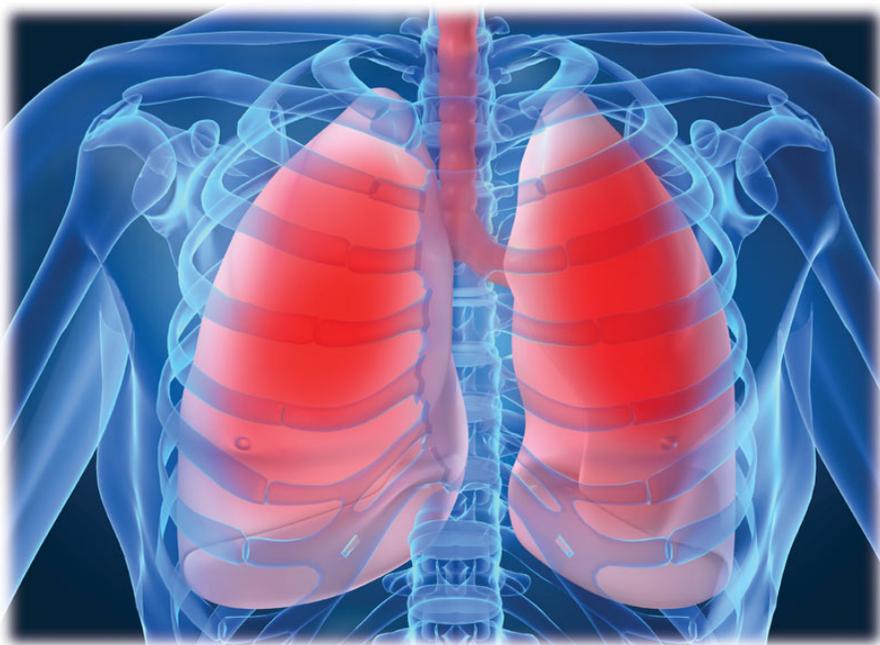**NACE**

NATIONAL ASSOCIATION FOR CONTINUING EDUCATION

Sleep Medicine: Latest Advances in Sleep Medicine: Diagnosis and Treatment

Outcome Report

Challenges in Pulmonary and Critical Care: 2011

Presented at:
Cleveland Clinic Florida
Weston, Florida
December 3, 2011

Report Date: 12/31/11

Course Director

Franck Rahaghi, MD, **MHS**
Director, Pulmonary Hypertension Clinic
Director, Pulmonary Education and Rehabilitation
Chair of Quality
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 educational activity for a maximum of 4 *AMA PRA Category 1 Credits™.*

*The Cleveland Clinic Florida designates this educational activity for a maximum of 2 *AMA PRA Category 1 Credits™.*

* This applies to the full day CME activity entitled Challenges in Pulmonary and Critical Care: 2011.

Commercial Support

Agenda

| Time	Session
7:20-7:50	Continental Breakfast and Registration
7:50-8:00	Welcome Remarks Franck Rahaghi, MD, MHS, FCCP
8:00-9:00	What is New in Lung Cancer: Diagnosis and Management Eduardo Oliveira, MD, MBA
9:00-10:00	COPD: New Developments Charlie Strange, MD
10:00- 10.30	Break/Vendor Area
10:30-11:00	Keynote Speaker: Representative Debbie Wasserman Schultz, Florida's 20th District –Health Care in the United States
11:00-12:00	Anticoagulation: What is New Victor Tapson, MD
12:00- 1:00	Lunch/Exhibits
1:00-2:00	*Pulmonary Hypertension: State of the Art Franck Rahaghi, MD, MHS, FCCP
2:00-3:00	*Alpha-1 Antitrypsin Deficiency: Future of Diagnosis and Treatment Franck Rahaghi, MD, MHS, FCCP
3:00-3:15	Break/Vendor Area
3:15-4:15	**Sleep Medicine: Latest Advances in Sleep Medicine: Diagnosis and Treatment Laurence Smolley, MD**
4:15-4:30	Closing 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

- 102 attendees
- 67% Physicians; 11% NPs; 5% PAs; 10% RNs; 7% Other
- Over 80% in community-based practice
- 47% PCPs, 21% Pulmonologists; 1%Endocrinologists; 1% Cardiologists; 2% Rheumatologist; 28% Other or did not respond

