

Clinical Updates for Nurse Practitioners and Physician Assistants: 2017



Clinical Advances in Pulmonary Arterial Hypertension

Outcome Report for 10 Cities: Actelion # 33221495
February 28, 2018

Curriculum Overview

◆ Accredited Live Regional Symposia, Launch Date: September 16, 2017 through December 7, 2017

❖ The live symposia was held in 10 cities with simulcast in 3 cities.

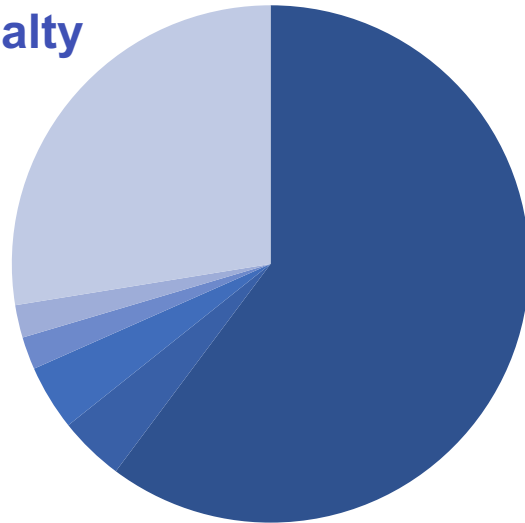
◆ Non-Accredited “Clinical Highlights” - The program content was reinforced to participants with a document containing key teaching points from the program and is distributed 1 week after each meeting.

◆ Enduring Symposium Monograph, Launch Date: January 5, 2018 End Date: January 4, 2019

❖ http://naceonline.com/CME-Courses/course_info.php?course_id=943

Level 1 (Participation)

Practice specialty



- 59% PCPs
- 4% Pulmonologist
- 4% Gastroenterologist
- 2% Cardiologist
- 2% Endocrinology
- 27% Other or did not respond



4 cities



544

total attendees



209

remote
simulcast



335

on site

Professional Degree

- 79% NP
- 11% PA
- 4% RN
- 6% MD
- 1% DO or other



92%

Provide direct
patient care

Key Findings



Knowledge/Competence

Statistically significant improvement in all questions regarding the diagnosis and management of patients with Pulmonary Arterial Hypertension



Confidence

Over 300% improvement in confidence in the ability to recognize features that suggest PAH 4 weeks after the program.



Practice

Nearly 30% improvement in intent to order an echocardiogram for a patient with unexplained shortness of breath 4 weeks after the program



Change of Practice Behavior

94% 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 attending the activity.

4 Weeks Post N= 81

Discussion and Implications

- ❖ Moderate to very confident levels in the ability recognize features suggestive of PAH rose from 17% to 72% after the activity.
- ❖ At 4 weeks, confidence levels remained at 55%, a significant improvement from baseline
- ❖ Participants were more competent and knowledgeable in the evaluation and management of patients with PAH 4 weeks after the activity.
- ❖ Learners demonstrated persistent gaps in the several areas including:
 - ❖ Pathophysiology of PAH
 - ❖ Physical examination for PAH
 - ❖ Treatment strategies for PAH
 - ❖ PAH monitoring

The post-test scores, and intent to change practice patterns regarding the evaluation and management of patients with Pulmonary Arterial Hypertension, signifies a clear gap in knowledge and an unmet need among primary care clinicians. It continues to be an important area for future educational programs.

