Challenges in Pulmonary and Critical Care: 2016

NACE NATIONAL ASSOCIATION FOR CONTINUING EDUCATION

Pulmonary Arterial Hypertension: Choice of Therapy

Final Outcome Report

Report Date: March 1, 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

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

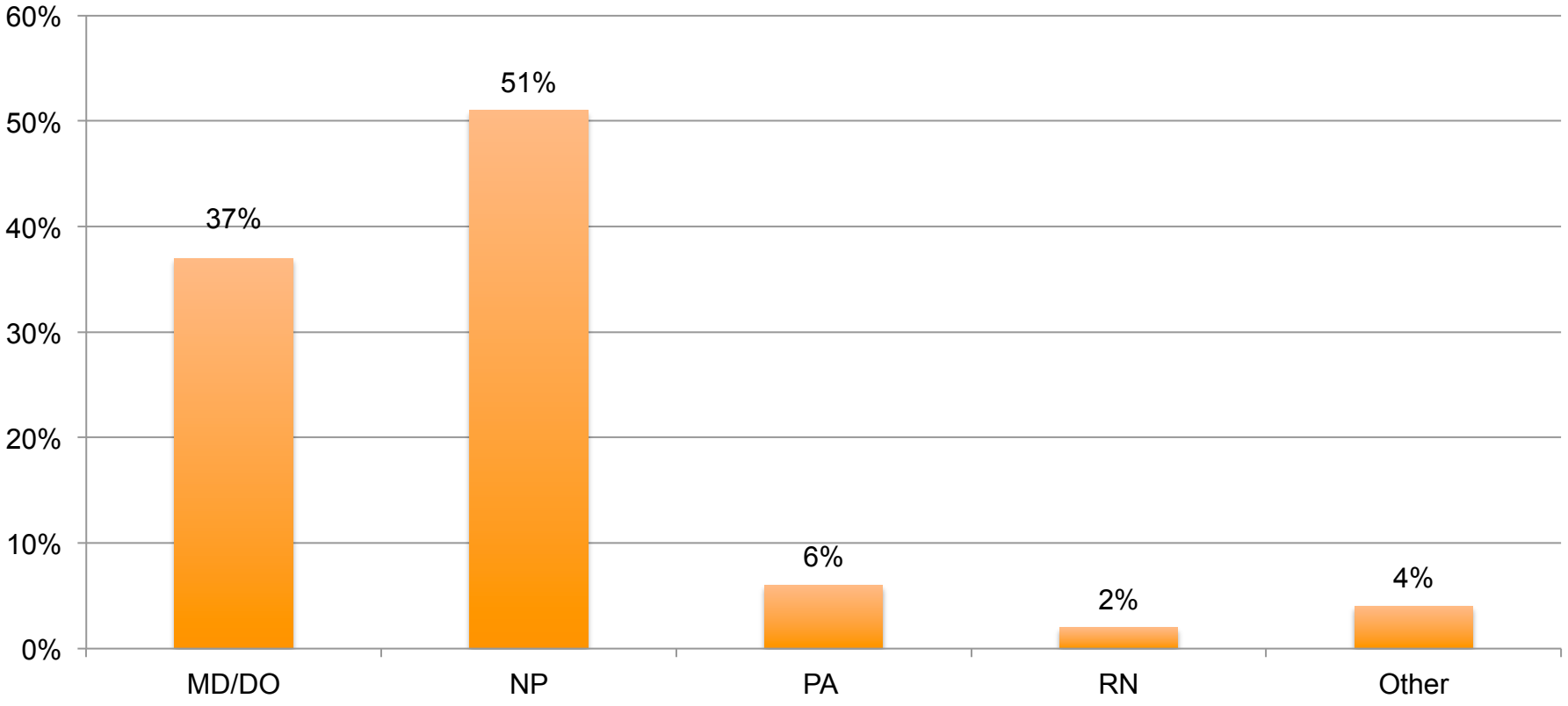
Consistent with the policies of the ACCME, NACE evaluates the effectiveness of all CME activities using a systematic process based on the following model:

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!

