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

NACE

LIVE CONFERENCE SERIES

Recognizing and Managing Pulmonary Arterial Hypertension in Primary Care

Final Live Outcome Report
Grant ID : 40730403 January 21, 2019

NACE

Executive Summary

- This curriculum focused on the diagnostic strategy for PAH along with appropriate treatment and monitoring strategies for Primary Care providers
- 2,365 attendees in multiple professional specialties were reached via both live onsite and online formats
- This curriculum has the ability to impact **110,292 patients seen by learners on a weekly basis, and 5,735184 patients annually**
- Improvement across all learning domains was noted ranging from 7% to 94%
- Overall, the program improved the confidence and competence of learners to evaluate a patient suspected of having PAH and recommend appropriate treatment and monitoring

Persistent Educational Gaps

- Though improvements were observed, learners demonstrated score slippage on the PCA indicating persistent gaps in the several areas including:
  - Risk factors associated with PAH
  - Need for Right Heart Catheterization in patients suspected of having PAH, before initiating pharmacotherapy
  - Rationale for therapeutic decisions in patients with PAH

The post-test scores, and intent to change practice patterns regarding the evaluation and management of patients with PAH, 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. Review the risk factors and classification of pulmonary hypertension (PH).
2. Discuss the appropriate diagnostic strategy for pulmonary arterial hypertension (PAH), including the roles of echocardiography, ventilation/perfusion (V/Q) scanning, and right heart catheterization (RHC).
3. Review current and emerging treatments for patients with PAH.
4. Describe how to monitor patients with PAH for disease progression.

Curriculum Overview

9 Accredited Live Regional Symposia | Sep. 8, 2018 – No. 10, 2018

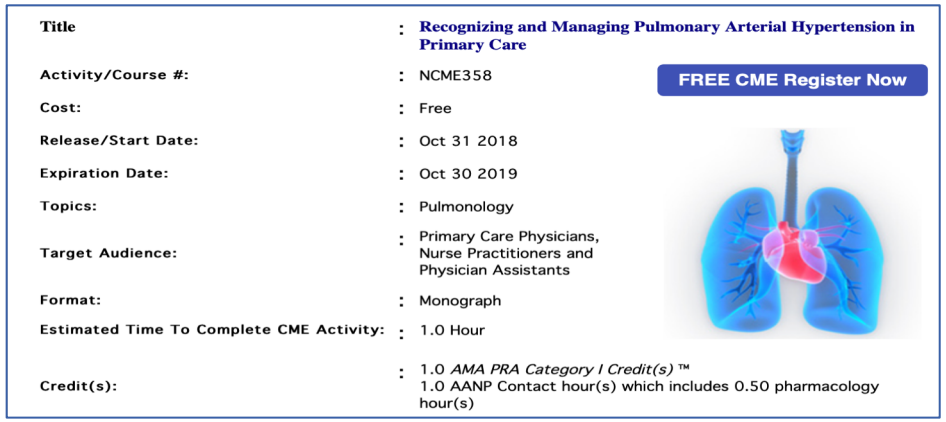
1 Accredited Live Simulcast: Oct. 27, 2018

1 Accredited Live Virtual Symposium: Nov. 17, 2018

Enduring CME eMonograph

Launch: October 31, 2018 | End: October 30, 2019

Available at: http://bit.ly/NACE2018CUMonograph



Title	:	**Recognizing and Managing Pulmonary Arterial Hypertension in Primary Care**
Activity/Course #:	:	NCME358
Cost:	:	Free
Release/Start Date:	:	Oct 31 2018
Expiration Date:	:	Oct 30 2019
Topics:	:	Pulmonology
Target Audience:	:	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 I Credit(s)* ™ 1.0 AANP Contact hour(s) which includes 0.50 pharmacology hour(s)

FREE CME Register Now

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

Course Director

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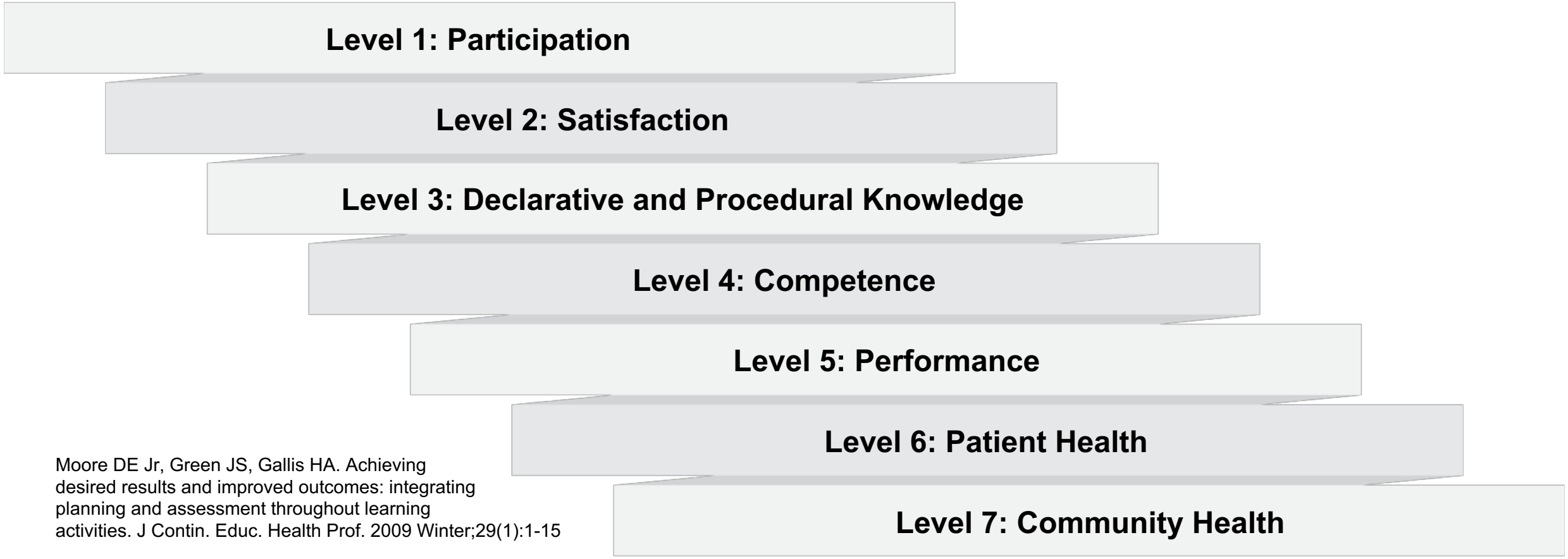
Commercial Support

