

# Pulmonary Arterial Hypertension Gameshow Improves Physician Knowledge and Competencies

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Presented at **ATS (The American Thoracic Society) 2025**, 16-21 May 2025; Poster #4307

## BACKGROUND

We sought to determine if online continuing medical education (CME) delivered in an interactive gameshow format could improve the knowledge, competence and confidence of pulmonologists and cardiologists related to the identification and management of pulmonary arterial hypertension (PAH).

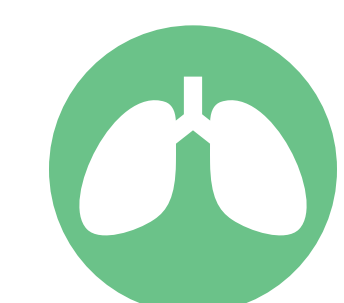


## METHODS

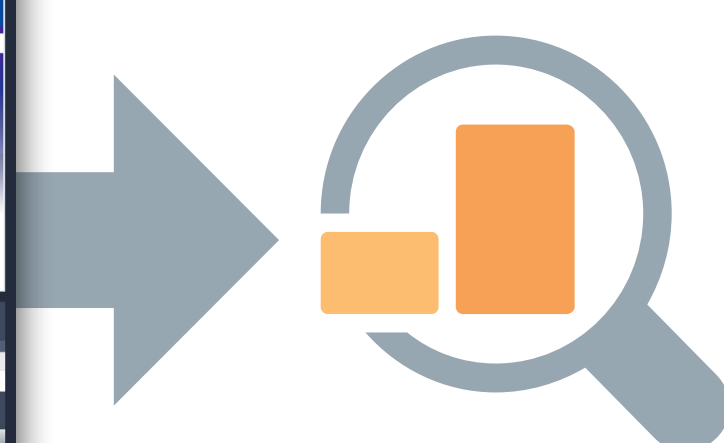
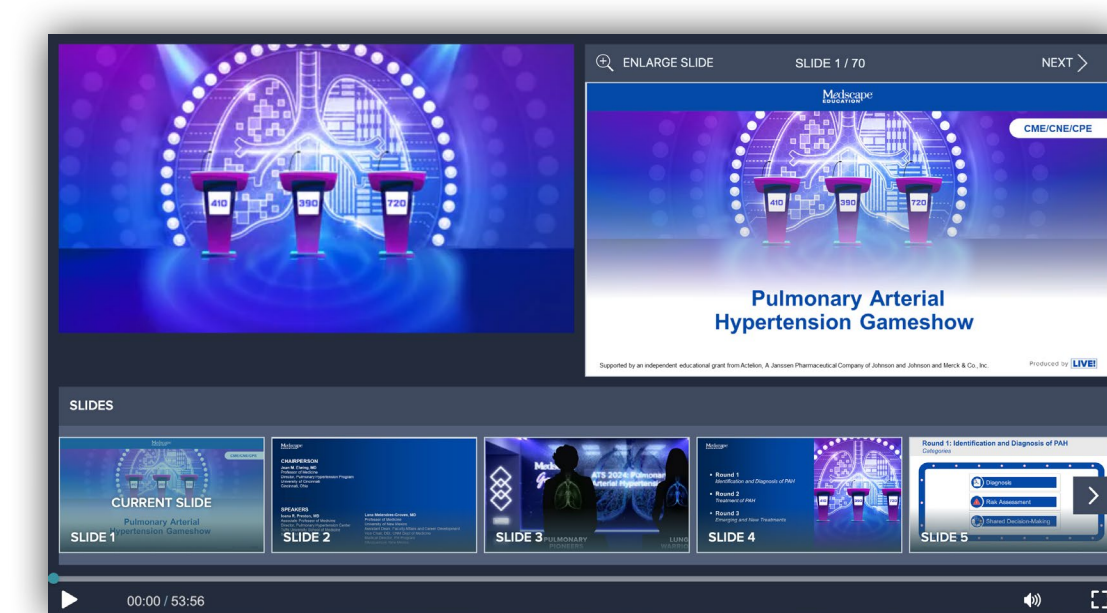
This CME intervention comprised of a 60-minute enduring online video-based program with 3 expert faculty, originally broadcast live in-person and online at the 2024 American Thoracic Society (ATS) International annual meeting, as a gameshow with interspersed faculty commentary. Educational effect was assessed using a repeated-pair design with pre-/post-assessment. Three multiple choice questions assessed knowledge and competence, and 1, rated on a Likert-type scale, assessed confidence. A paired samples t-test was conducted on overall average number of correct responses and for confidence rating, and a McNemar's test was conducted at the question level (significance level,  $P < .05$ ). The enduring activity launched June 18, 2024 and data were collected through September 9, 2024.