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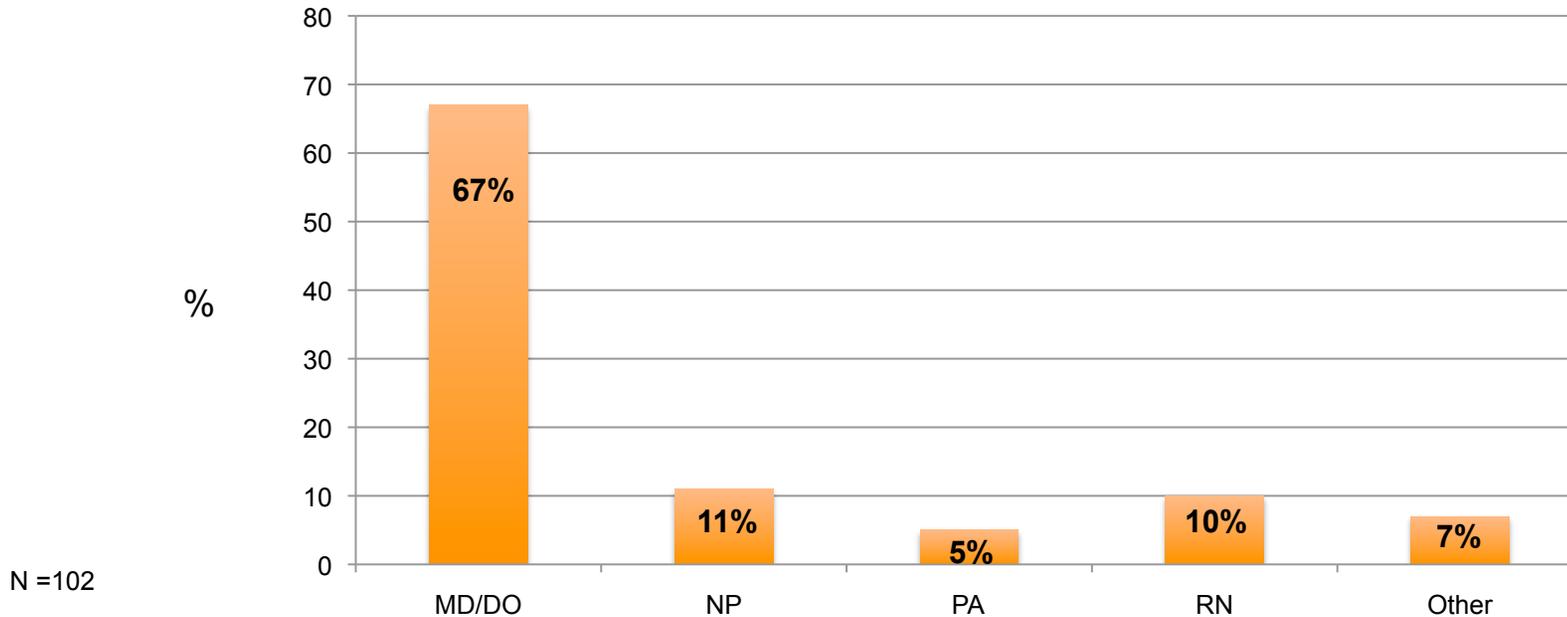
Did we reach the right audience?   Yes!