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Clinical Updates for Nurse Practitioners and Physician Assistants: 2017

Commercial Support

The Clinical Updates for Nurse Practitioners and Physician Assistants: 2017 series of CME activities were supported through educational grants or donations from the following companies:

- Actelion Pharmaceuticals US, Inc
- Amgen Inc
- Gilead Sciences, Inc
- Novartis Pharmaceuticals Corporation
- Sanofi US
- Shire Human Genetic Therapies, Inc



Clinical Updates for Nurse Practitioners and Physician Assistants

Update 2017 Conference Schedule

City	Date
Orlando, FL	September 16, 2017
Cincinnati, OH	September 23, 2017
Seattle, WA	October 7, 2017
Philadelphia, PA*	October 14, 2017
Dallas, TX	October 21, 2017
Miami, FL	October 28, 2017
Charlotte, NC	November 4, 2017
Phoenix, AZ*	November 11, 2017
White Plains, NY*	November 18, 2017
Costa Mesa, CA	December 2, 2017

***Simulcast and Live Conference**
Bolded cities are where the lecture was given



Learning Objectives

1. Discuss the pathophysiology of pulmonary arterial hypertension (PAH)
2. Recognize signs and symptoms suggestive of PAH and the appropriate diagnostic strategy
3. Describe how to monitor patients with PAH for disease progression
4. Review current and emerging treatments for patients with PAH

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.

Level 1: Participation

Level 2: Satisfaction

Level 3: Declarative and Procedural Knowledge

Level 4: Competence

Level 5: Performance

Level 6: Patient Health

Level 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 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

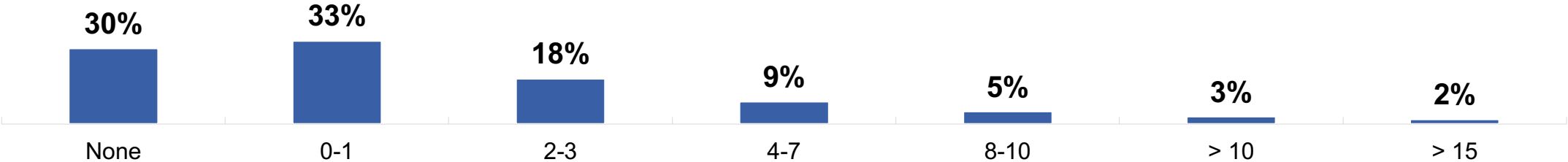


91% said they would implement new strategies that they learned



100% said the program was fair-balanced and unbiased

Patients visits with Pulmonary Arterial Hypertension seen each week in a clinical setting:

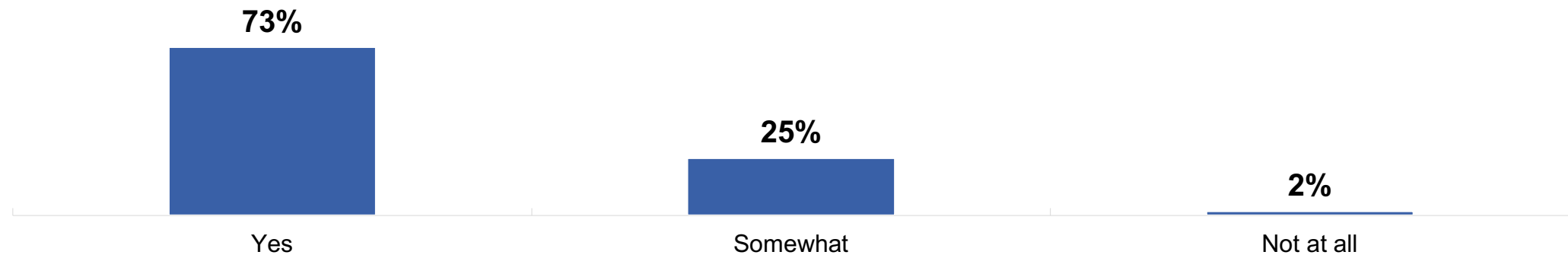


Sample Size: N = 519

Attendee Learning Objectives Achievement

Upon completion of this activity, I can now:

- Discuss the pathophysiology of pulmonary arterial hypertension (PAH)
- Recognize signs and symptoms suggestive of PAH and the appropriate diagnostic strategy
- Describe how to monitor patients with PAH for disease progression
- Review current and emerging treatments for patients with PAH

