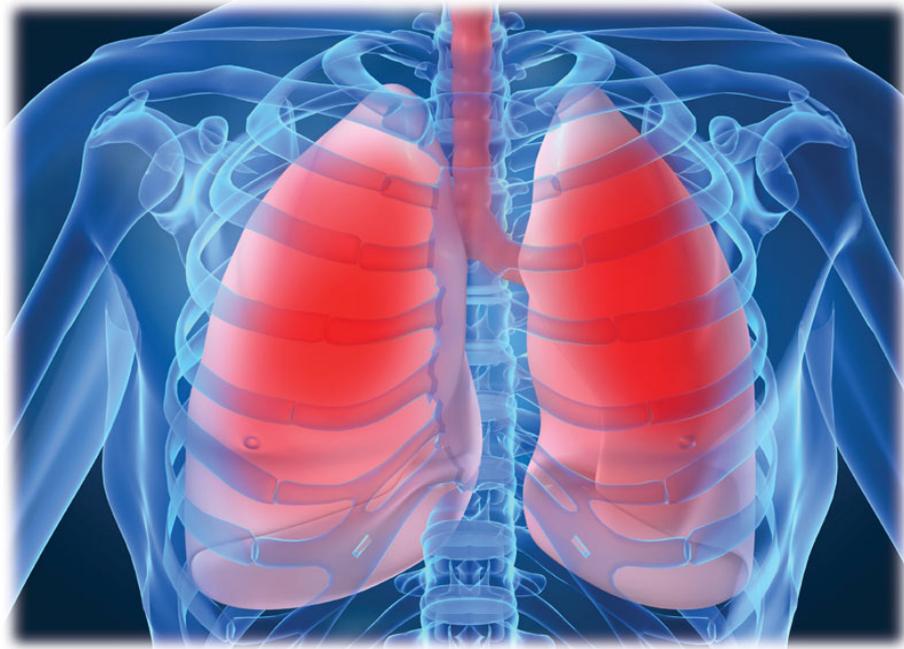




NATIONAL ASSOCIATION FOR CONTINUING EDUCATION



Pulmonary Hypertension: Goal
Oriented Therapy

Final Outcome Report

Challenges in Pulmonary and Critical Care: 2015

**Presented at:
Cleveland Clinic Florida
Weston, Florida
November 21, 2015**

Report Date: January 8, 2016

Course Director

Franck Rahaghi, MD, MHS, FCCP

Director, Pulmonary Hypertension Clinic
Director, Pulmonary Education and Rehabilitation
Cleveland Clinic Florida
Weston, FL

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 *AMA PRA Category 1 Credits*[™]. Physicians should only claim 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 8.0 contact hours of continuing education (which includes 1.25 hours of pharmacology).

Commercial Support

Challenges in Pulmonary and Critical Care: 2015 CME activity was supported through educational grants from the following companies:

Actelion

Baxalta

Boehringer Ingelheim Pharmaceuticals, Inc.

CSL Behring

Grifols

Mallinckrodt Pharmaceuticals

United Therapeutics Corporation

Agenda

7:00-7:45	Registration and Breakfast	12:15- 1:00	Lunch and Exhibits
7:45-8:00	Welcome Remarks Franck Rahaghi, MD, MHS, FCCP	1:00-2:00	Identifying and Managing Patients with Sarcoidosis Franck Rahaghi, MD, MHS, FCCP
8:00-9:00	Pulmonary Hypertension: Goal Oriented Therapy Abubakr Bajwa, MD	2:00-3:00	Pathology of Pulmonary Diseases: COPD/Sarcoidosis/Idiopathic Pulmonary Fibrosis/ Hypersensitivity Pneumonitis Pablo A. Bejarano, MD
9:00-10:00	Idiopathic Pulmonary Fibrosis: How to Use our New Treatments Felipe Martinez, MD		
10:00- 10:15	Break/Exhibits	3:00-3:15	Break/Exhibits
10:15-11:15	Alpha One Anti-trypsin Deficiency: Challenges in Diagnosis and Treatment Franck Rahaghi, MD, MHS, FCCP	3:15-4:15	COPD: Bridging the Gaps Anas Hadeh, MD, FCCP
		4:15-5:15	Palliative Care and Chronic Pulmonary Diseases Nydia Martinez Galvis, MD
11:15-12:15	Lung Cancer: Screening and the New Outlook Jinesh Mehta, MD	5:15-5:30	Concluding Remarks Franck Rahaghi, MD, MHS, FCCP