Level 2: Satisfaction

- 97% rated the activity as very good to excellent
- 99% indicated the activity improved their knowledge
- 95% stated that they learned new strategies for patient care
- 89% said they would implement new strategies that they learned in their practice
- 99% 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 latest advances in diagnosis of sleep disorder and the indications
and applications of home sleep testing; Describe the indications and
applications of treatment of sleep apnea; Explain the indications and
applications of certain drugs in sleep medicine.
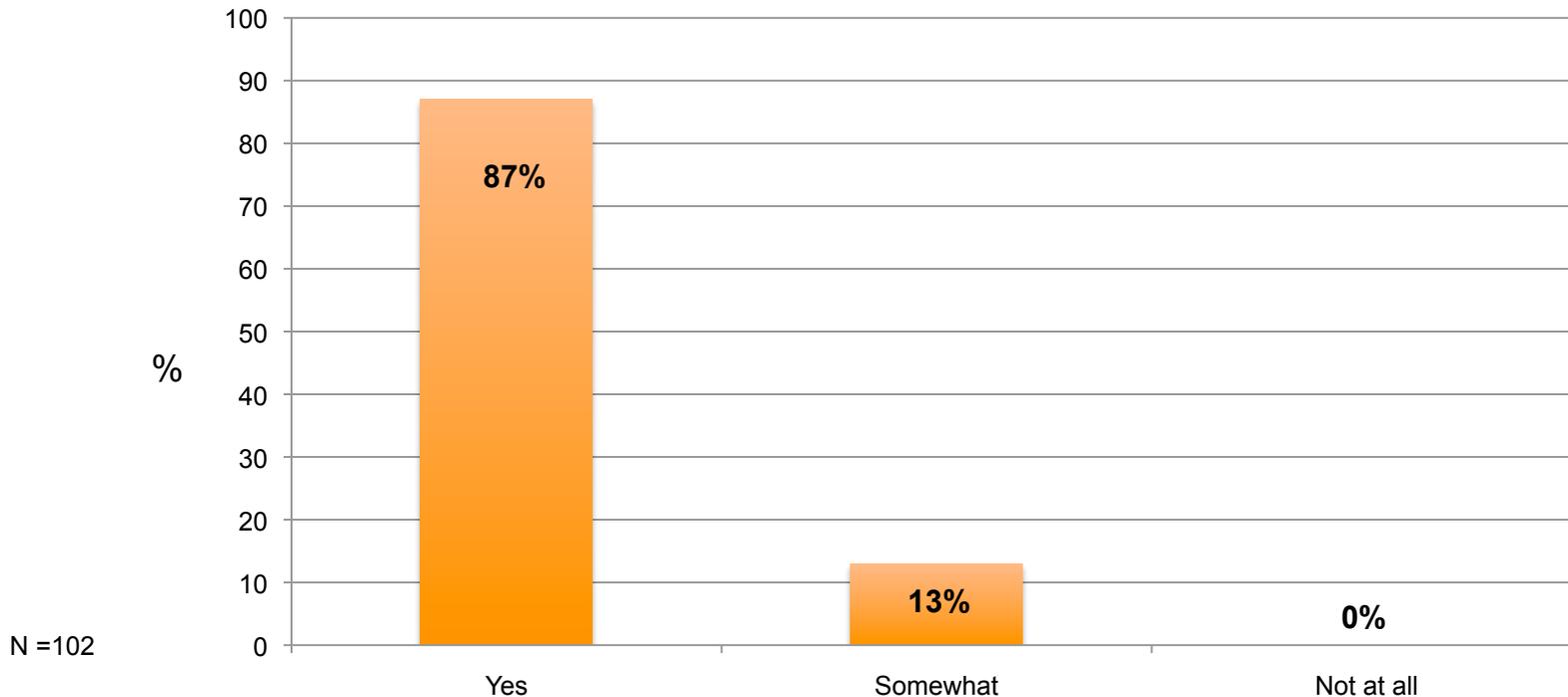
Did learners indicate they achieved the learning objectives?
Yes! 100% believed they did.

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

- **Level 3: Competence to Apply Critical Knowledge**

  Case-based vignettes and pre- and post-test knowledge questions were asked with each session in the CME activity. 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]

- **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.

- **Level 4: Self-Reported Change in Practice Behavior**

  Intent to change and change four weeks after CME activity.

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 Med14(10): 771-80.

Sleep Medicine: Latest Advances in Sleep Medicine: Diagnosis and Treatment

Faculty
Laurence Smolley, MD
Chair, Pulmonary and Critical Care
Director of Sleep Disorders Center
Cleveland Clinic Florida
Weston, FL

Learning Objectives

- Discuss the latest advances in diagnosis of sleep disorder and the indications and applications of home sleep testing

- Describe the indications and applications of treatment of sleep apnea

- Explain the indications and applications of certain drugs in sleep medicine

Key Findings

Sleep Medicine: Latest Advances in Sleep Medicine: Diagnosis and Treatment

Knowledge/Competence	Learners demonstrated improvement in their answers from pre to post-testing on four of the four case-based questions regarding latest advances in the diagnosis and treatment of sleep disorders with improvements reaching significance in two of the four questions.
Confidence	Participants reported higher confidence levels in providing care to patients with this condition following the education.
Intent to Perform	Learners stated that they were very likely (63%) to somewhat likely (28%) to implement strategies learned at this session in their practice.