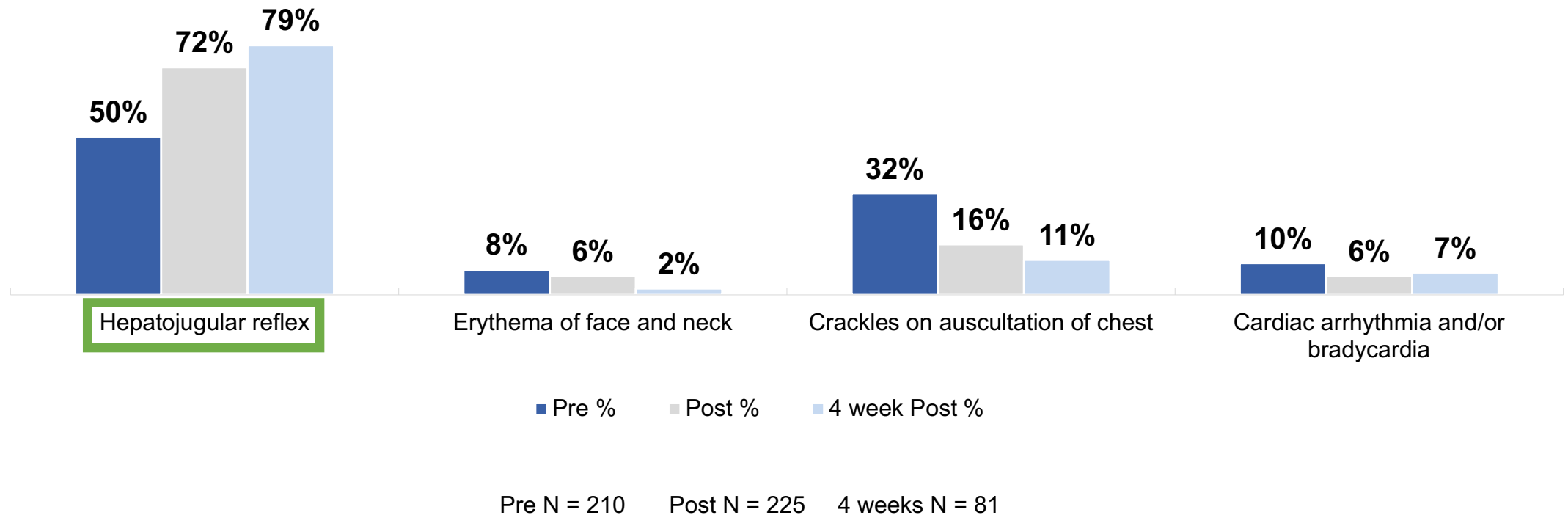


Sample Size: N = 505

Which of the following examination findings suggests PAH?

(Learning Objective 2)