Levels of Evaluation

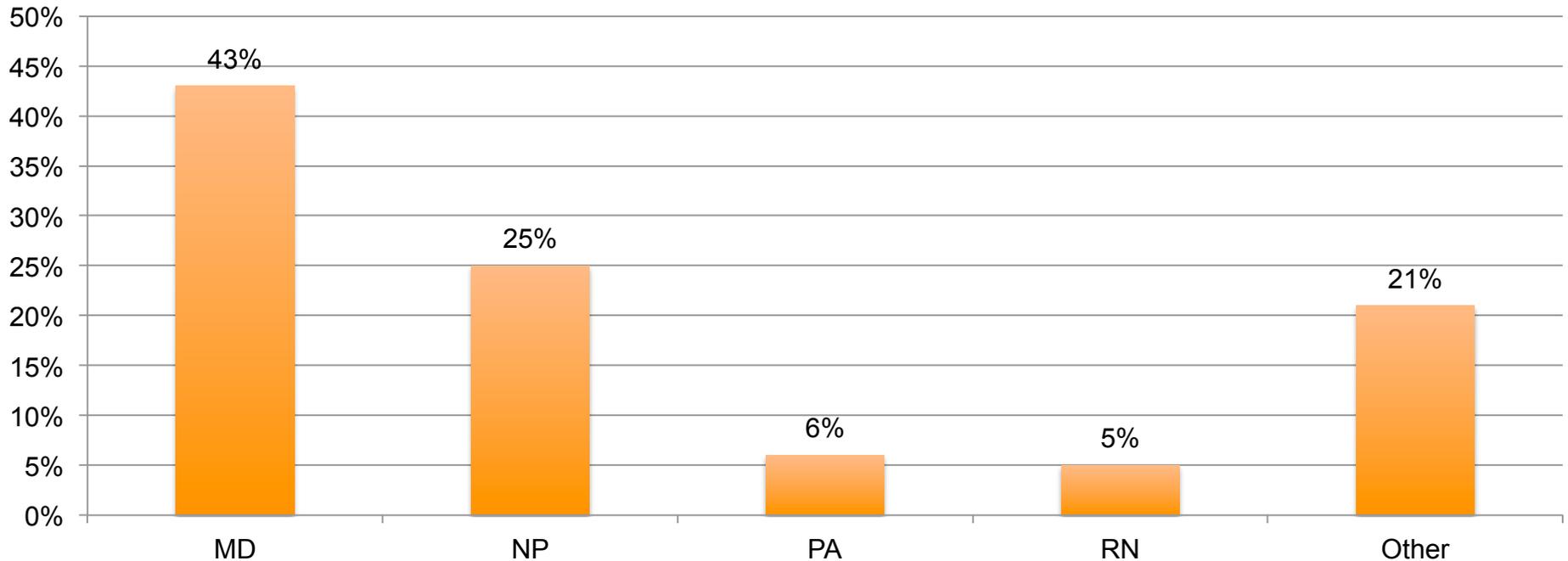
Consistent with the policies of the ACCME, NACE evaluates the effectiveness of all CME activities using a systematic process based on the following model:

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

- 156 attendees
- 43% Physicians; 25% NPs; 6% PAs; 5% RNs; 21% Other
- Over 36% in community-based practice
- 47% PCPs, 26% Pulmonology; 2% Cardiology; 1% Endocrinology
- 24% Other or did not respond