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:

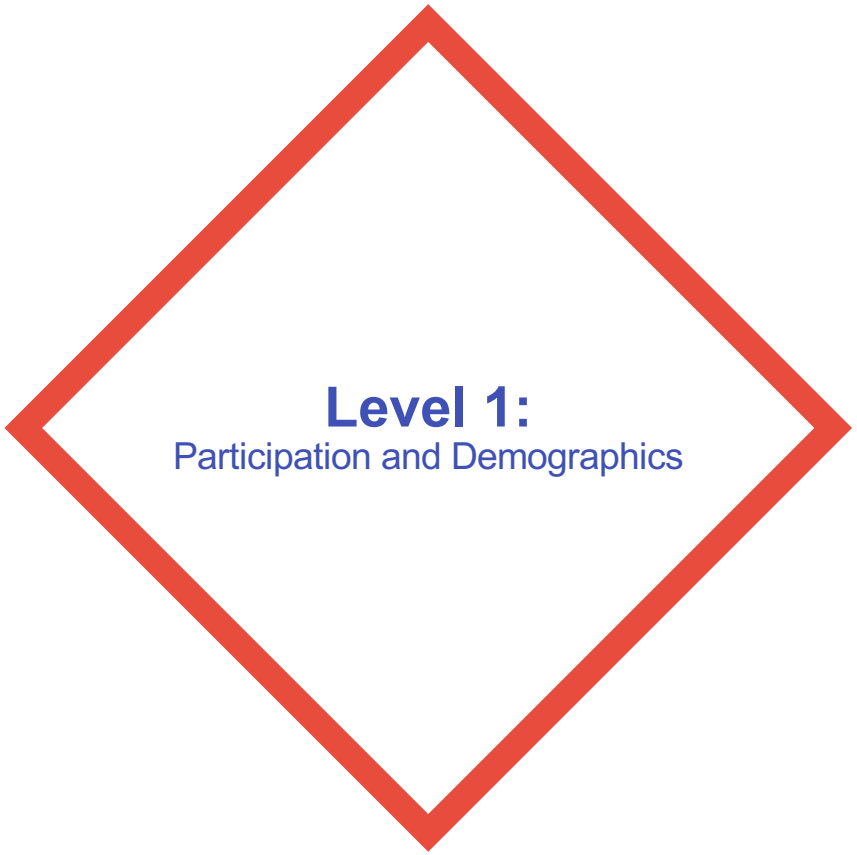
- Actelion Pharmaceuticals US, Inc
- Sanofi US
- Grifols
- Novartis Pharmaceuticals Corporation
- GlaxoSmithKline
- Ferring Pharmaceuticals, Inc.

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

2365 total attendees

9 cities: **1288** attendees

1 live Simulcast: **550** attendees
1 live Virtual Symposium: **527** attendees

95%

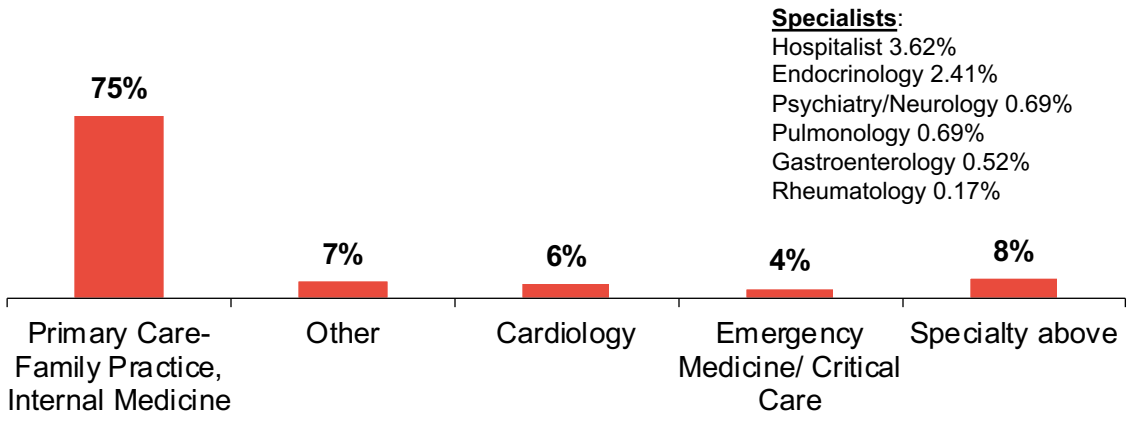
Provide direct patient care

Level 1:Participation

2018 Symposium/Simulcast	Date	Attendees
White Plains, NY	9/8/18	189
Orlando, FL	9/15/18	199
Seattle, WA	9/22/18	103
Philadelphia, PA (King of Prussia)	10/6/18	79
Anaheim, CA	10/13/18	98
Charlotte, NC	10/20/18	115
Phoenix, AZ	10/27/18	116
Phoenix, AZ- Simulcast	10/27/18	550
Dallas, TX	11/3/18	260
Miami, FL	11/10/18	129
Virtual Symposium	11/17/18	527
Total		**2,365**