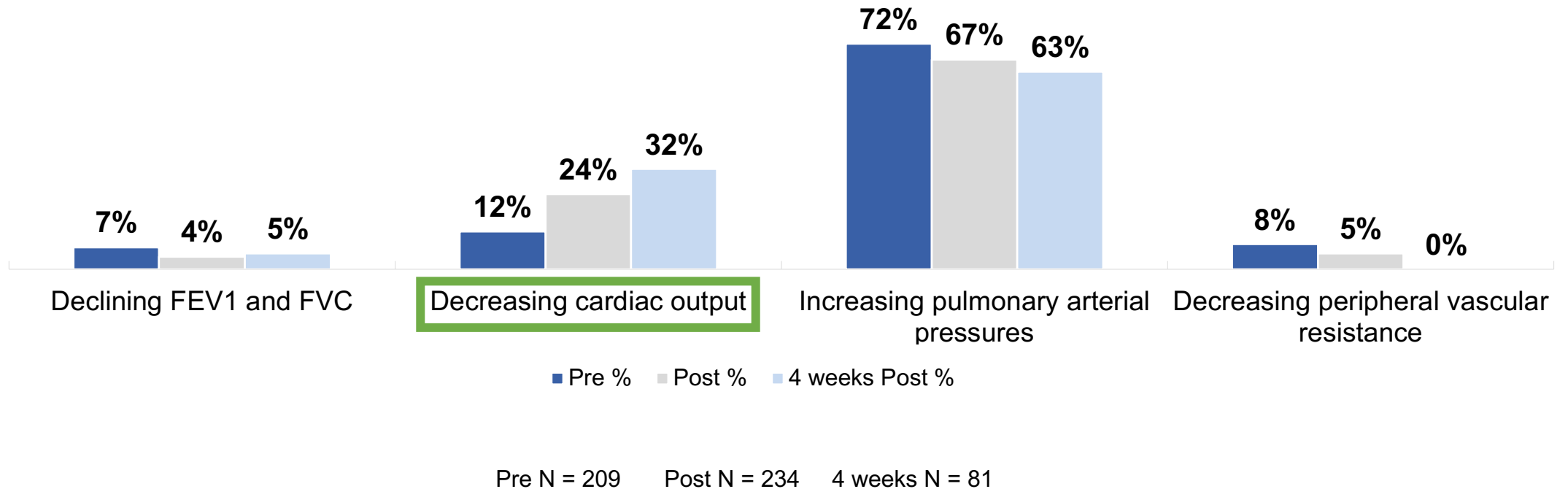
P Value: <0.001 – Significant



In the pathophysiology of PAH, progression to right heart failure is associated with which of the following?

(Learning Objective 1)

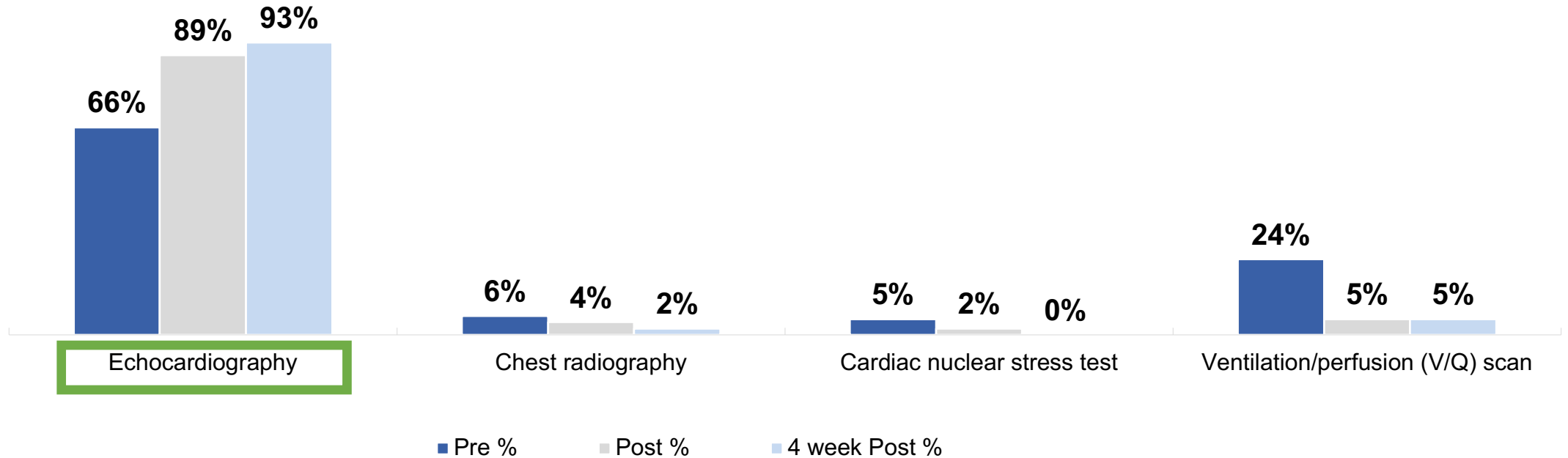
P Value: <0.00133 – Significant



In a patient diagnosed with PAH, which of the following would be performed every 6-12 months?