N = 105

Did we reach the right audience? **Yes!**

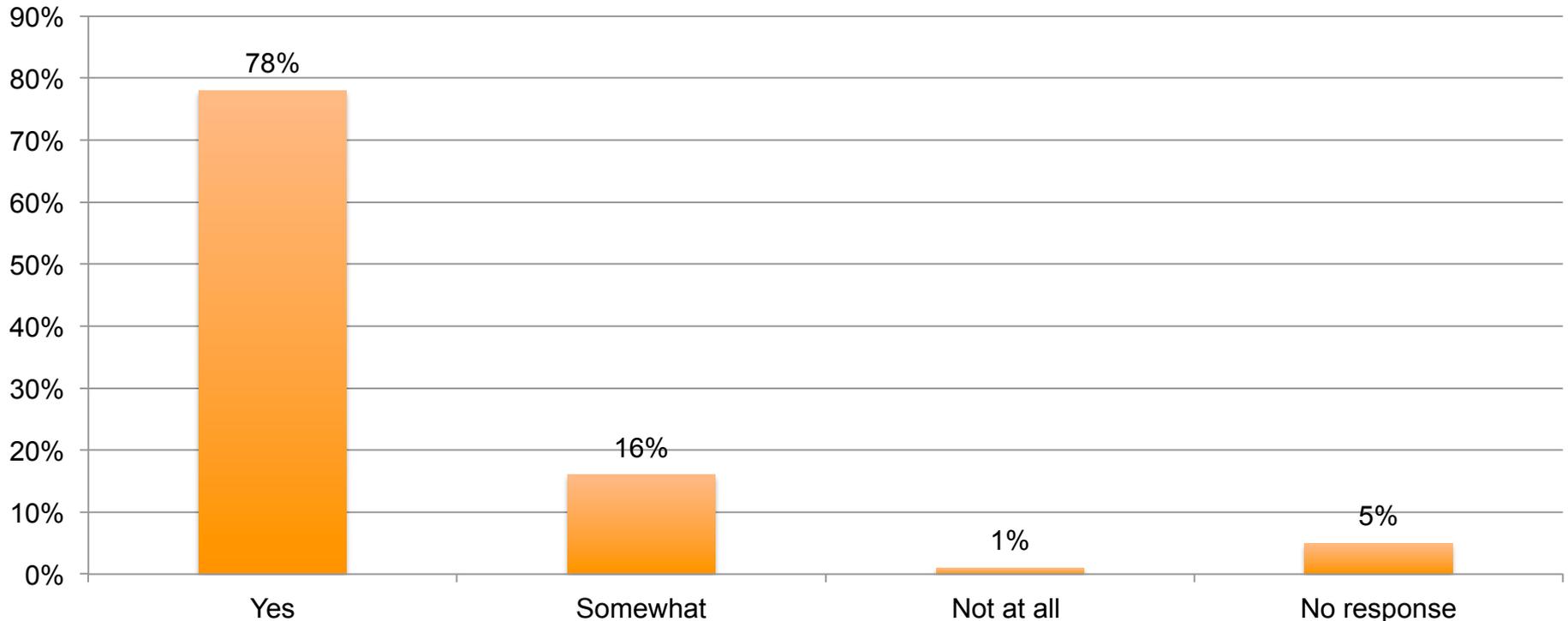
Level 2: Satisfaction

- 99% rated the activity as very good to excellent
- 100% indicated the activity improved their knowledge
- 100% stated that they learned new strategies for patient care
- 83% 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 pulmonary arterial hypertension (PAH); Explain the workup of patients suspected of having PAH; Discuss the evolution of goals in trials; List therapeutic options in the management of patients with PAH and effective use of targeted treatment options for PAH



Did learners indicate they achieved the learning objectives?

Yes! 94% 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 Intention 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 Med 14(10): 771-80.

Outcome Study Methodology (Cont.)

4. Readiness to Change Behavior (Prochaska and DeClemente Model)

CME activities can motivate providers to move through different stages of change which can ultimately lead them to take action and modify their practice behavior in accordance with the objectives of the education. Movement through these stages of change is an important dependent variable to consider in evaluating the impact of CME. Participants were asked to evaluate their stage of change with respect to specific topics being presented.

- **Pre-contemplation stage:** I do not manage (PAH), nor do I plan to this year.
- **Contemplation stage:** I did not manage (PAH) before this course, but as a result of attending this course I'm thinking of managing it now.
- **Pre-contemplation/confirmation stage:** I do manage patients with (PAH) and this course confirmed that I do **not** need to change my treatment methods.
- **Preparation for action stage:** I do manage patients with (PAH) and this course helped me change my treatment methods.

Pulmonary Hypertension: Goal Oriented Therapy

Faculty

Abubakr Bajwa, MD
Associate Professor,
Chief, Division of Pulmonary, Critical Care and Sleep Medicine
Medical Director, Respiratory Therapy
Department of Medicine, University of Florida, Jacksonville
Jacksonville, FL

Learning Objectives

- Discuss the pathophysiology of pulmonary arterial hypertension (PAH)
- Explain the workup of patients suspected of having PAH
- Discuss the evolution of goals in trials
- List therapeutic options in the management of patients with PAH
- Discuss effective use of targeted treatment options for PAH

Key Findings

Pulmonary Hypertension: Goal Oriented Therapy

Knowledge/Competence	Learners demonstrated improvement in their answers from pre to post-testing on all three of the case-based questions regarding Pulmonary Arterial Hypertension.
Confidence	Whereas the 45% of learners rated themselves as being moderately to high in their understanding of treating Pulmonary Arterial Hypertension before the education 78% of the learners reported being moderately to highly confident following the program.
Intent to Perform	As a result of this program, 29% of learners who did not manage Pulmonary Arterial Hypertension before are considering doing so, while 39% indicated that they will change their treatment methods.
Change of Practice Behavior	90% of learners who responded to our four week survey indicated that they had changed their practice behavior to implement the learning objectives of this program within four weeks after they attended the activity.