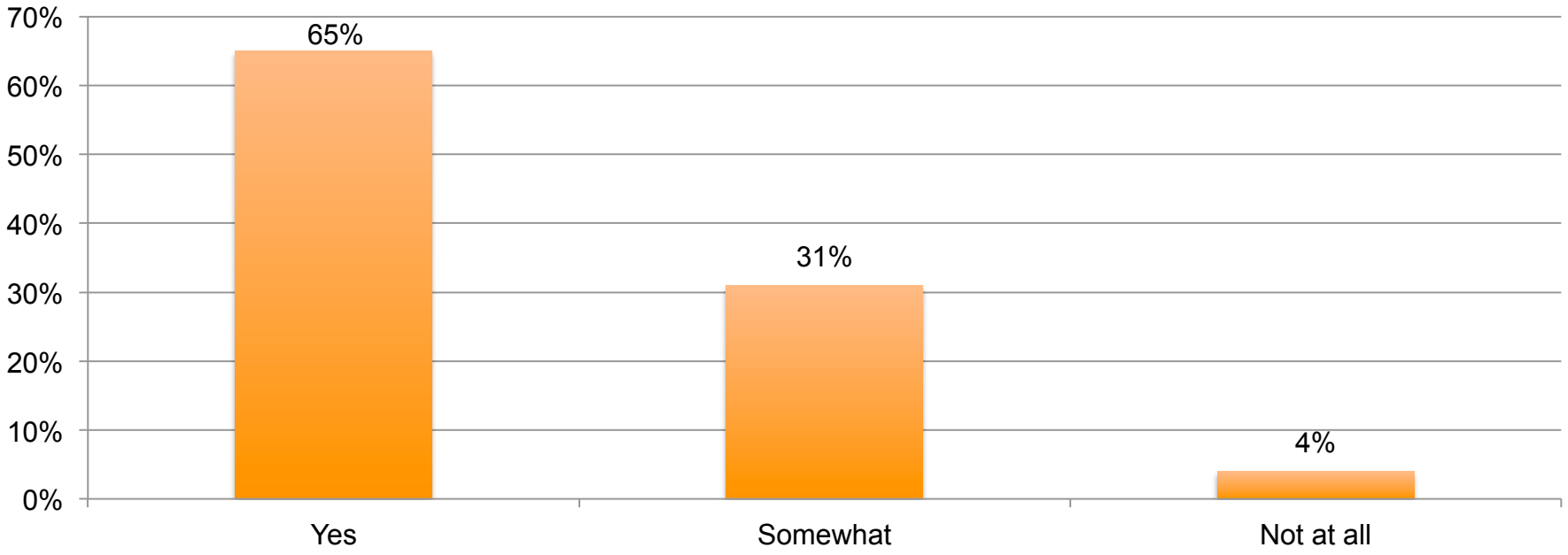
Level 2: Satisfaction

- 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 and etiologies of Pulmonary Arterial Hypertension; determine when PAH should be suspected and how to determine the specific etiology including the importance of right heart catheterization and ventilation-perfusion (V/Q) scan; discuss methodology to assess severity of illness in PAH; and discuss the treatment principles and the therapeutic agents in PAH.



N =189

Did learners indicate they achieved the learning objectives?

Yes! 96% 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.

Pulmonary Arterial Hypertension: Choice of Therapy

Faculty

Franck Rahaghi, MD, MHS, FCCP
Director, Pulmonary Hypertension Clinic
Director, Pulmonary Education and Rehabilitation
Cleveland Clinic Florida
Weston, FL

Learning Objectives

- Discuss the pathophysiology and etiologies of Pulmonary Arterial Hypertension
- Determine when PAH should be suspected and how to determine the specific etiology including the importance of right heart catheterization and ventilation-perfusion (V/Q) scan
- Discuss methodology to assess severity of illness in PAH
- Discuss the treatment principles and the therapeutic agents in PAH