**Cardiologists**  
(n = 81)



**Pulmonologists**  
(n = 38)



## How to Read the Linked Learner Assessment

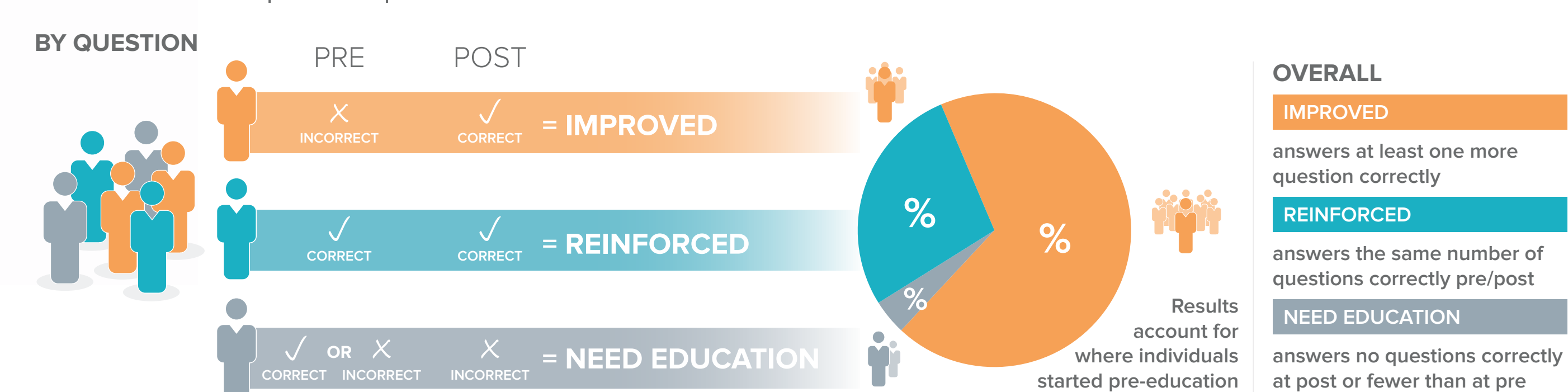
### OUTCOMES COMPLETERS

Each individual completed BOTH the pre- and post-education questions – SAME individuals pre- and post-education



### LINKED LEARNER

Each individual tracked pre- and post-education – Learners serve as their own controls