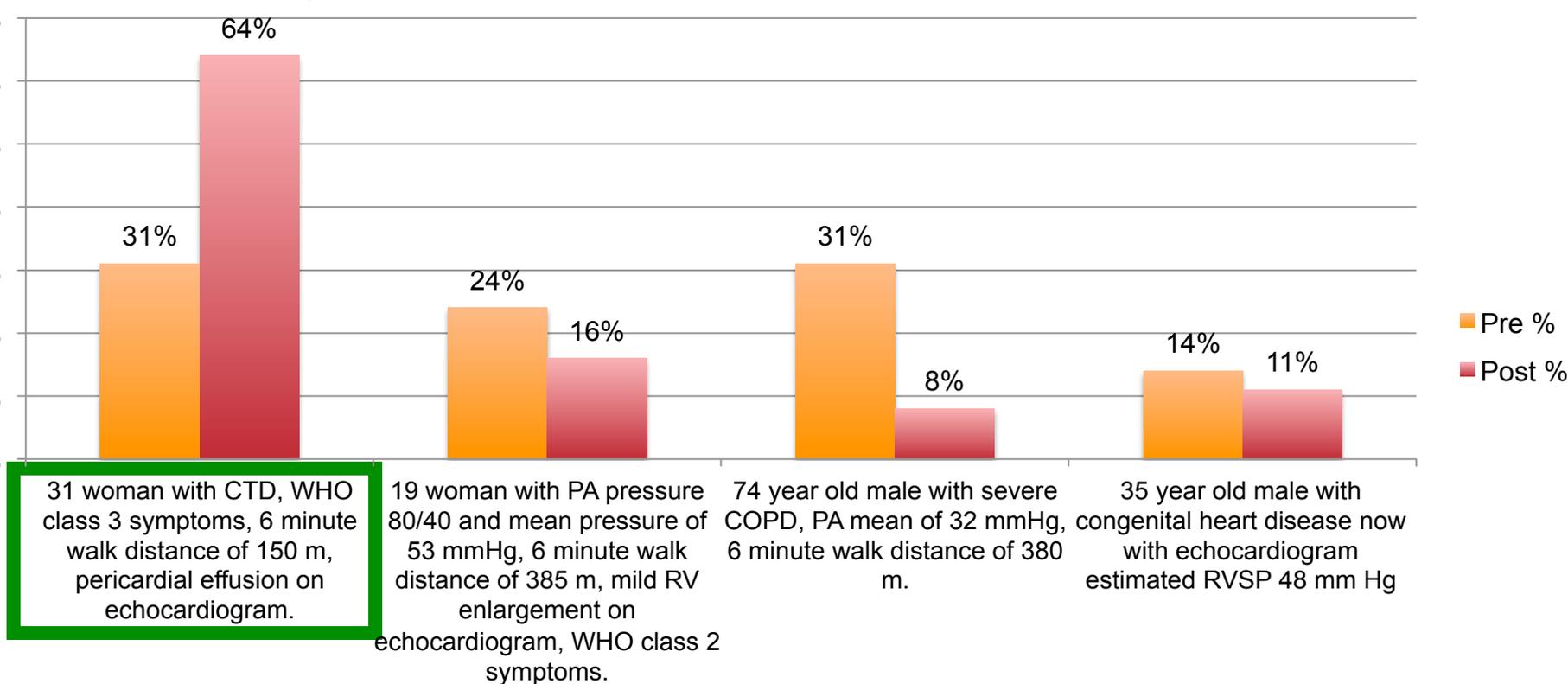
N=60

Case Vignette Knowledge and Competence Assessment Questions

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

Which one of these is a high risk PAH patient?

