Challenges in Pulmonary and Critical Care 2017

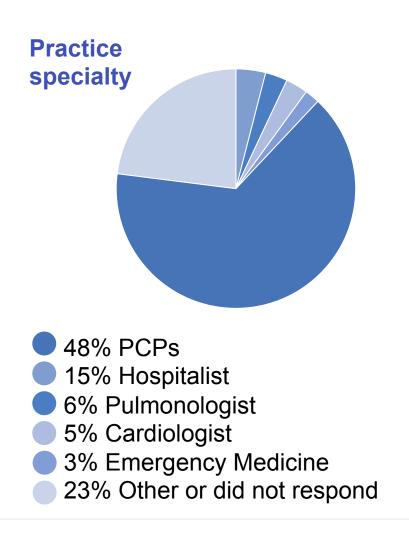


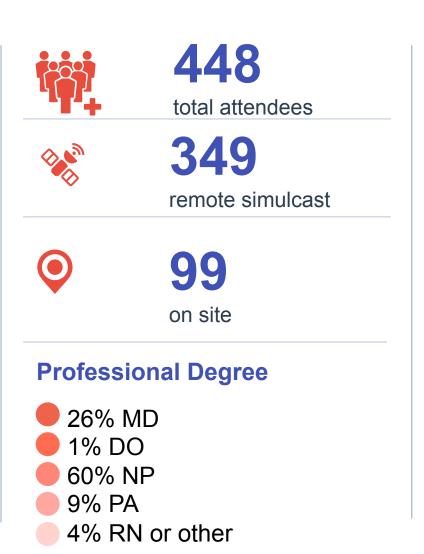
Pulmonary Hypertension: The Era of Combination Therapy

Outcome Report: February 6, 2018



Level 1 (Participation)









Key Findings



Statistically significant improvement in 3 of 4 questions regarding the evaluation and management of patients with Pulmonary Arterial Hypertension



91% stated they would implement new strategies learned from this program in their practice



Significant improvement in confidence in the ability to recognize and manage patients with Pulmonary Arterial Hypertension 4 weeks after the program. Learners confidence went from 11% to 88% for those with somewhat to very high levels.



Change of Practice Behavior

After 4 weeks, participants reported the following improved skills regarding the treatment of patients with pulmonary disease: 70% disease state awareness, 61% pharmacotherapy, and 56% screening protocols.

4 Weeks Post N= 164



Discussion and Implications

- ❖ Overall, the program greatly improved understanding of the learners in diagnosis and management and pharmacotherapy of pulmonary arterial hypertension,
- Major improvement in understanding the disease and its importance
- Though improvements were observed, learners demonstrated persistent gaps in the several areas including:
 - How to accurately assign a patient to a PAH group
 - The benefits, timing, and data supporting combination therapy for PAH
 - Recognition of the risk of chronic thromboembolic pulmonary embolism from acute pulmonary embolism
- The post-test scores, and intent to change practice patterns regarding the management of patients with Pulmonary Arterial Hypertension, signifies a clear gap in knowledge and an unmet need among clinicians. It continues to be an important area for future educational programs.



Course Director

Franck Rahaghi, MD, MHS, FCCP Director of Advanced Lung Disease Clinic Director, Pulmonary Hypertension Clinic Head of Alpha-1 Foundation Clinical Resource Center Chairman, Dept. of Pulmonary and Critical Care Cleveland Clinic Florida Weston, FL

Activity Planning Committee

Gregg Sherman, MD

Franck Rahaghi, MD, MHS, FCCP

Harvey C. Parker, PhD, CHCP

Michelle Frisch, MPH, CHCP

Sheila Lucas, CWEP

Faculty

Sajive Aleyas, MD Director, Interventional & Advanced Diagnostic **Bronchology Clinic** Director, Respiratory Center Lung Cancer Program Department of Pulmonary & Critical Care Cleveland Clinic Florida Weston, FL

Carmel Celestin, MD Department of Vascular Medicine Cleveland Clinic Florida Weston, FL

Frank Eidelman, MD Chair, Department of Allergy & Immunology Cleveland Clinic Florida Weston, FL

Anas Hadeh, MD, FCCP Director, Pulmonary and Critical Care Medicine Fellowship Program

Affiliate Assistant Professor of Clinical Biomedical Medical University of South Carolina Science

FAU Charles E. Schmidt College of Medicine Cleveland Clinic Florida Weston, FL

Ileana M. Leyva, MD, FAAHPM **Regional Medical Director** VITAS Healthcare Fort Lauderdale, FL

Jinesh P. Mehta. MD Director, ICU Operations / MICU Pulmonary & Critical Care Medicine Cleveland Clinic Florida Weston, FL

Charlie Strange, MD

Professor of Pulmonary and Critical Care

Medicine

Charleston, S

Joao A. de Andrade, MD Professor of Medicine Director, Pulmonary Disease and Critical Care Medicine Training Program Director, Interstitial Lung Disease Program

University of Alabama at Birmingham

Birmingham, AL



Commercial Support

The Challenges in Pulmonary & Critical Care 2017 held on December 2, 2017 was supported through educational grants or donations from the following companies:

- Actelion Pharmaceuticals US, Inc.
- Bayer Healthcare Pharmaceuticals, Inc.
- Boehringer Ingelheim Pharmaceuticals, Inc.
- CSL Behring
- Grifols
- Mallinckrodt Pharmaceuticals
- Shire
- Sunovion Pharmaceuticals Inc.