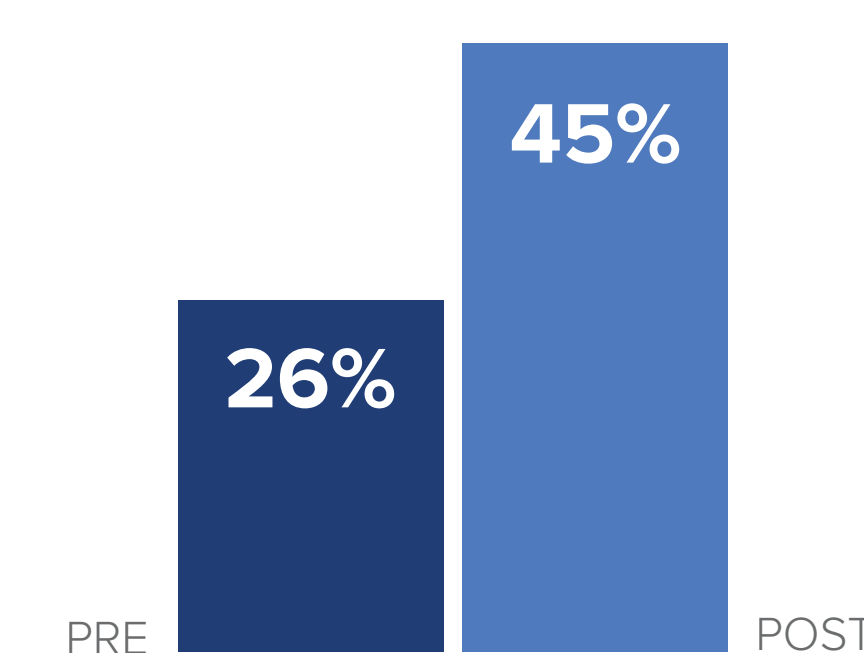


## RESULTS

### OVERALL

**Cardiologists** (n = 81)

AGGREGATED RESULTS



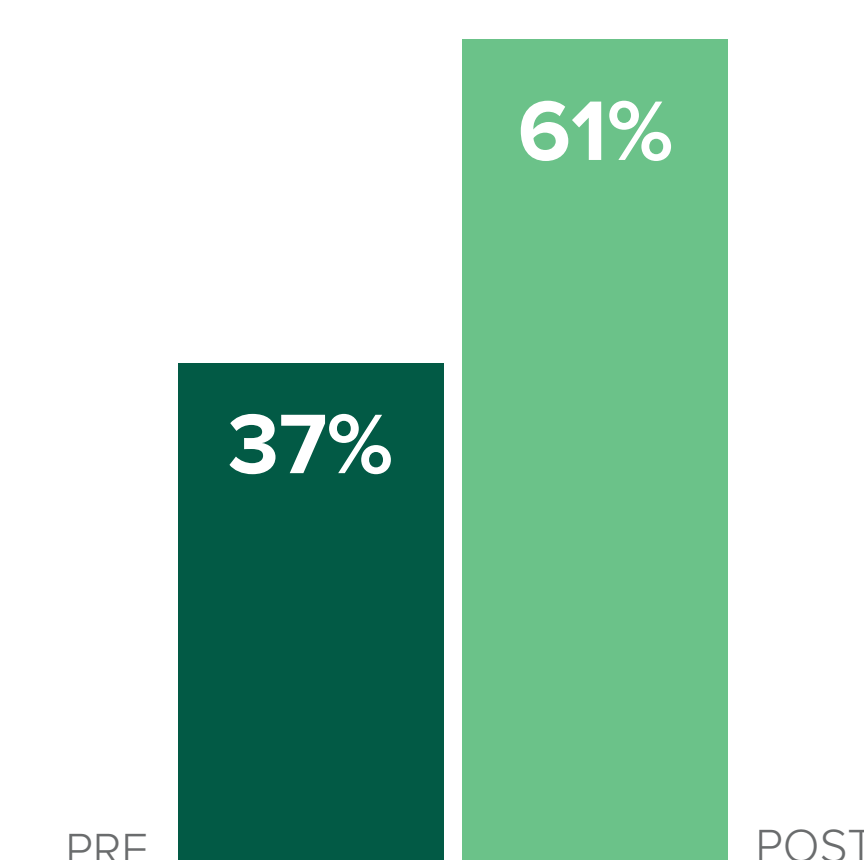
CHI-SQUARE TEST

**$P < .001$**

SIGNIFICANCE ( $P < .05$ )

**Pulmonologists** (n = 38)

AGGREGATED RESULTS



CHI-SQUARE TEST

**$P < .001$**

SIGNIFICANCE ( $P < .05$ )