Key Findings

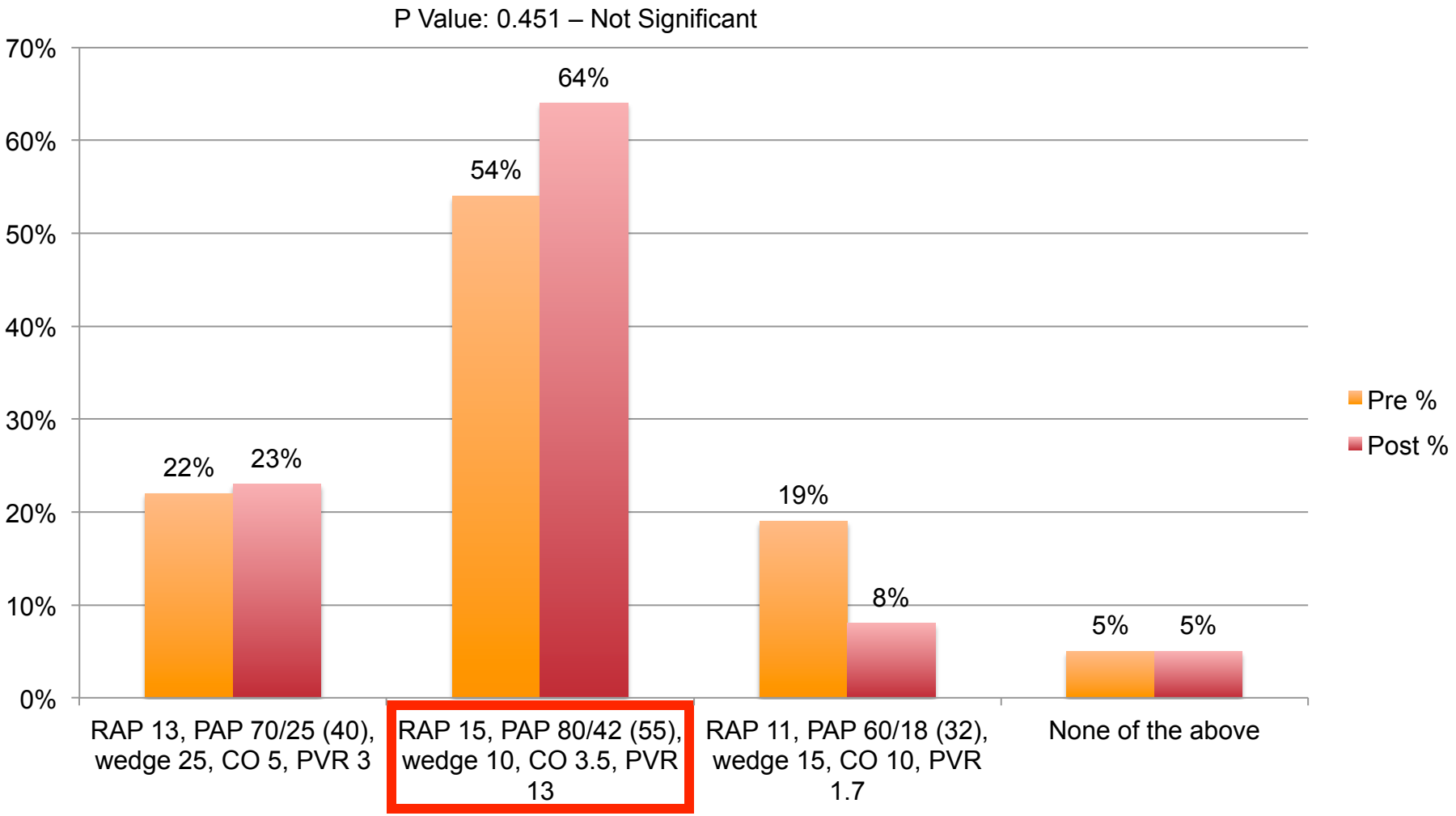
Pulmonary Arterial Hypertension: Choice of Therapy

Knowledge/Competence	Learners demonstrated improvement from pre to post-testing in their answers to four out of five questions, three of which achieved statistical significance of the case-based questions regarding Pulmonary Arterial Hypertension.
Confidence	Moderate to very confident levels regarding the evaluation and/or management Pulmonary Arterial Hypertension rose from 11% to 49% 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 management of Pulmonary Arterial Hypertension 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

Which hemodynamic profile is associated with PAH?
(Learning Objective 1)