Level 1: Demographics and Patient Reach

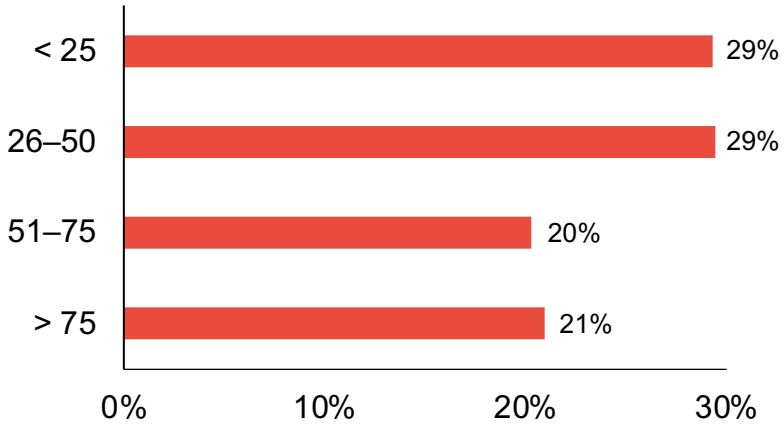
Specialty



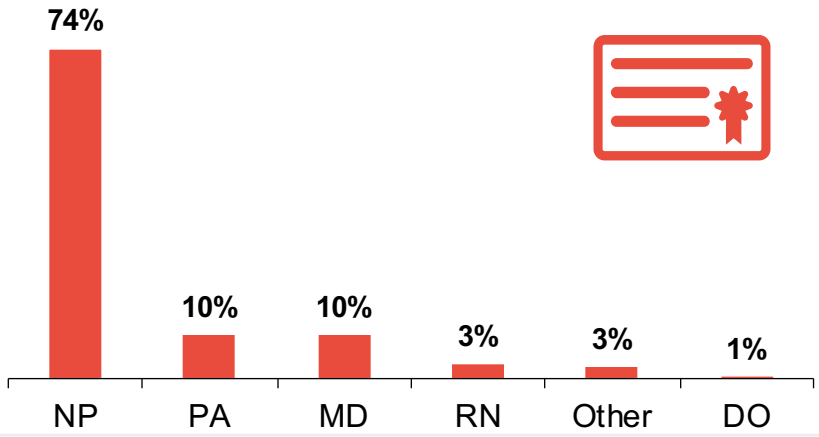
Specialists:
Hospitalist 3.62%
Endocrinology 2.41%
Psychiatry/Neurology 0.69%
Pulmonology 0.69%
Gastroenterology 0.52%
Rheumatology 0.17%

Patient Care Focus: 95%

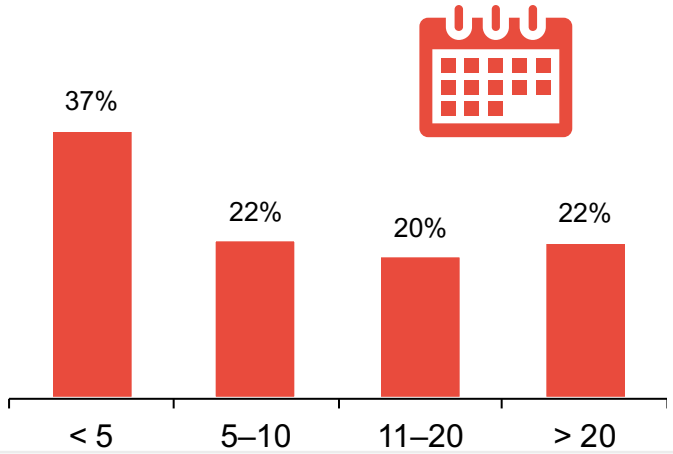
Patients with seen each week, in any clinical setting:



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

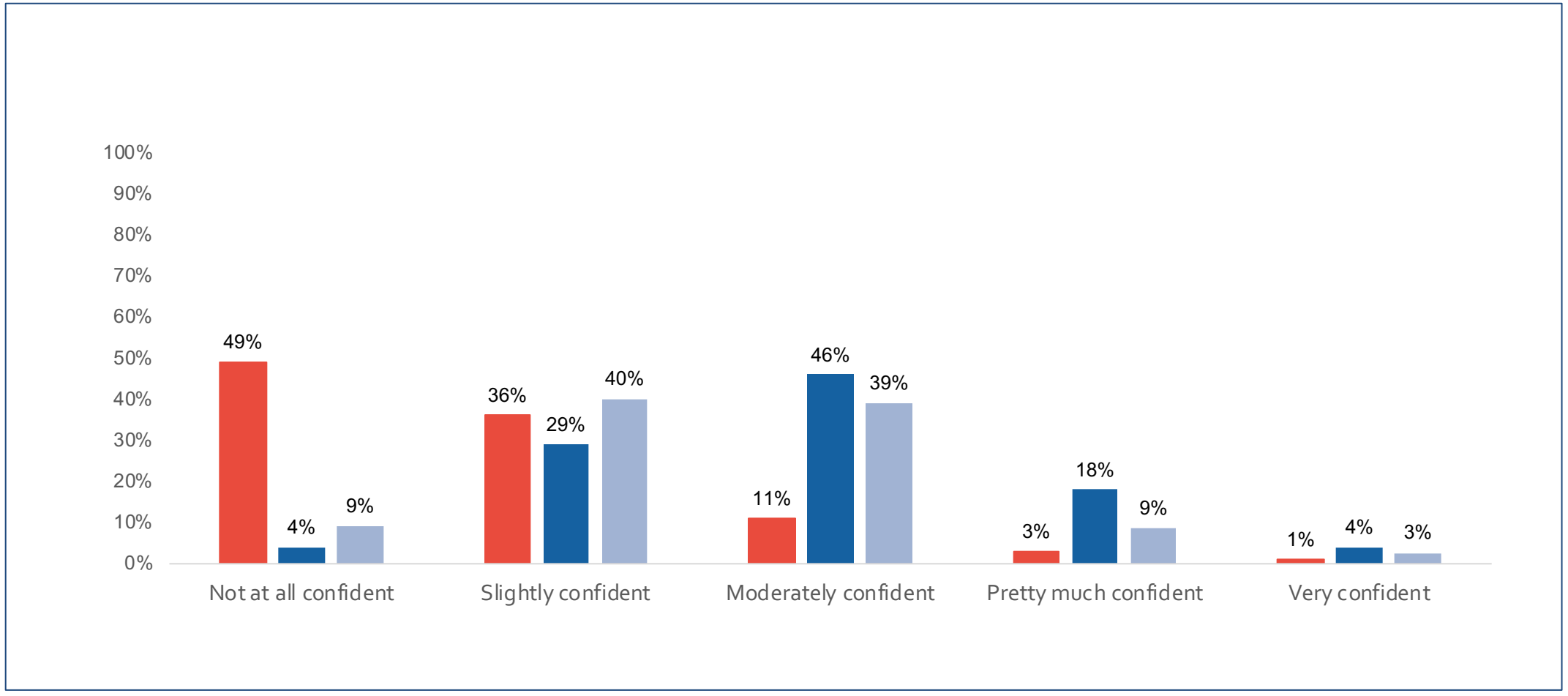
91% said they would implement new strategies that they learned

100% said the program was fair-balanced and unbiased

Confidence Assessment

Please rate your confidence in your ability to recognize features that suggest PAH.