### QUESTION 1 RESULTS

Improvement in knowledge of evaluation and risk stratification

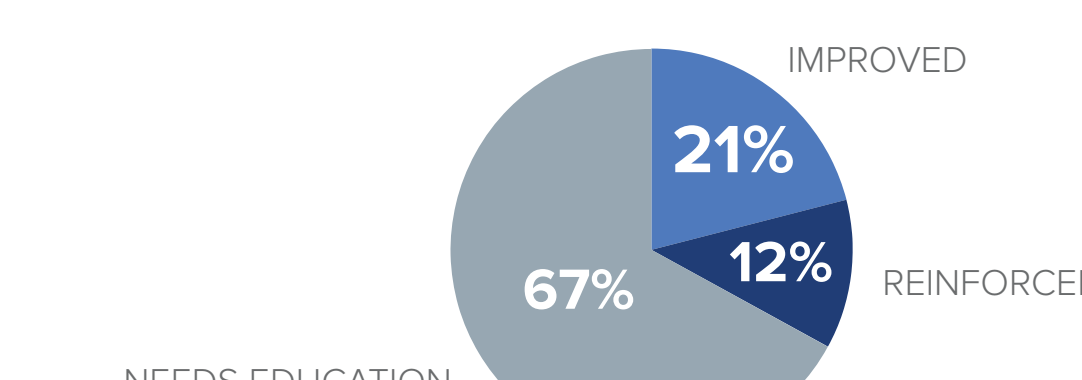
**QUESTION:** Based on the 2022 European Respiratory Society (ERS)/European Society of Cardiology (ESC) guidelines, what is the recommended strategy to choose initial pulmonary arterial hypertension (PAH) therapy? (Correct Answer: Risk assessment with 3-strata model)

**Cardiologists** (n = 81)

AGGREGATED RESULTS

PRE: 12% POST: 33%

LINKED LEARNING RESULTS



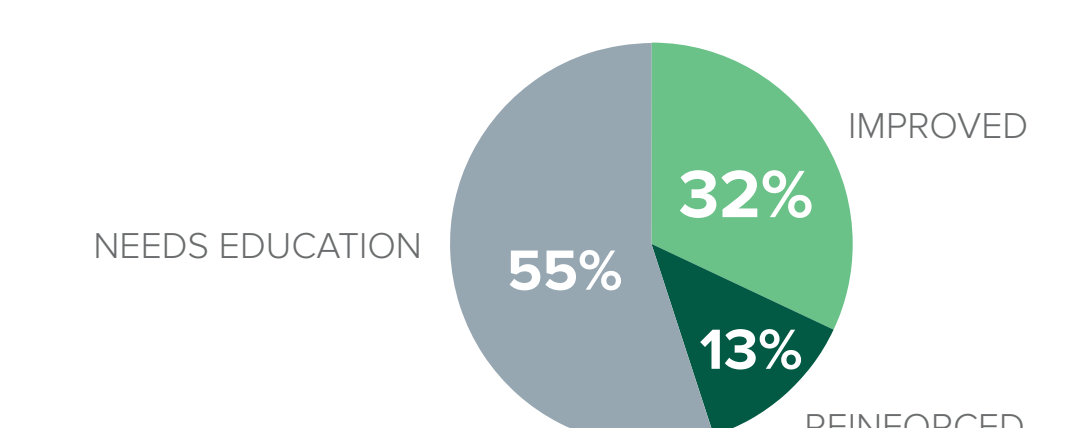
$P < .001$

**Pulmonologists** (n = 38)

AGGREGATED RESULTS

PRE: 16% POST: 45%

LINKED LEARNING RESULTS



$P < .01$

### QUESTION 3 RESULTS

Competence in selection of PAH treatment based on risk status

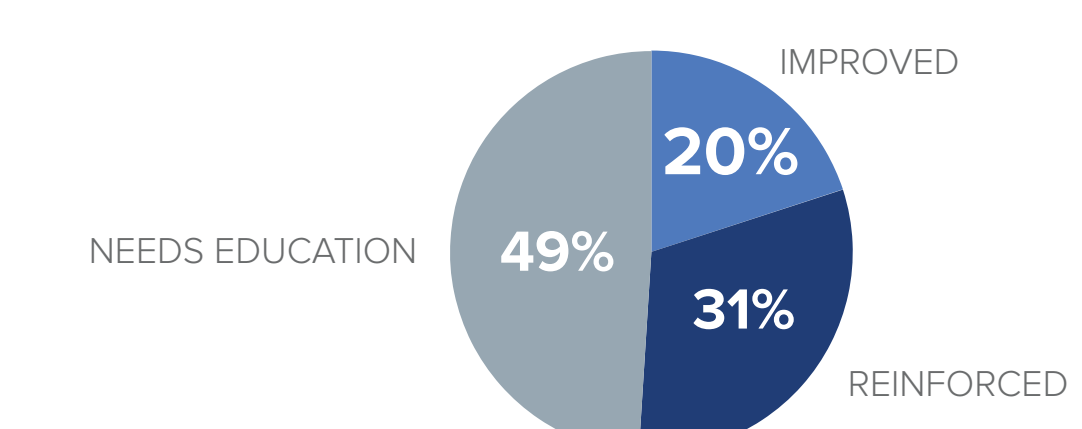
**QUESTION:** A novel drug approved for the treatment of PAH, sotatercept, is acting on which pathway? (Correct Answer: The BMPR2/activin pathway)