Learning Objectives

- 1. Discuss the diagnosis and classification of pulmonary hypertension according to the World Health Organization (WHO) clinical classification system.
- Outline an approach to rule out and appropriately manage chronic thromboembolic pulmonary hypertension (CTEPH), if present.
- 3. Recognize the role of upfront, early combination and goaloriented therapy for pulmonary arterial hypertension (PAH).
- 4. Describe the management of adverse events with PAH therapies and strategies to improve patient adherence.



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

desired results and improved outcomes: integrating planning and assessment throughout learning activities. J Contin. Educ. Health Prof. 2009 Winter;29(1):1-15

Moore DE Jr, Green JS, Gallis HA. Achieving

Level 7: Community Health



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



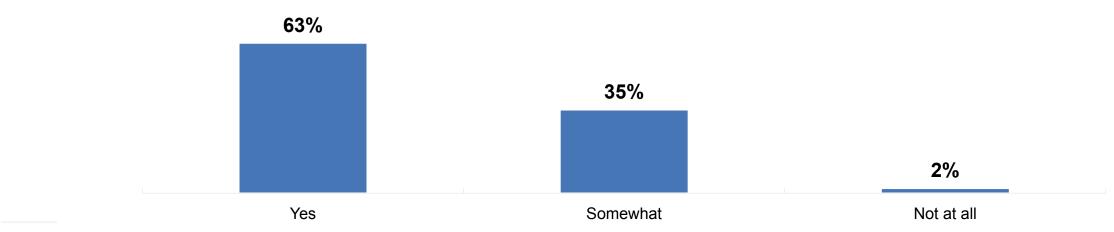
100% said the program was fair-balanced and unbiased



Attendee Learning Objectives Achievement

Upon completion of this activity, I can now:

- Discuss the diagnosis and classification of pulmonary hypertension according to the World Health Organization (WHO) clinical classification system.
- Outline an approach to rule out and appropriately manage chronic thromboembolic pulmonary hypertension (CTEPH), if present.
- Recognize the role of upfront, early combination and goal-oriented therapy for pulmonary arterial hypertension (PAH).
- Describe the management of adverse events with PAH therapies and strategies to improve patient adherence.



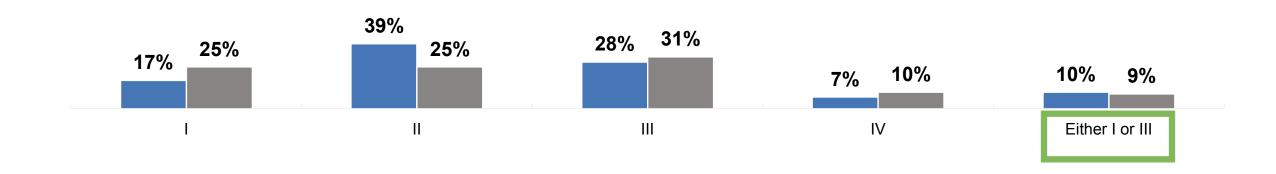
Sample Size: N = 391



A 45 yo woman presents with progressive dyspnea upon exertion and fatigue. Her medical history is significant for scleroderma. Physical examination reveals trace pedal edema. VQ scan is Low Probability for Clots. Echo and cardiac catheterization confirm pulmonary hypertension with a mean PA pressure of 35 and a pulmonary artery occlusion pressure (wedge) of 8, and a PVR of 4.

What group would her pulmonary hypertension be classified as: (Learning Objective 1)

P Value: 0.788 - Not Significant

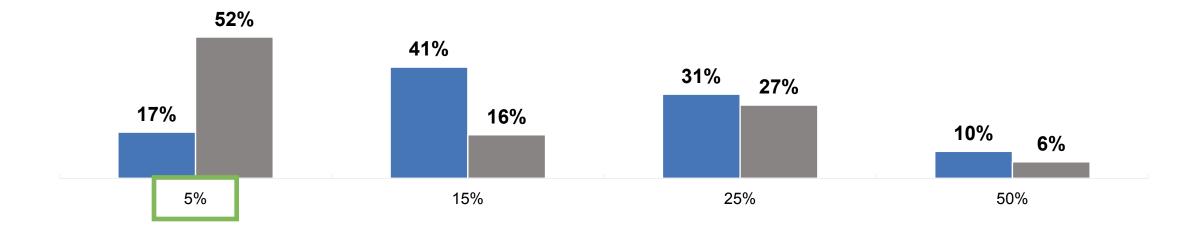




Following an acute pulmonary embolism, what percent of patients will develop chronic thromboembolic pulmonary embolism:

(Learning Objective 2)