(Learning Objective 3)

P Value: <0.001 – Significant

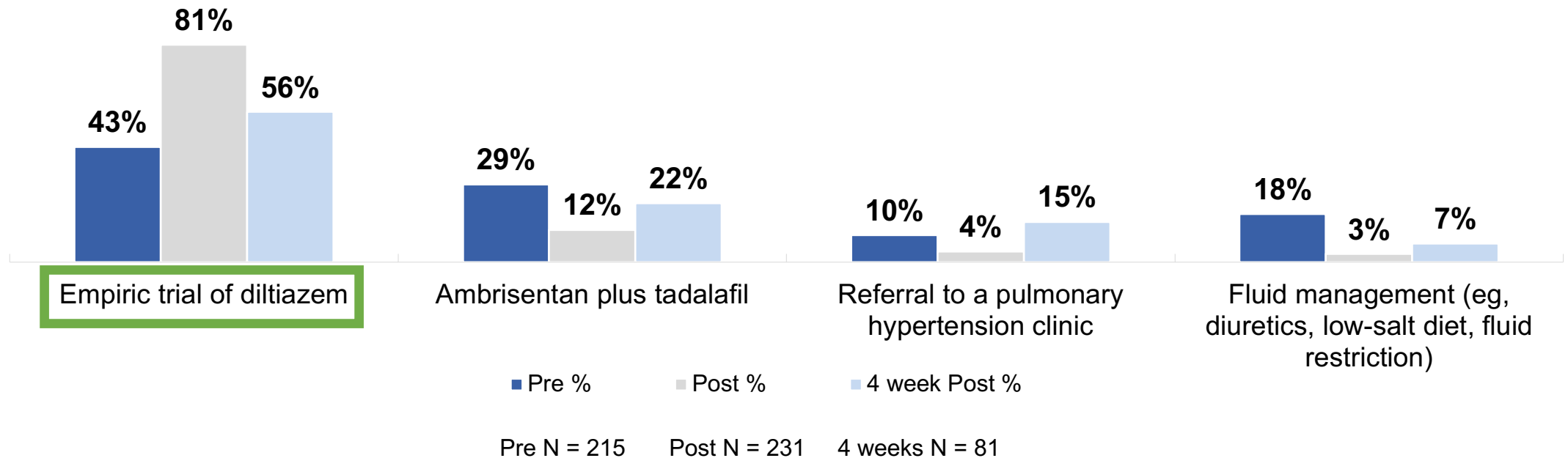


Pre N = 215 Post N = 222 4 weeks N = 81

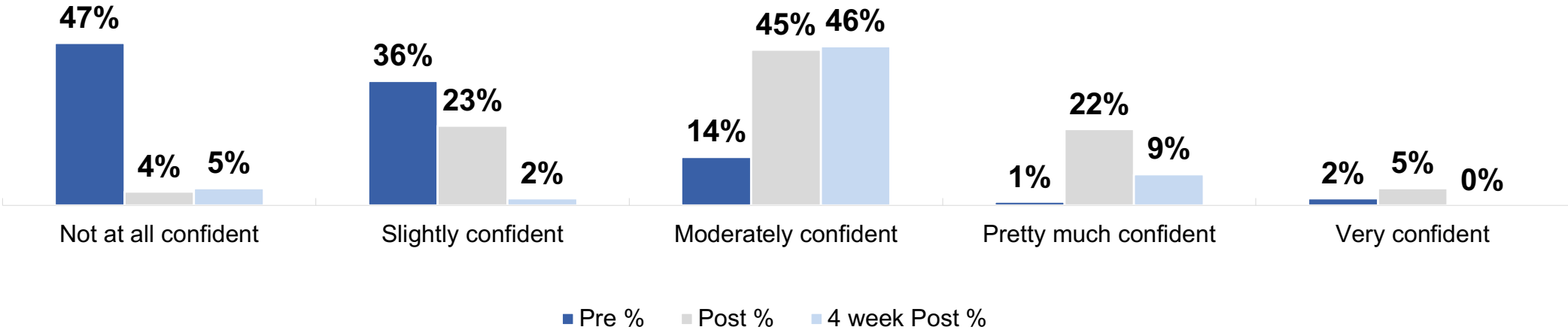
A 47-year-old overweight woman presents with progressive dyspnea on exertion and fatigue. Physical examination and chest X-ray identify no abnormalities. EKG is normal except for right axis deviation. Pulmonary function tests show reduced DLCO (65%). The patient is referred to a pulmonologist. Right heart catheterization suggests PAH with no vasodilator response. Patient is functional class III. Based on these findings, any of the following should be considered, EXCEPT:

(Learning Objective 3 and 4)

P Value: <0.001 – Significant

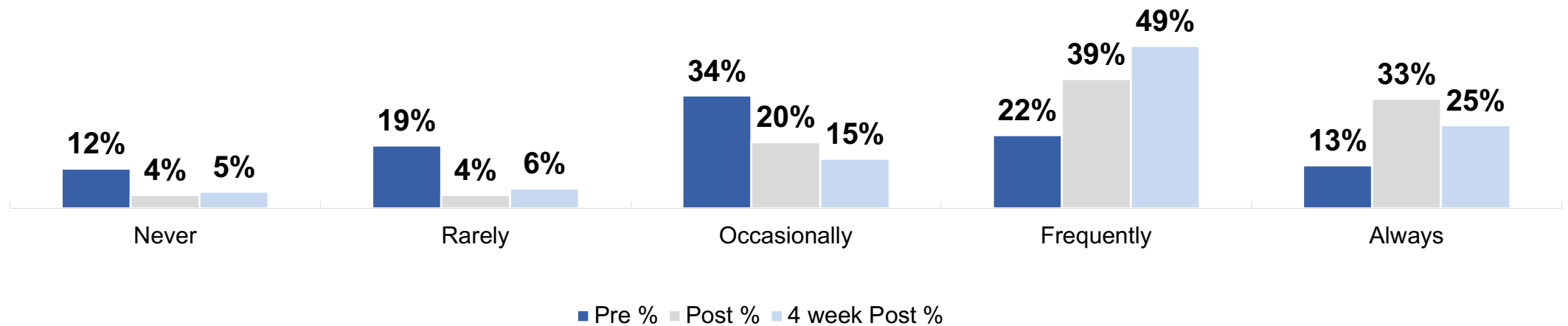


Please rate your confidence in your ability to recognize features that suggest PAH :



Pre N = 233 Post N = 248 4 weeks N = 81

How often do/will you plan to order an echocardiogram for a patient with unexplained shortness of breath?



Pre N = 232 Post N = 166 4 weeks N = 81

Data Interpretation

Are more aware of the physical exam findings suggestive of PAH

Recognize that decreasing cardiac output is associated with the progression to right heart failure in PAH



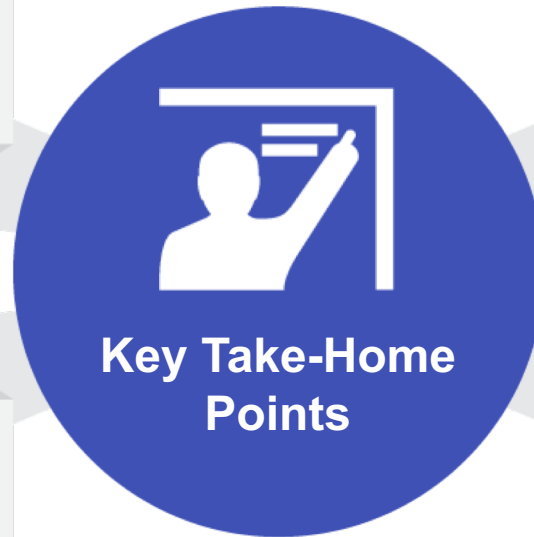
Are aware of the role of echocardiography in monitoring patients with PAH every 6-12 months

Understand that an empiric trial of calcium channel blockers is not indicated in the management of PAH when right heart catheterization shows no vasodilator response

Data Interpretation

89% stated 4 weeks after program they (sometimes-always) plan to order an echocardiogram for a patient with unexplained shortness of breath, improved from 69% prior to the program

Over 300% improvement in confidence in the ability to recognize features that suggest PAH 4 weeks after the program.