Learning Objective 1

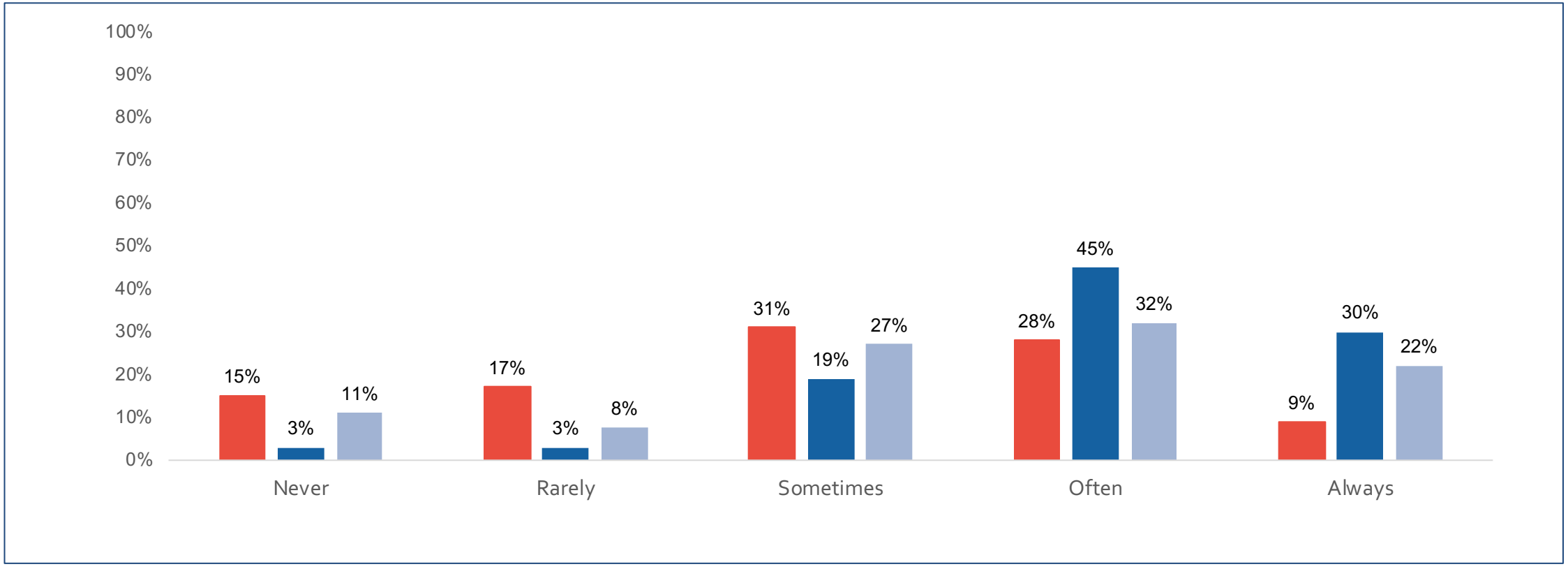


N= Pre: 724 Post: 692 PCA: 487

Pre-Post Change (1.71 to 2.89)	69%
Pre-PCA Change (1.71 to 2.59)	51%

How often do you/will you (after participating in this activity) order an echocardiogram for a patient with unexplained shortness of breath?

(Learning Objective 2)



N= Pre: 841 Post: 892 PCA: 487

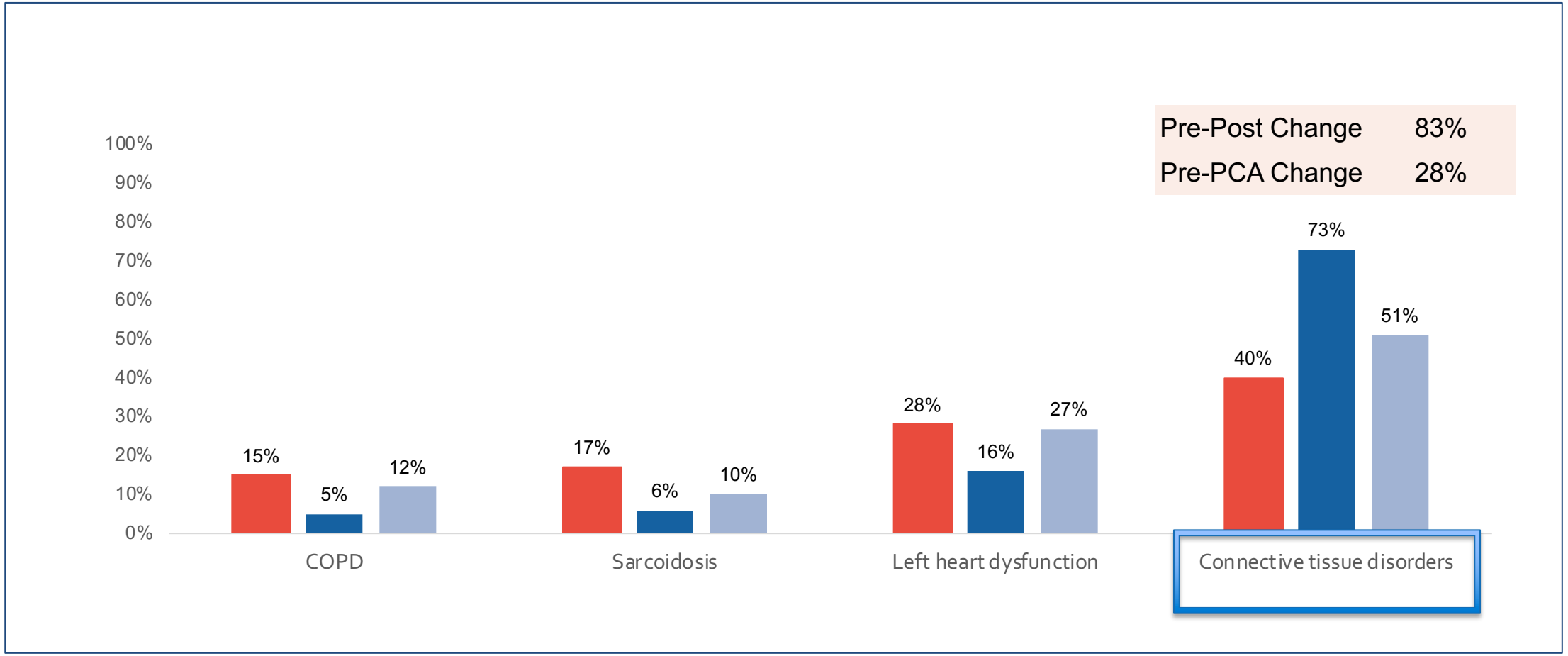
Pre-Post Change (3.0 to 3.97)	32%
Pre-PCA Change (3.0 to 3.7)	23%