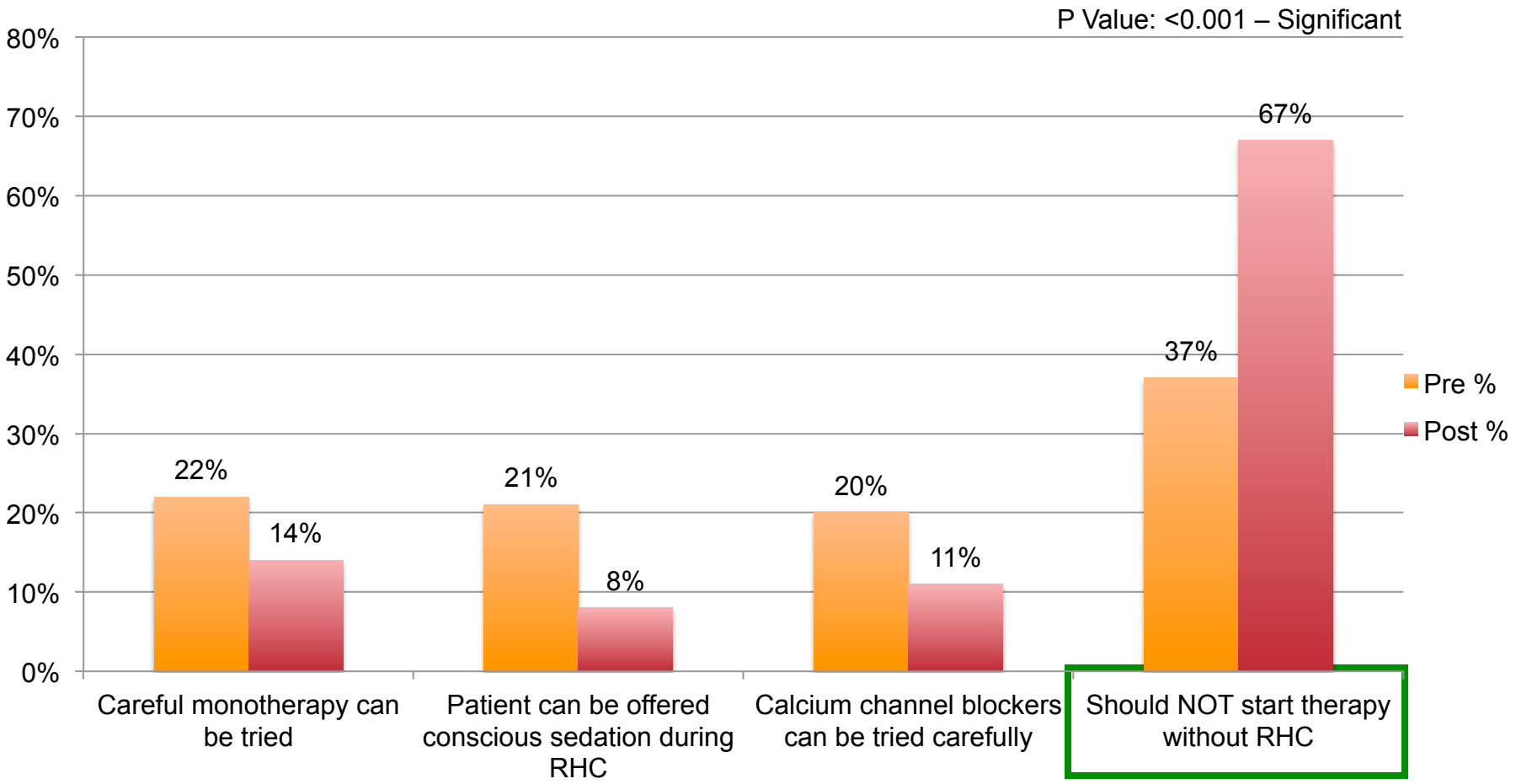
Pre N =91 Post N = 111

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

Case Vignette Knowledge and Competence Assessment Questions

(Presented before and after lecture. Boxed answer is correct.)

If a patient's history, physical exam and laboratory workup is consistent with Pulmonary Arterial Hypertension, and the patient is hesitant regarding a Right Heart Catheterization (RHC)…
(Learning Objective 2)