P Value: 0.001 – Significant

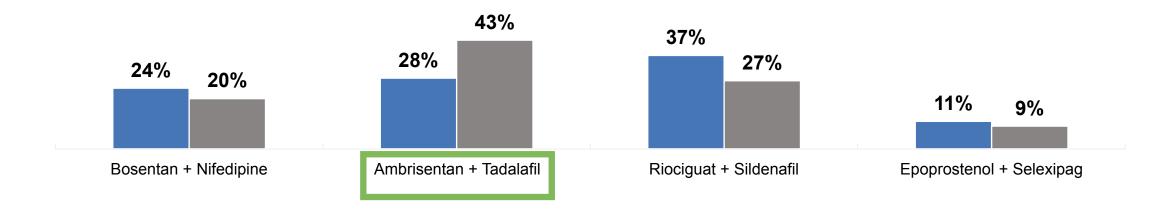




Which of the following upfront combination therapy has shown benefit in pulmonary arterial hypertension:

(Learning Objective 3)

P Value: 0.002 – Significant



Pre N = 187

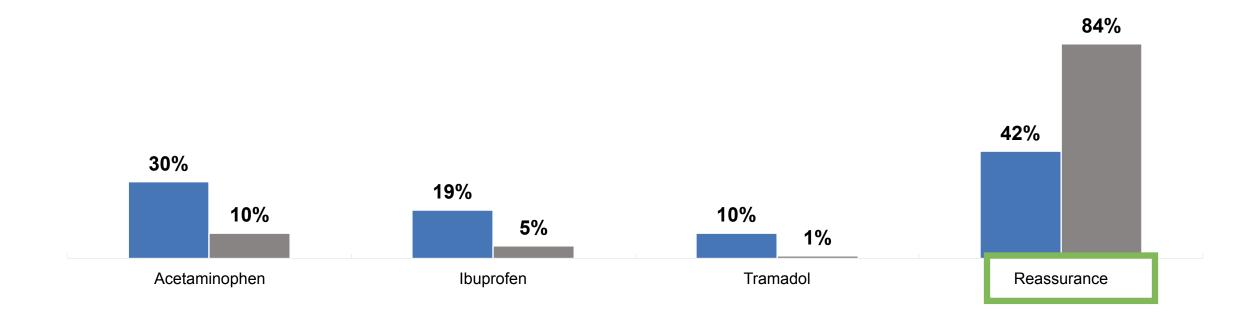
Post N = 190



A patient who was recently started on IV epoprostenol complains of jaw pain while eating. What is the best treatment option:

(Learning Objective 4)

P Value: 0.001 – Significant

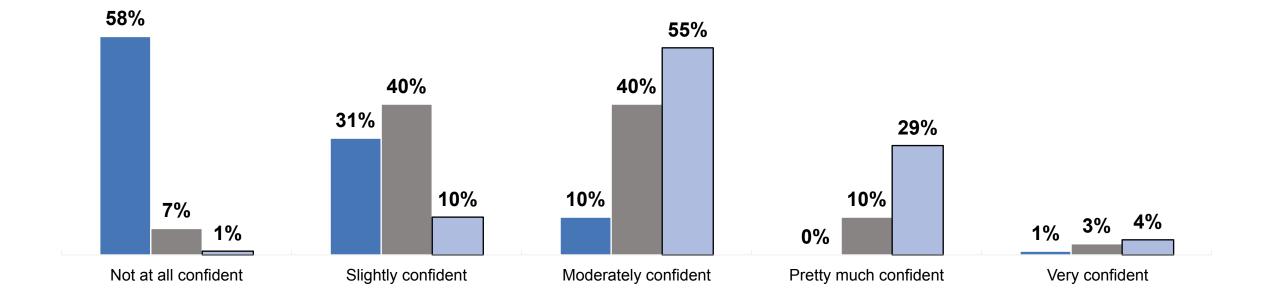


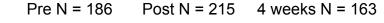
Pre N = 159 Post N = 210



Confidence Assessment

Please rate your confidence in your ability to recognize and manage PAH:







Data Interpretation

Are much more confident in recognizing and managing patients with PAH

Understand how to manage side effects of PAH therapy



Recognize the benefits and timing of combination therapy in the management of PAH

More aware of the risk of developing chronic thrombotic pulmonary embolism after an episode of acute pulmonary embolism

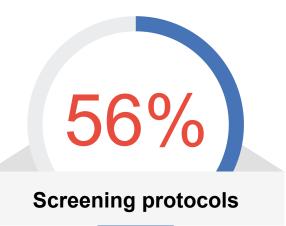


(4-week Post Assessment N=164)

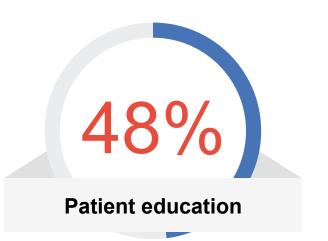
Please select the specific areas of skills, or practice behaviors, you have improved regarding the treatment of patients with pulmonary disease since this CME activity. (Select all that apply.)













(4-week Post Assessment N=164)

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









Formulary restrictions



Time constraints