Knowledge Assessment

Which of the following conditions is associated with risk for PAH?

(Learning Objective 1)

P Value: <=0.05



N= Pre: 752 Post: 812 PCA: 487

Competence Assessment

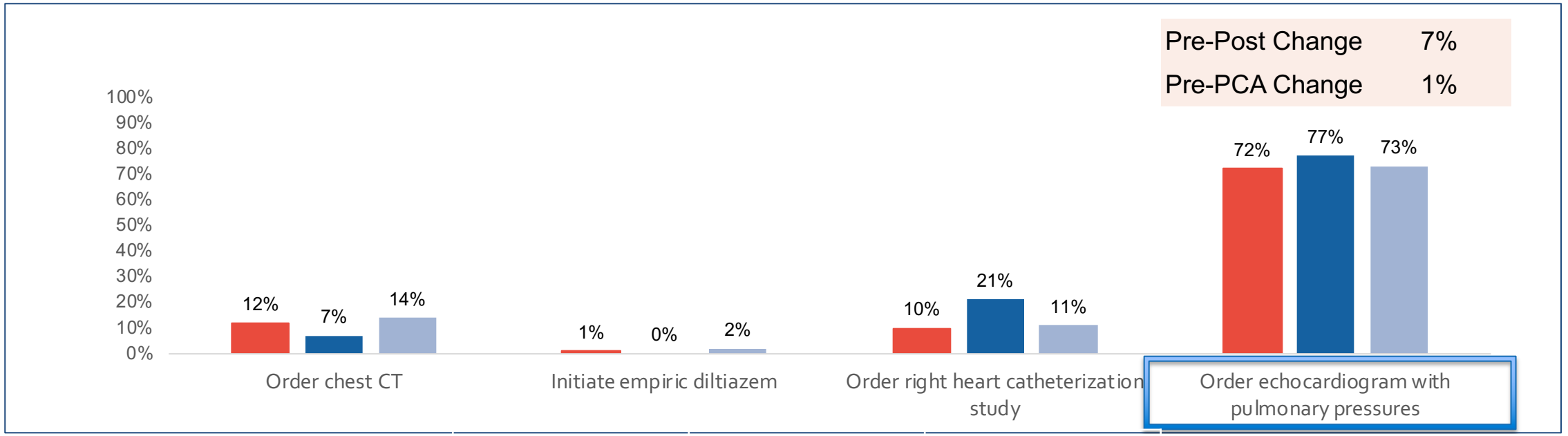
A 61 y/o, non-smoking, obese man presents with progressive dyspnea on exertion. He has a history of hypertension and dyslipidemia.

- **Workup: BP 140/88 mmHg, lungs CTA, heart RRR, mild edema of LE, and mild hepatomegaly.**
- **ECG: WNL except for right axis deviation. PFTs: WNL except for reduced DLCO (65%).**
- **Meds: Fosinopril/hydrochlorothiazide 20/25 mg qd and atorvastatin 80 mg qd.**

What is an appropriate next step for this patient?

(Learning Objectives 2,3)

P Value: >=0.05



N= Pre: 801 Post: 816 PCA: 487

Competence Assessment

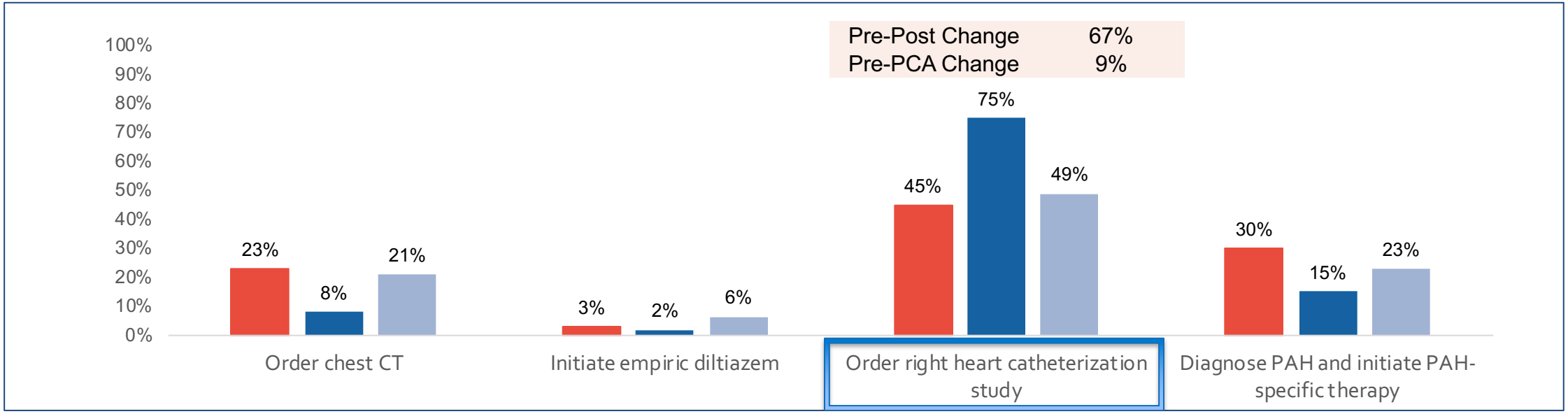
A 70 y/o overweight woman presents with progressive dyspnea on exertion. She has a history of osteoarthritis, hypertension, and dyslipidemia.