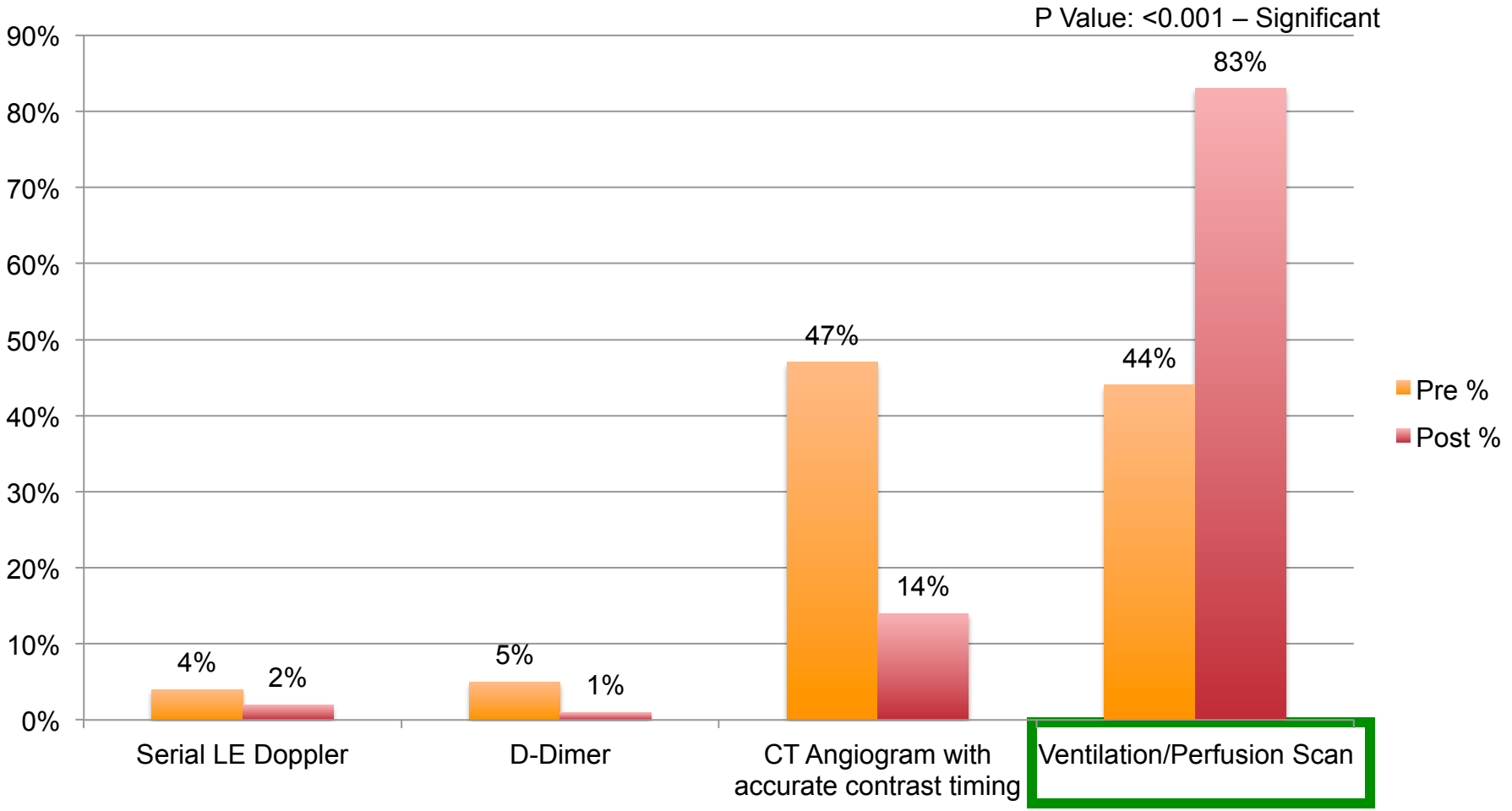
Pre N =91 Post N = 112

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 is the most effective way to rule out Chronic Thromboembolic Pulmonary Hypertension? (Learning Objective 2)



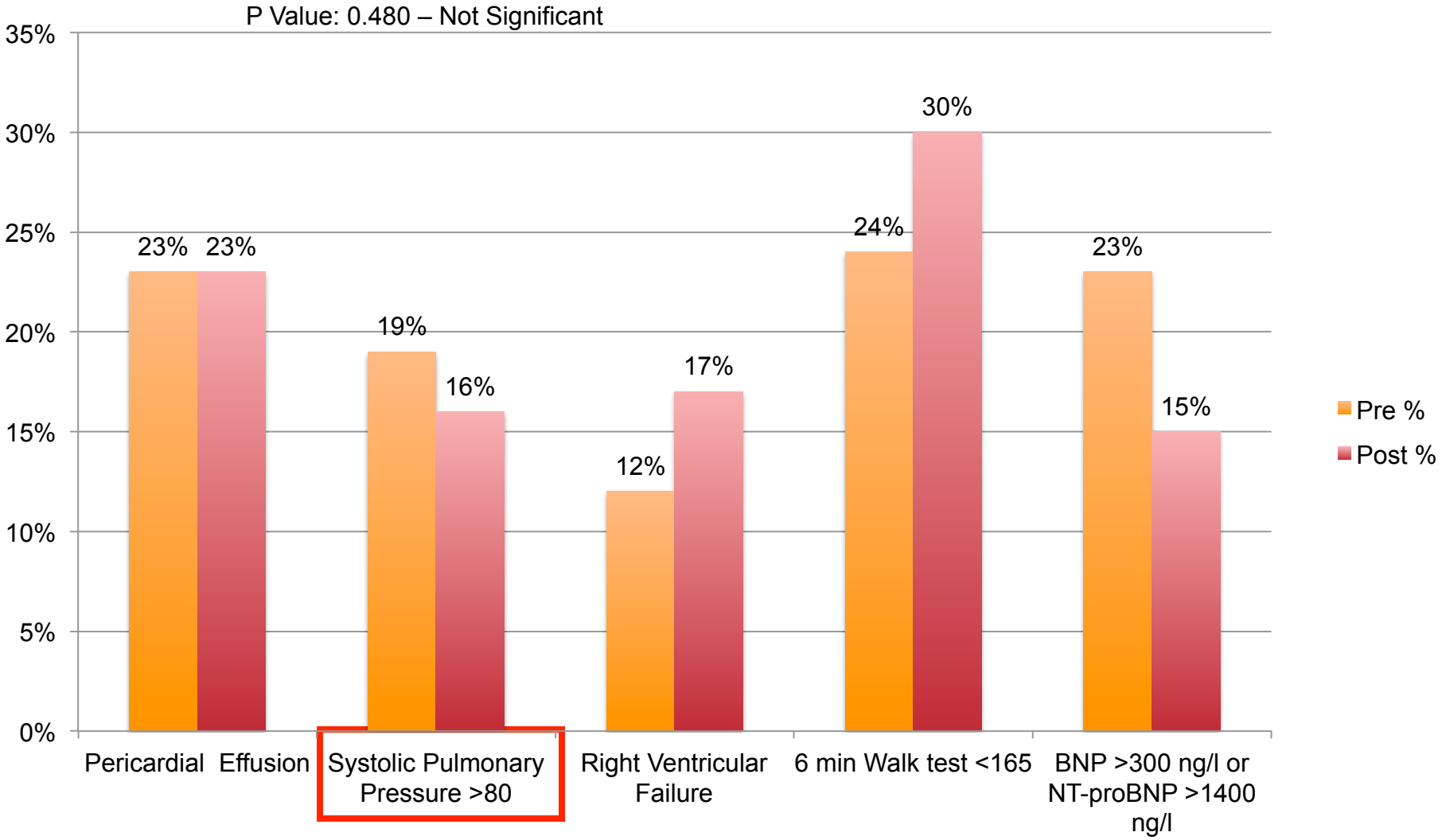
Pre N =96 Post N = 118

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.)