**Cardiologists** (n = 81)

AGGREGATED RESULTS

PRE: 32% POST: 51%

LINKED LEARNING RESULTS



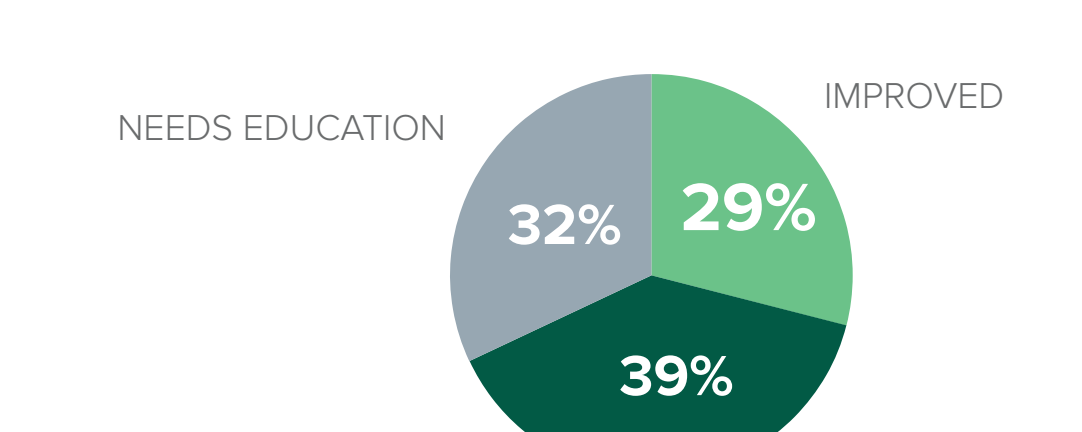
$P < .001$

**Pulmonologists** (n = 38)

AGGREGATED RESULTS

PRE: 39% POST: 68%

LINKED LEARNING RESULTS



$P < .001$

### QUESTION 2 RESULTS

Improvement in knowledge of evidence-based PAH treatment

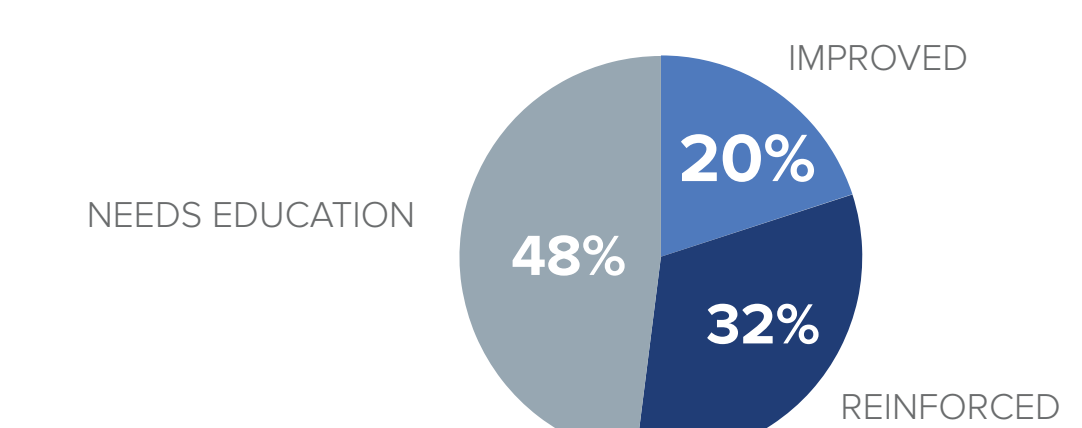
**QUESTION:** A patient was diagnosed with idiopathic PAH, and their risk assessment indicates a low risk of mortality at 1 year. Which treatment approach is recommended for this patient? (Correct Answer: Dual upfront combination therapy with PDE5 inhibitor and ERA)