- **Workup: BP 138/82 mmHg, lungs CTA, heart RRR, mild edema of LE.**
- **ECG shows right axis deviation. PFTs show reduced DLCO (56%). Echo: LVEF 65%, moderate tricuspid regurgitation, RVSP 50 mmHg.**
- **Meds: Lisinopril 20 mg qd, hydrochlorothiazide 25 mg qd, rosuvastatin 40 mg qd, ibuprofen prn.**

What is an appropriate next step for this patient?

(Learning Objectives 2 and 3)

P Value: <=0.05



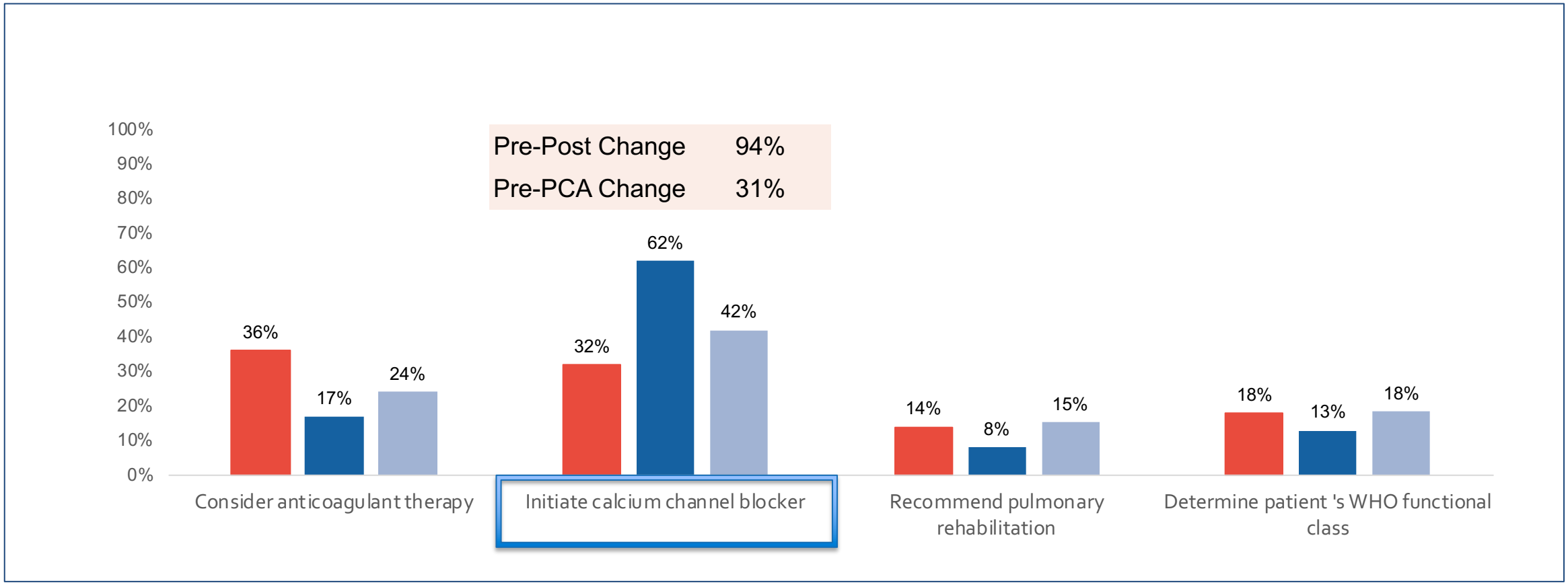
N= Pre: 834 Post: 824 PCA: 487

Knowledge Assessment

For a patient diagnosed with PAH who demonstrated no vasodilator response on RHC, all of the following would be appropriate, EXCEPT?

(Learning Objective 2)

P Value: <=0.05



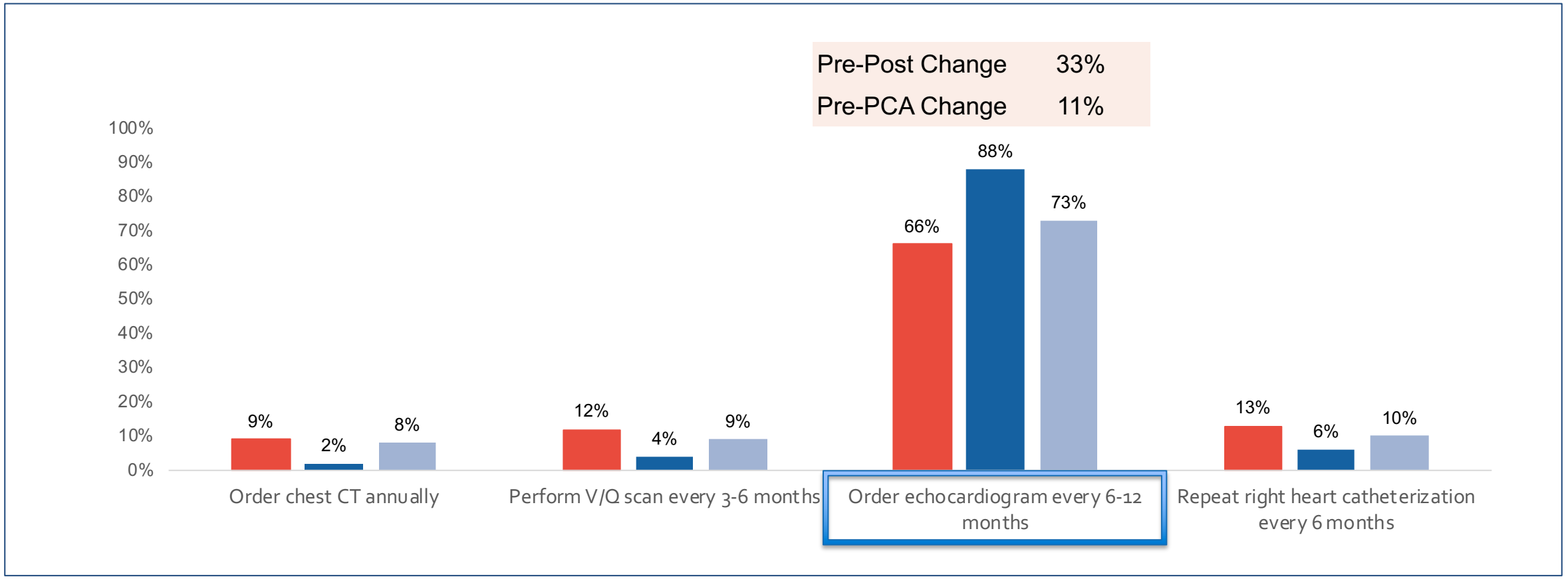
N= Pre: 784 Post: 806 PCA: 487

Knowledge Assessment

What monitoring is appropriate for a patient with PAH who is treated with combination therapy?