This finding in a patient does NOT represents a high likelihood of imminent, elevated mortality: (Learning Objective 3)



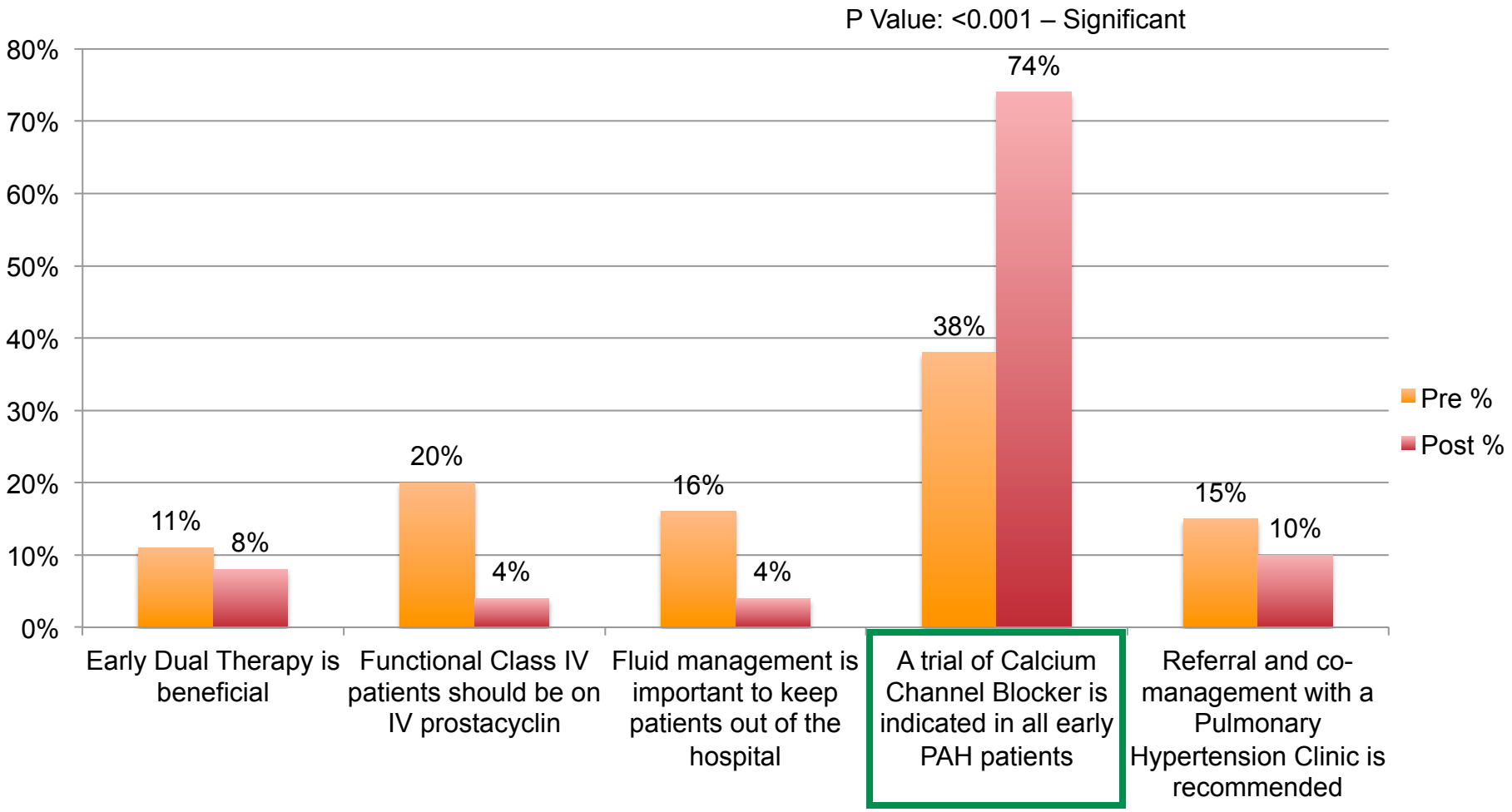
Pre N =93 Post N = 103

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

Case Vignette Knowledge and Competence Assessment Questions

(Presented before and after lecture. Boxed answer is correct.)