**Cardiologists** (n = 81)

AGGREGATED RESULTS

PRE: 32% POST: 52%

LINKED LEARNING RESULTS



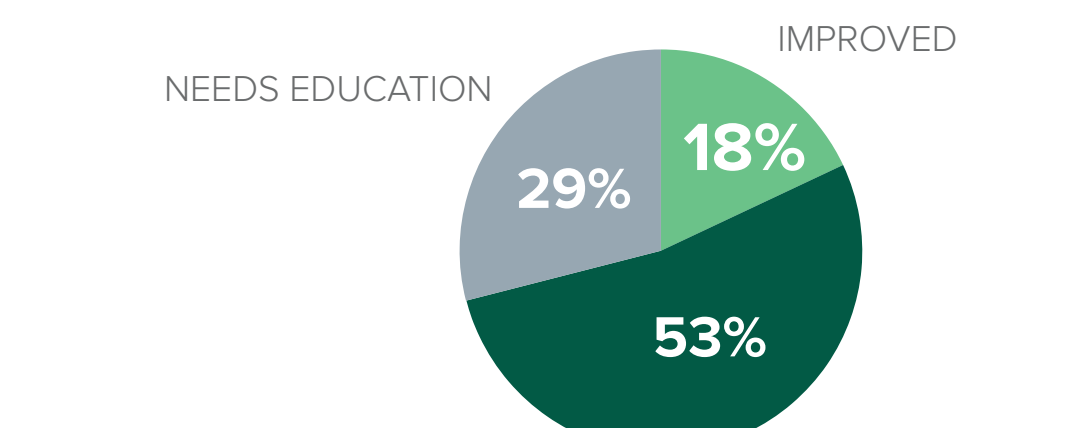
$P < .001$

**Pulmonologists** (n = 38)

AGGREGATED RESULTS

PRE: 55% POST: 71%

LINKED LEARNING RESULTS



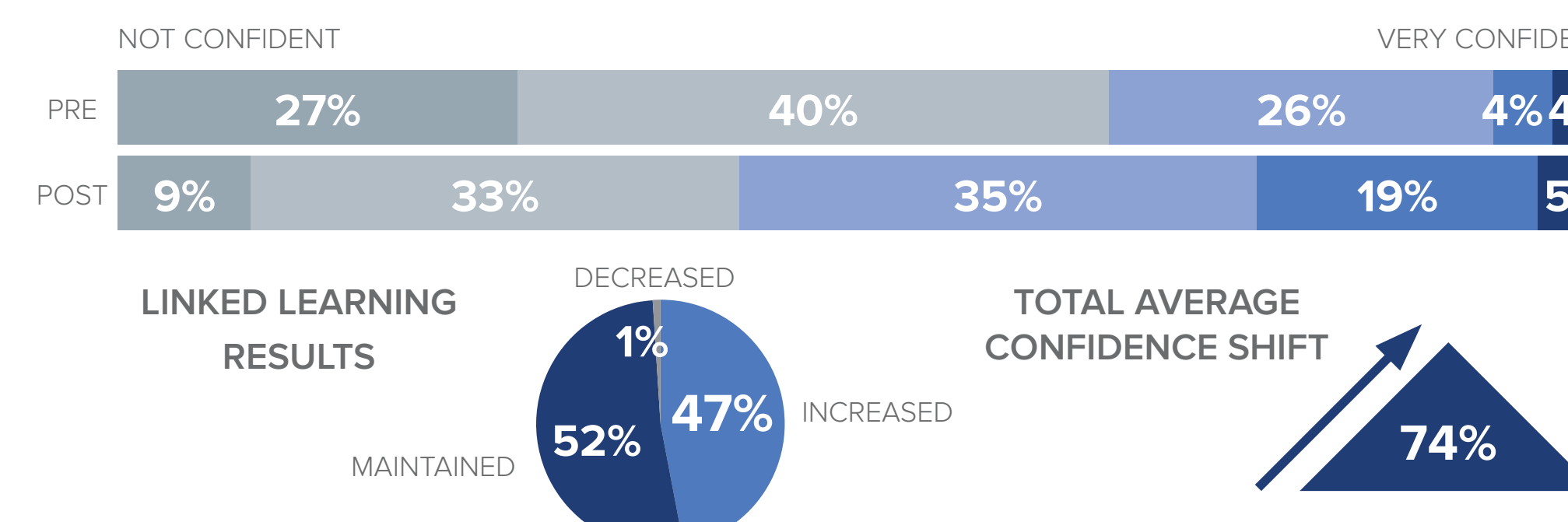
$P < .05$

### CONFIDENCE ANALYSIS

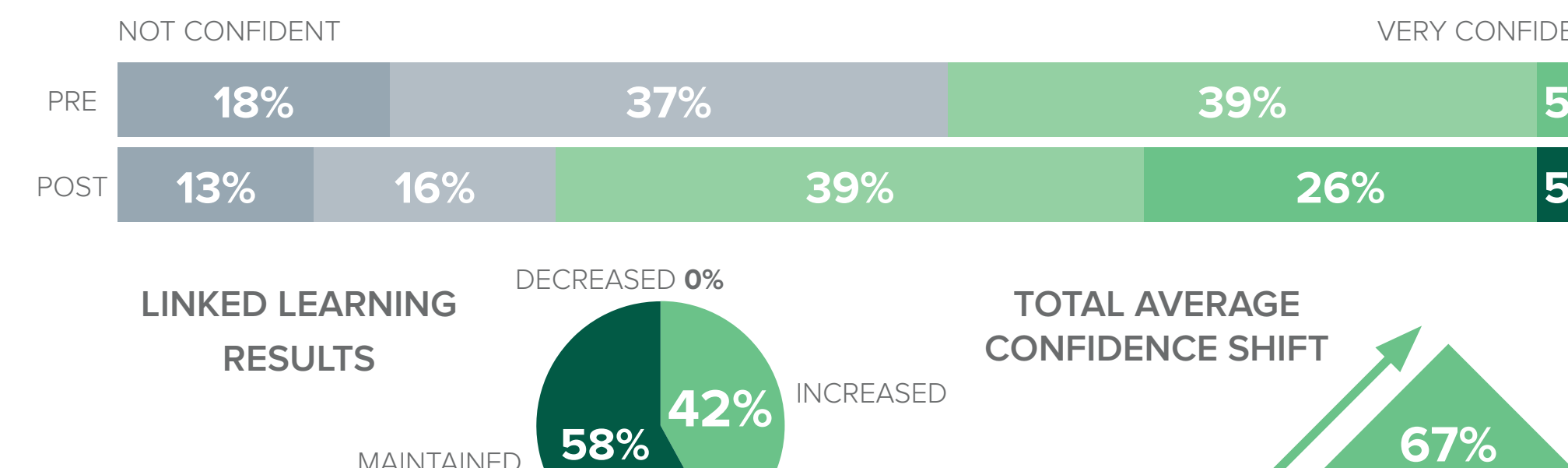
Confidence in ability to facilitate shared decision-making to improve disease management

**QUESTION:** How confident are you right now in your ability to facilitate shared decision-making to enhance disease management for patients with PAH? (Select ranking from 1 [Not confident] to 5 [Very confident])

**Cardiologists** (n = 81)



**Pulmonologists** (n = 38)



## CONCLUSIONS

This study demonstrates the success of online case-based CME delivered as a gameshow on knowledge, competence, and confidence of physicians related to the identification and management of PAH. Continued gaps were identified for future educational targets.

### ACKNOWLEDGEMENTS

Supported by an independent educational grant from Actelion, a Janssen Pharmaceutical Company of Johnson and Johnson and Merck & Co.

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