(Learning Objective 4)

P Value: <=0.05



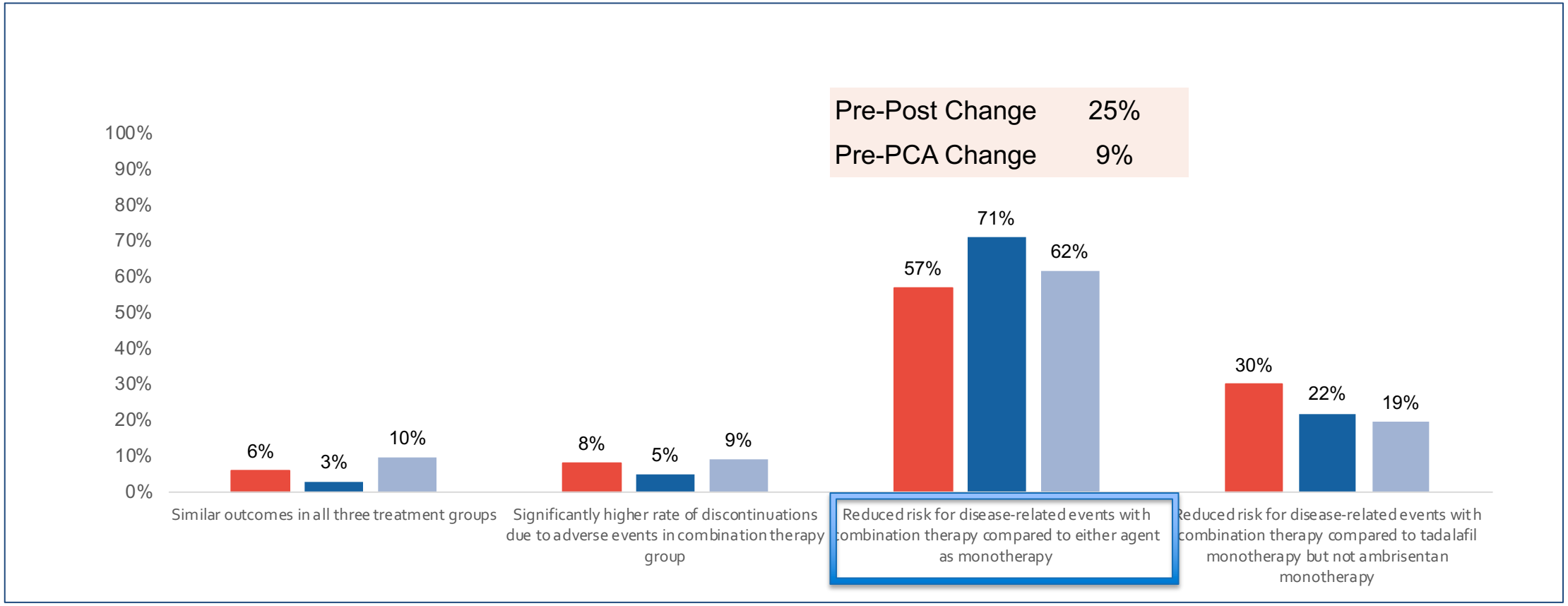
N= Pre: 724 Post: 812 PCA: 487

Knowledge Assessment

A study in PAH comparing the combination of ambrisentan/tadalafil to either agent as monotherapy demonstrated which of the following?

(Learning Objective 3)