P Value: <0.001 – Significant



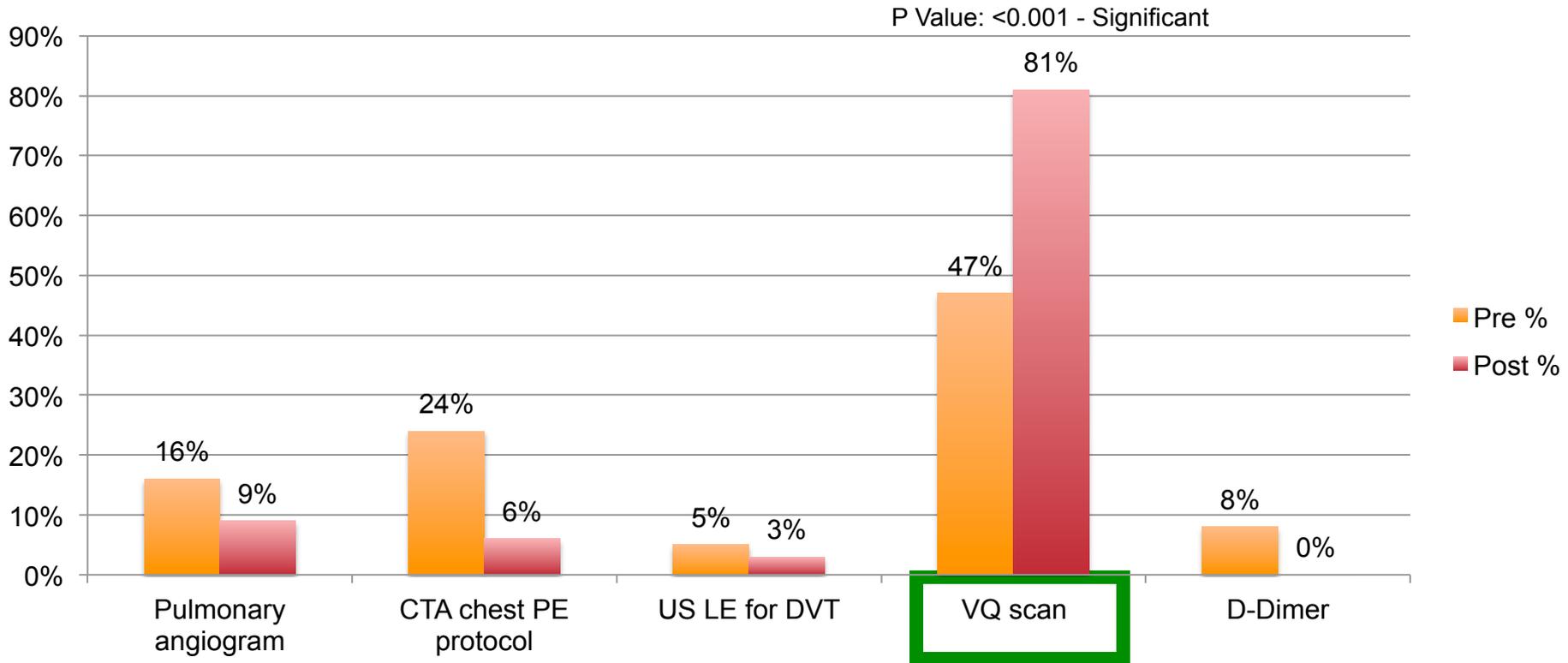
Pre N = 78
Post N = 98

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.)

A 65 year old man has symptoms and echocardiogram suggestive of pulmonary hypertension, he had an episode of PE 5 years ago what is the most important test to rule out CTEPH?



Pre N = 92
Post N = 95

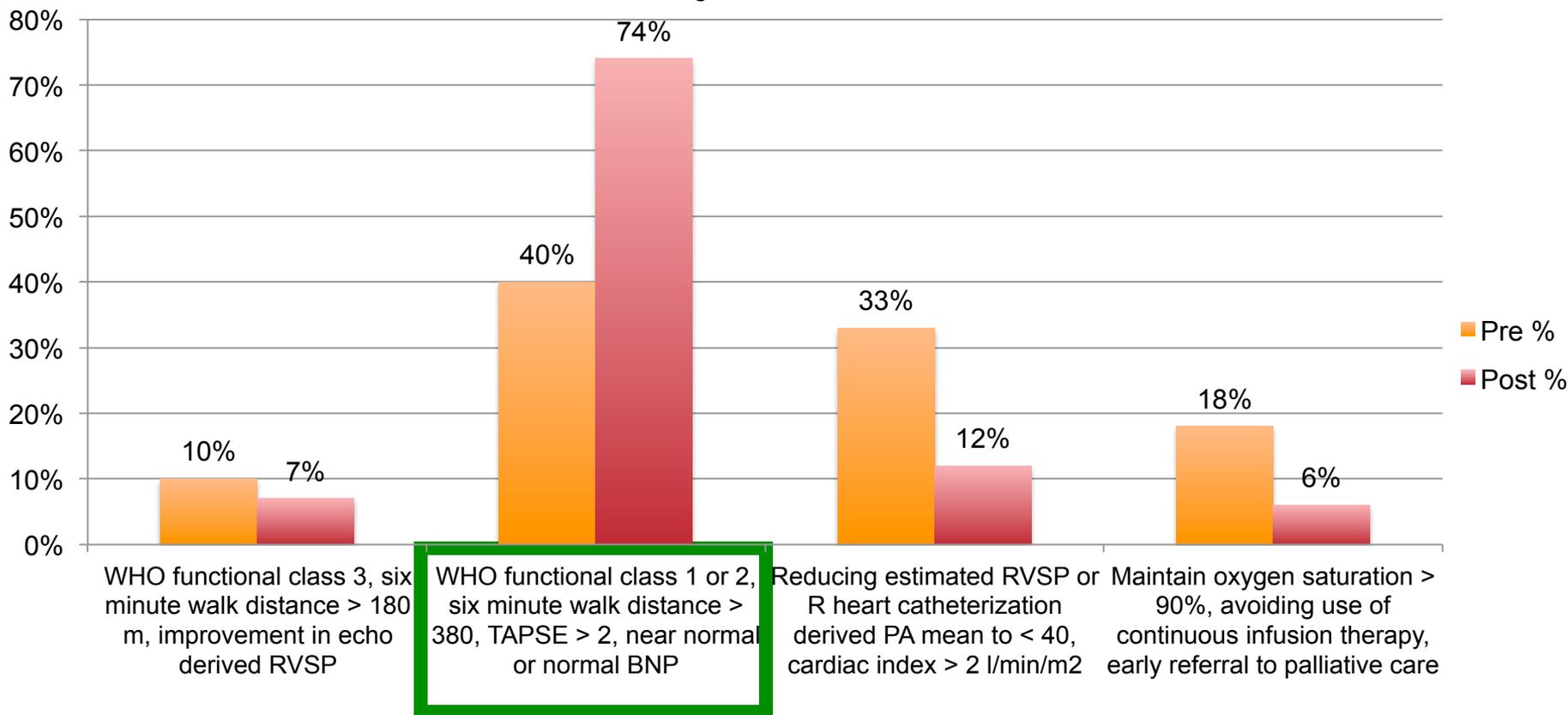
Green highlight indicates significant difference between pre and post testing.