Regarding treatments for Pulmonary Hypertension, which is not true?
(Learning Objective 4)

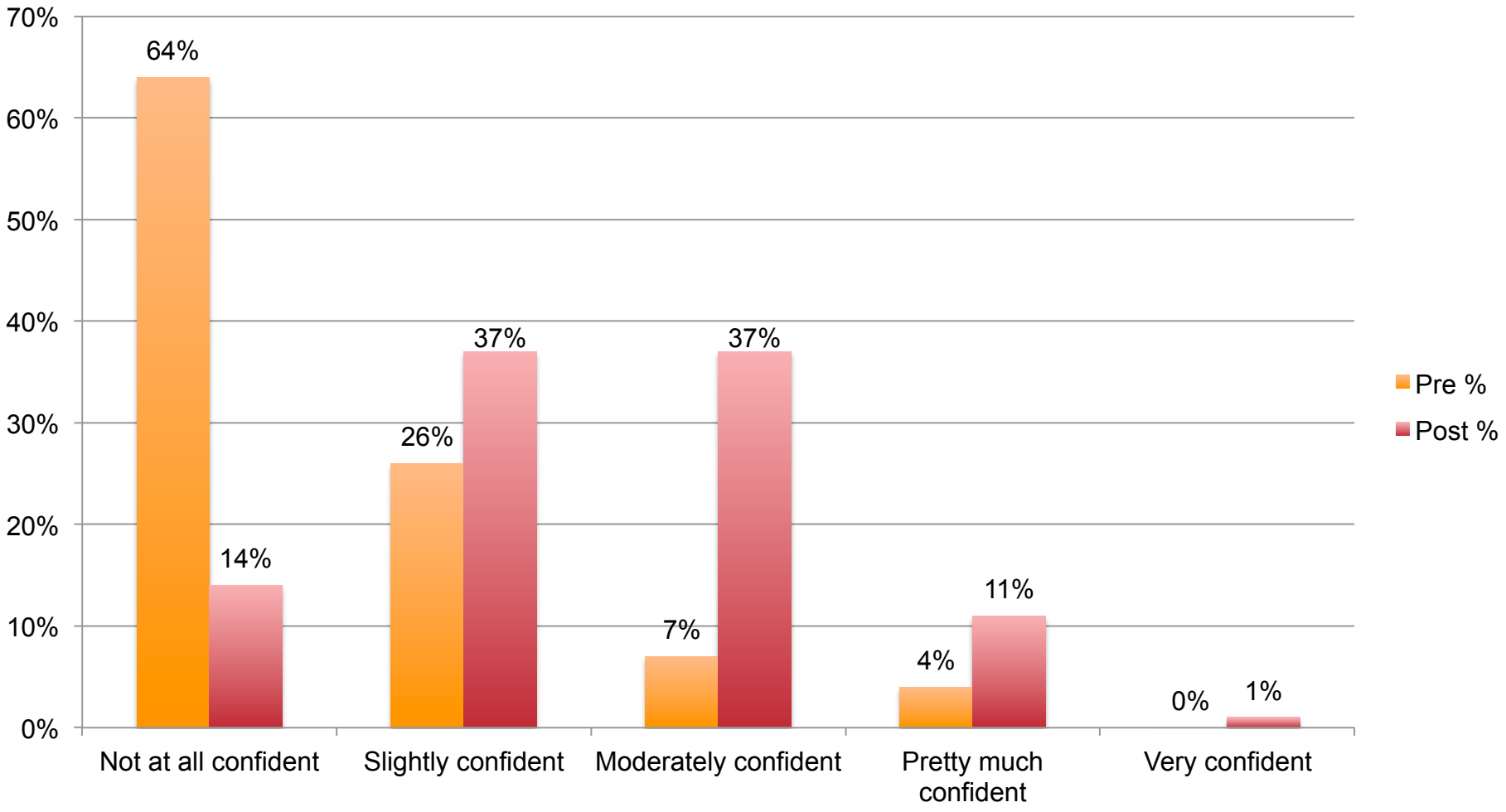


Pre N =93 Post N = 114

Green highlight indicates significant difference between pre and post testing.