P Value: <=0.05

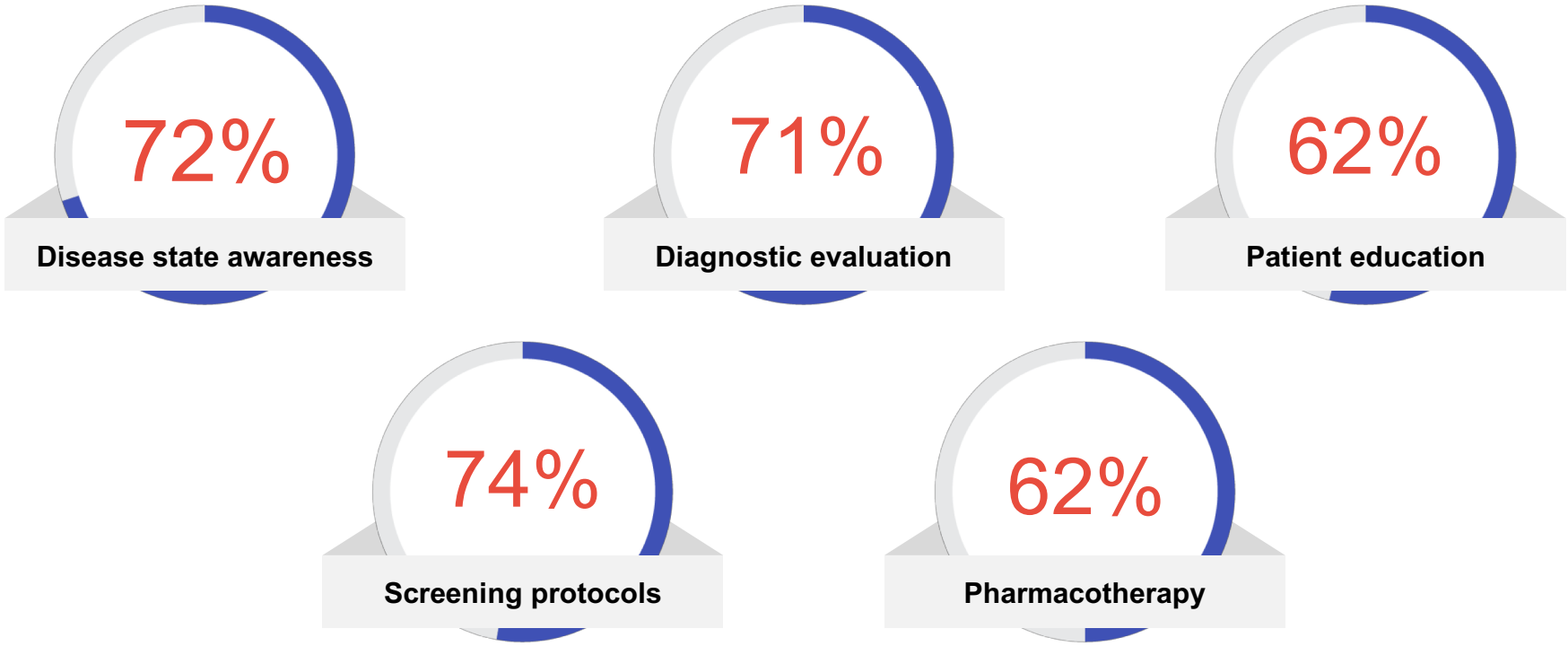


N= Pre: 778 Post: 810 PCA: 487

(4-week Post Assessment)

Please select the specific areas of *skills, or practice behaviors*, you have improved regarding the treatment of patients with PAH since this CME activity. (Select all that apply.)

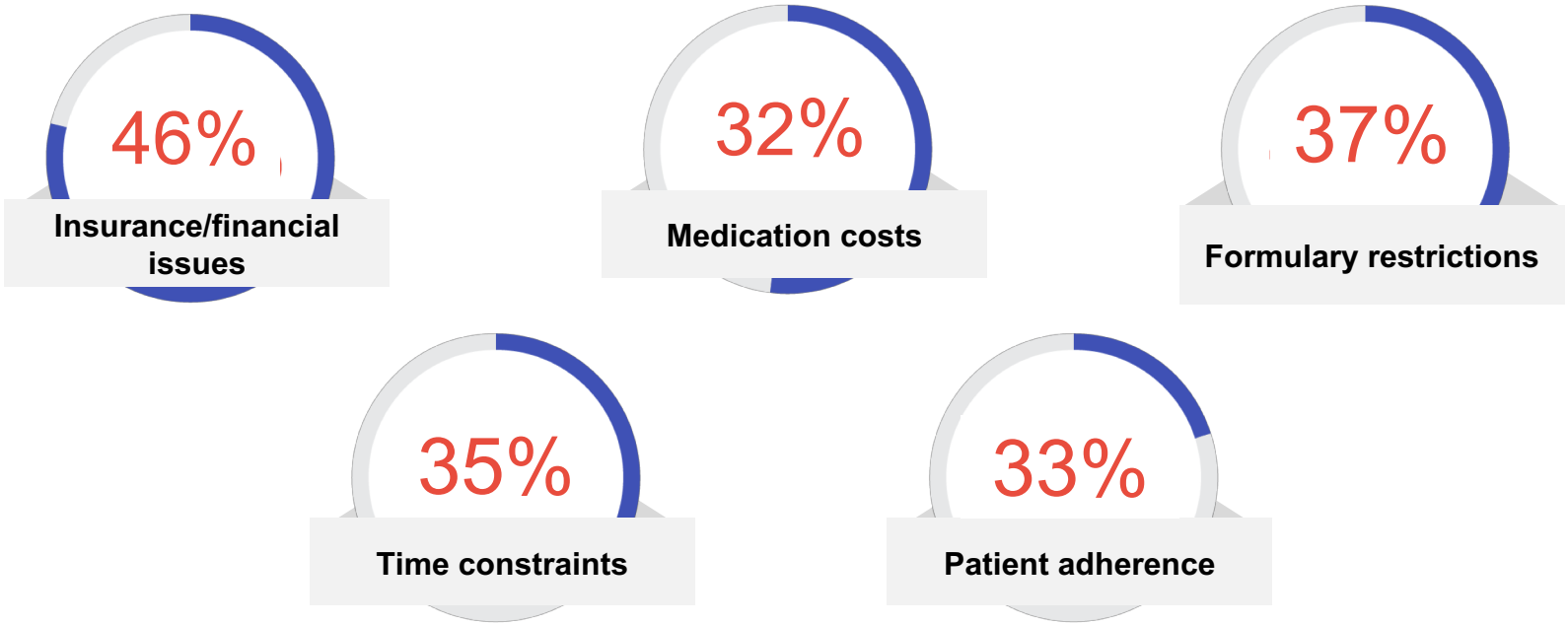
N=487



(4-week Post Assessment)

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

N=487



Participant Educational Gains

83% improvement in recognition of conditions such as connective tissue disorders associated with PAH

94% improvement in awareness that calcium channel blockers are inappropriate in patients with no vasodilator response on RHC

67% improvement in competence recognizing the need for a right heart catheterization prior to initiating therapy for PAH

25% more aware that combination therapy is more effective than monotherapy and 33% more aware that patients with PAH on combination therapy are monitored with echocardiogram every 6-12 months

Persistent Educational Gaps After 4 Weeks

- Risk factors associated with PAH
- Need for Right Heart Catheterization in patients suspected of having PAH, before initiating pharmacotherapy
- Importance of knowing vasodilator response on RHC prior to offering calcium channel blocker therapy
- Rationale for combination therapy in patients with PAH

Key Take-Home Points

Learners were nearly 70% more confident in their ability to recognize features consistent with PAH

32% increase in intent to order an echocardiogram to evaluate for PAH in a patient with unexplained shortness of breath

After 4 weeks, participants reported the following improved skills regarding the treatment of patients with PAH: 74% screening protocols 72% disease state awareness, and 71% diagnostic evaluation

95% of attendees provide direct patient care with a potential impact of this activity on 110,292 patients seen on a weekly basis, and 5,735184 patients seen annually