Case Vignette Knowledge and Competence Assessment Questions

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

What are some appropriate goals of PAH therapy?

P Value: <0.001 – Significant



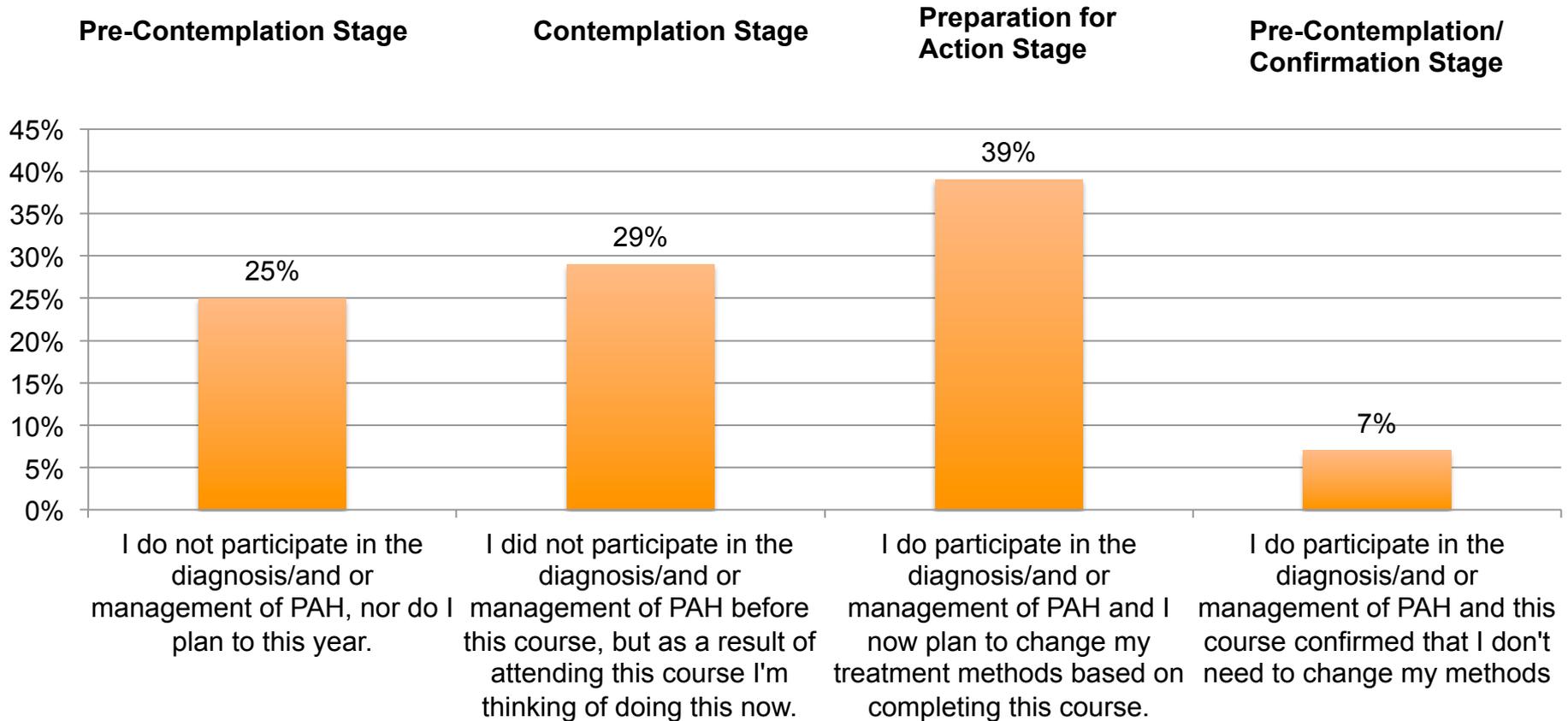
Pre N = 83
Post N = 97

Green highlight indicates significant difference between pre and post testing.