**Key Take-Home
Points**

91% of participants are likely to utilize information learned from this activity in their practice

70% of attendees report seeing 0-1 or more patients with PAH weekly suggesting a significant number of patients impacted by this education.

Persistent Educational Gaps After 4 Weeks

Pathophysiology of PAH

Physical examination for PAH

Treatment strategies for PAH

PAH monitoring



New Specific Behaviors Reported at 4 weeks



PAH is higher on my differential for younger patients with unexplained fatigue and shortness of breath

I will order echocardiogram for symptoms of dyspnea not explained by exam or CXR

I have started to refer patients to a PAH clinic

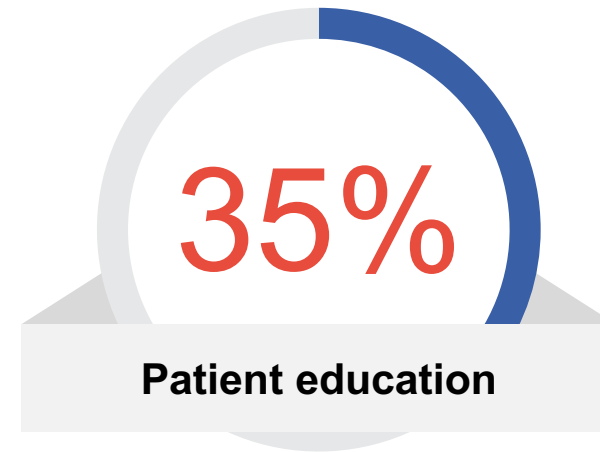
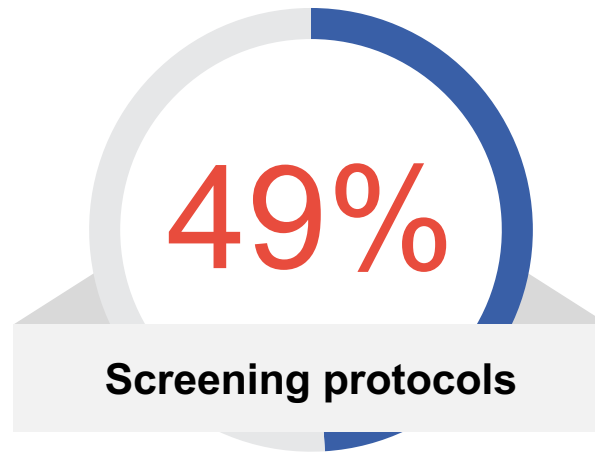
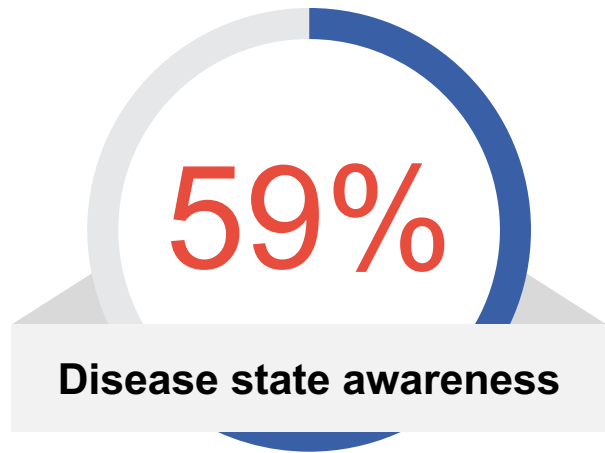
I am more aware of features for recognizing PAH

I am more confident in educating patients and screening for PAH



(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)



(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)