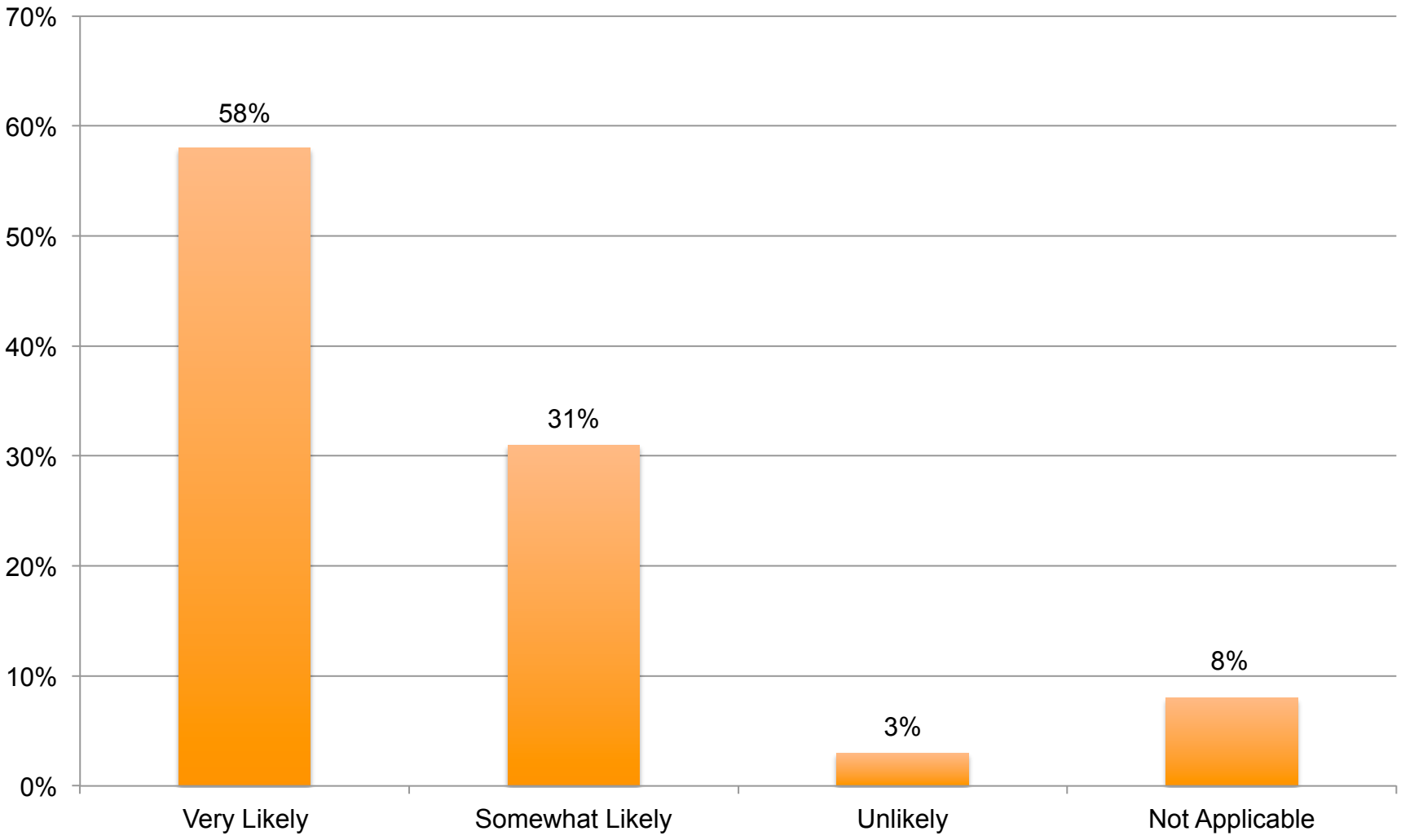
Changes in Confidence from Pre to Post-Testing Pulmonary Arterial Hypertension: Choice of Therapy

On a scale of 1 to 5, please rate how confident you would be in the evaluation and management of Pulmonary Arterial Hypertension:



Pre N =107 Post N = 113

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



N =180

Discussion and Implications
Pulmonary Arterial Hypertension: Choice of Therapy

- Pulmonary arterial hypertension (PAH) is a serious and often progressive disorder that may be idiopathic or associated with various underlying medical conditions. PAH causes right ventricular dysfunction and impaired activity tolerance, and can lead to right-heart failure and death. With the development of new therapies for PAH—screening, prompt diagnosis, and accurate assessment of disease severity become increasingly important. However, PAH patients continue to be referred too late in the disease process, at a time when hemodynamic abnormalities are at an advanced stage. The objective of this activity was to discuss the pathophysiology of Pulmonary Arterial Hypertension, determine when PAH should be suspected, how to determine the specific etiology including the importance of right heart catheterization and ventilation-perfusion (V/Q) scan, discuss methodology to assess severity of illness in PAH, and to discuss the treatment principles and the therapeutic agents in PAH
- 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 indicated improvement in knowledge as measured by positive changes in pre to post-test scores in 4 out of 5 questions asked, three of which achieved with statistical significance.
- 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 the evaluation and management of PAH. Moderate to very confident levels rose from 11% to 49%.
- Summary: Eighty nine percent of the attendees suggested they were likely to change their practice patterns as a result of this program. This activity was successful in the goal of improving understanding about evaluating patients suspected of PAH 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 as well as choice of effective, therapies for PAH.