Change in Practice Behavior Question

Presented after lecture.

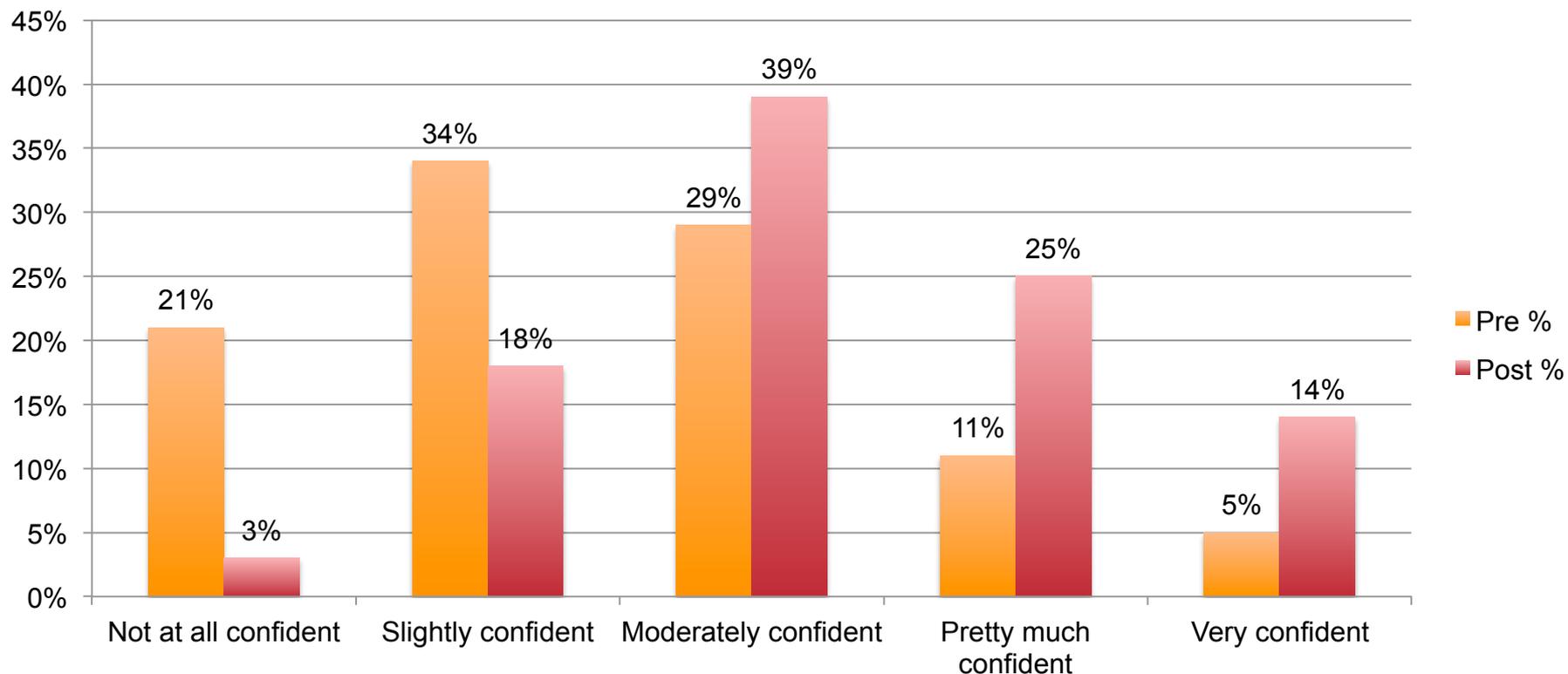
Which of the statements below describes your approach to participating in the diagnosis and/or management of a patient with Pulmonary Arterial Hypertension (PAH):



