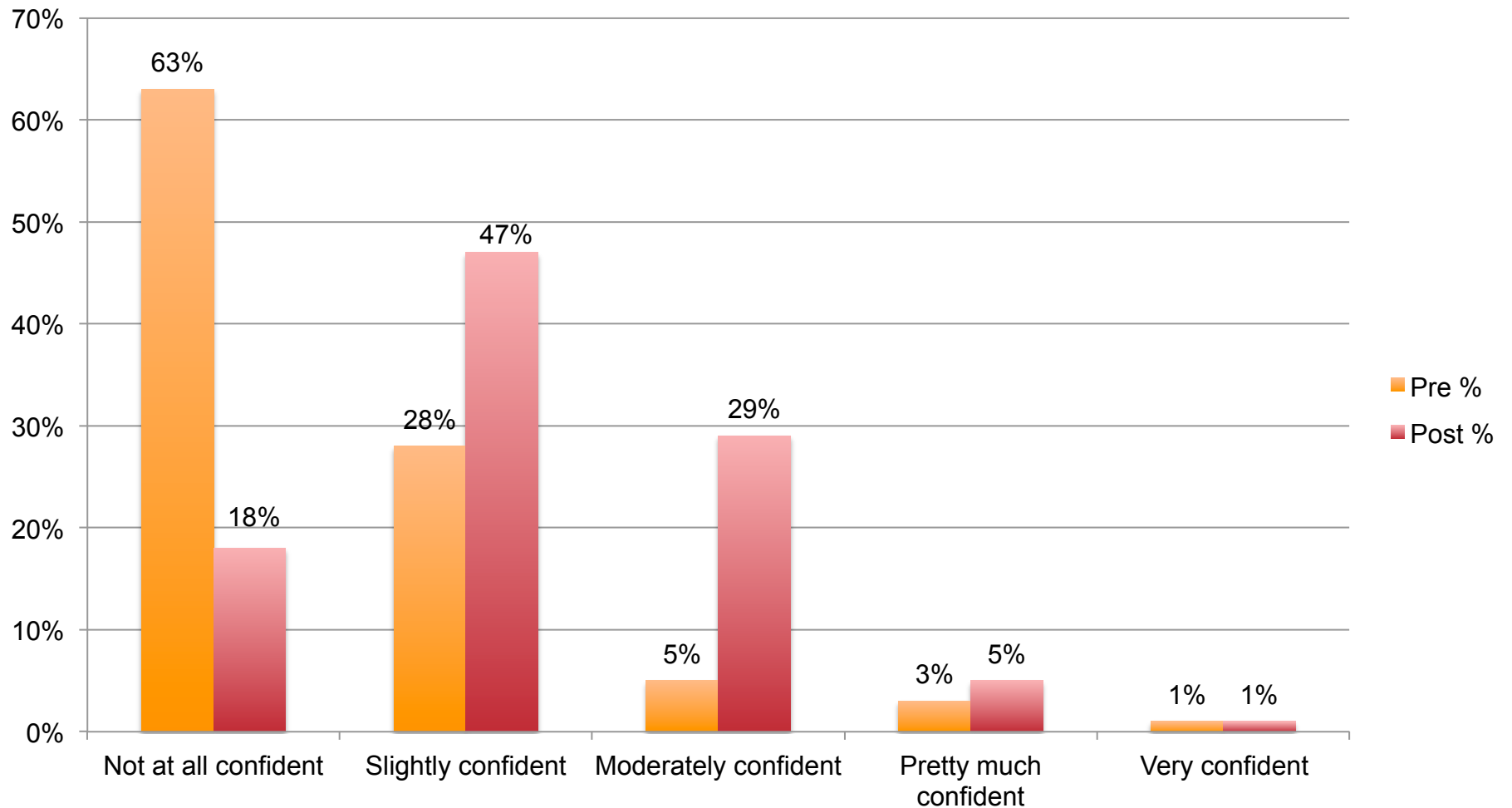
Pre N =148   Post N = 135

How Likely Are You to Implement These Strategies in Your Practice?

Bar chart showing responses:
- Very Likely: 58%
- Somewhat Likely: 31%
- Unlikely: 3%
- Not Applicable: 8%

N =180

Discussion and Implications
Alpha One Anti-Trypsin Deficiency: Challenges in Diagnosis and Treatment

- Knowledge/Competence: Attendee knowledge was assessed at two points for this activity—prior to the activity and immediately following the activity using the case vignettes and knowledge questions. The results demonstrated statistically significant improvement in knowledge, as measured by positive changes in pre to post-test scores, in 2 out of 4 questions asked.

- Intention to Change: 89% indicated that they are very likely, or somewhat likely, to implement elements of lessons learned at the symposium.

- Confidence: Participants indicated a robust increase in self-reported confidence in treating patients with AATD. Moderate to very confident levels regarding the diagnosis and/or treatment of Alpha One Anti-Trypsin Deficiency rose from 9% to 35%.

- Summary: Eighty nine percent of the attendees suggested they were very likely to somewhat likely going to change their practice patterns as a result of this program. This activity was successful in the goal of improving understanding about the evaluation of patients suspected of of Alpha One Anti-Trypsin Deficiency and managing their disease. The activity had a positive impact in terms of self-reported improvement in confidence and the likelihood of practice change. Future programming should continue to educate clinicians on current guidelines on diagnosis and therapy of of Alpha One Anti-Trypsin Deficiency .