N =92

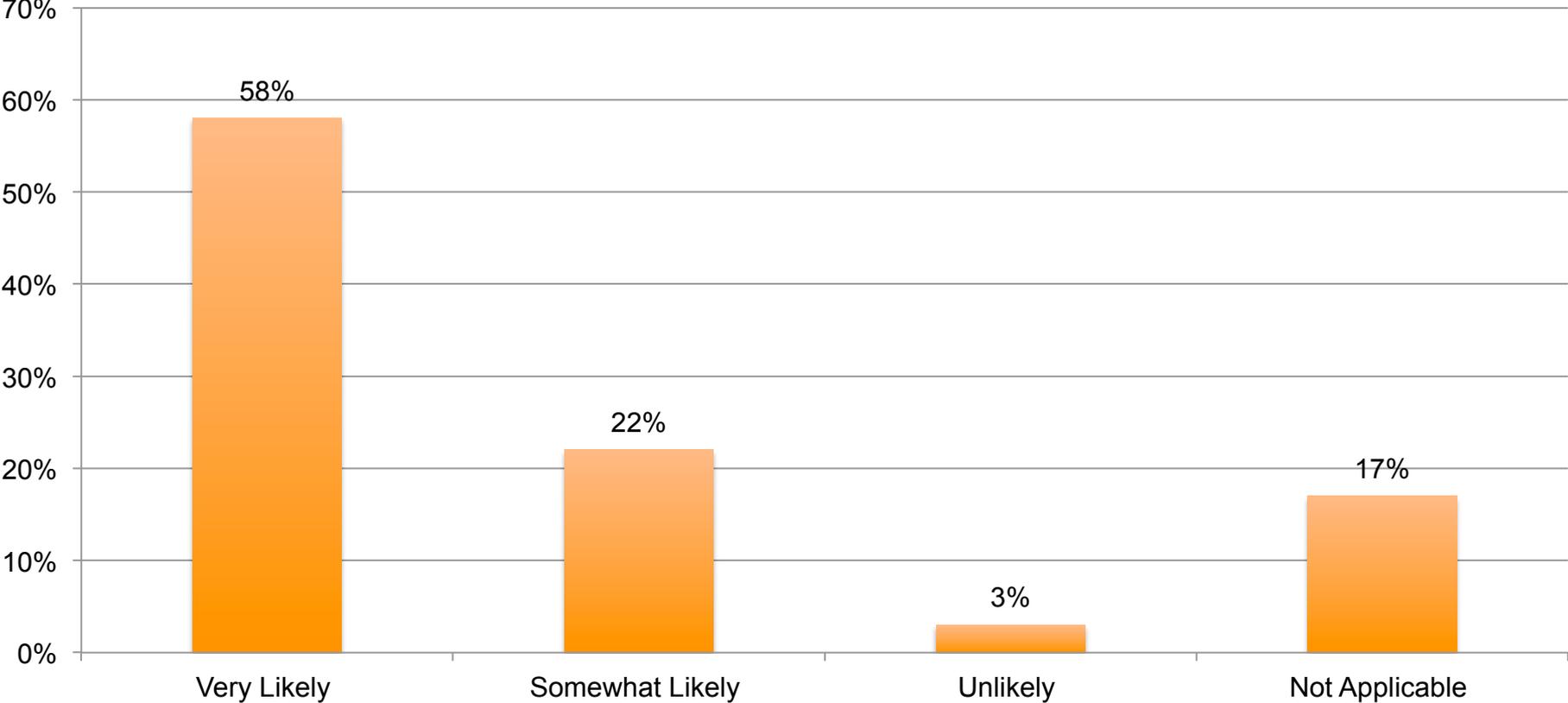
Changes in Confidence from Pre to Post-Testing Pulmonary Hypertension: Goal Oriented Therapy

On a scale of 1 to 5, please rate how confident you would be in the diagnosis and/or management of a patient with Pulmonary Arterial Hypertension:



Pre N = 82
Post N = 99

Intention to Change Practice Behavior and Implement Learning



N =146

Discussion and Implications

Pulmonary Hypertension: Goal Oriented 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 PAH, explore workup, and therapeutic management and effective use of targeted treatment options for 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 described earlier. The results indicated statistically significant improvement in knowledge as measured by positive changes in pre to post-test scores on all three questions asked. It seems that the learners improved in areas of diagnosis, disease management and prognostics. Though still the correct answers had a low of 64% suggesting the need for further education in PAH.

Readiness to Change: Thirty-nine percent of attendees noted that they currently treat patients with PAH and that this activity provided information that would lead to further changes in their care of patients with PAH. Twenty-nine percent indicated that they did not treat patients with PAH prior to this activity, but would consider doing so after having been exposed to the information taught.

Confidence: Participants indicated a substantial overall increase in self-reported confidence levels in treating patients with COPD. Attendees who reported that they felt moderately confident or more confident rose from 45% to 78

Summary: Eighty percent of the attendees suggested they were likely to very likely going 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 effective, therapies for PAH.