Case Vignette Knowledge and Competence Assessment Questions
(Presented before and after lecture. Boxed answer is correct.)

66 yr old man comes in for evaluation and management of very loud snoring which has driven his wife out of the boudoir and falling asleep while trying to manage his investment portfolio on his IPAD over the last 18 months

HPI: He has noted occasional annoying palpitations when he arises from sleep at night to go urinate which he does 1-2 times per night. His wife has noted some breath holding episodes which end with a snort or grunt and some leg jerking.
You suspect obstructive sleep apnea (OSA). You elucidate for him and his wife the causes, functional and cardiovascular consequences OSA and some treatment alternatives. You recommend a diagnostic sleep study in the sleep disorders center lab. He adamantly refuses to have a study done in a lab and demands a Home Sleep Study/Portable Monitoring (HST/PM) because his cousin had one. What do you do now ?
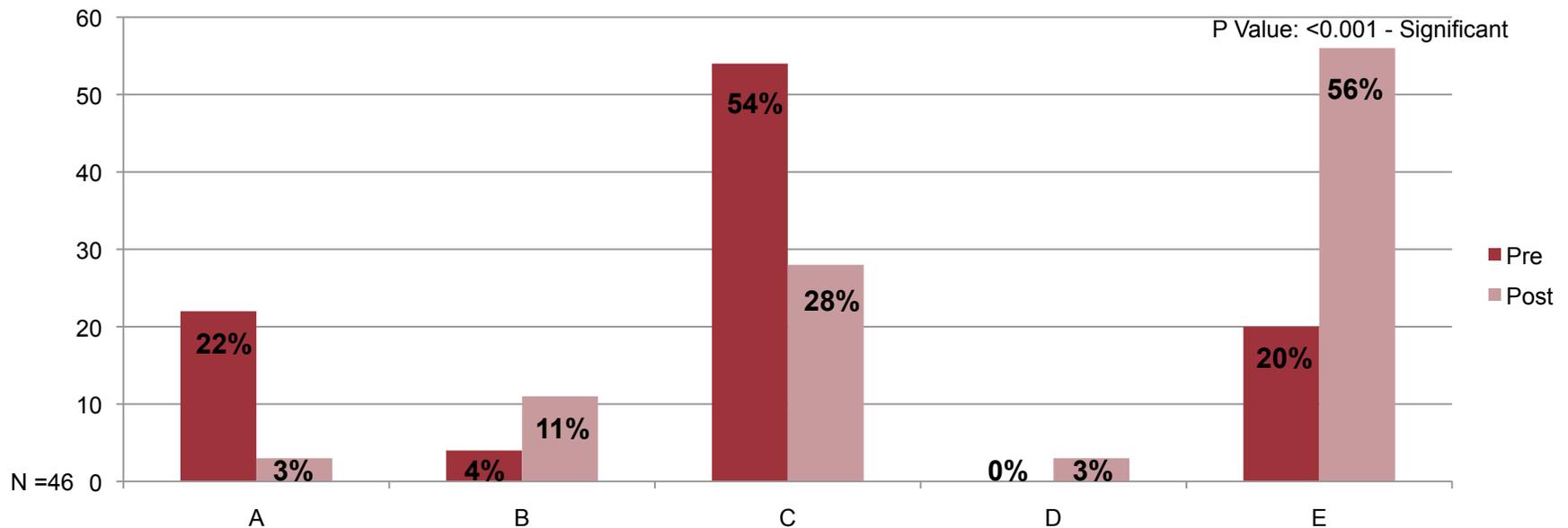
A. Recommend weight loss (BMI target 25) and return to clinic in 6 months

B. Recommend ENT consult for laser - assisted uvulopalatopharyngoplasty (UPPP)

C. Offer him a portable monitor (PM) home sleep test (HST)

D. Recommend he get a new financial advisor , drink more wine and buy his wife ear plugs

E. Recommend he seek another opinion at an accredited sleep disorders center

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.)

Against your better judgment your investor , wine connoisseur, with some leg jerking and annoying palpitations when he arises from sleep at night winds up with a HST
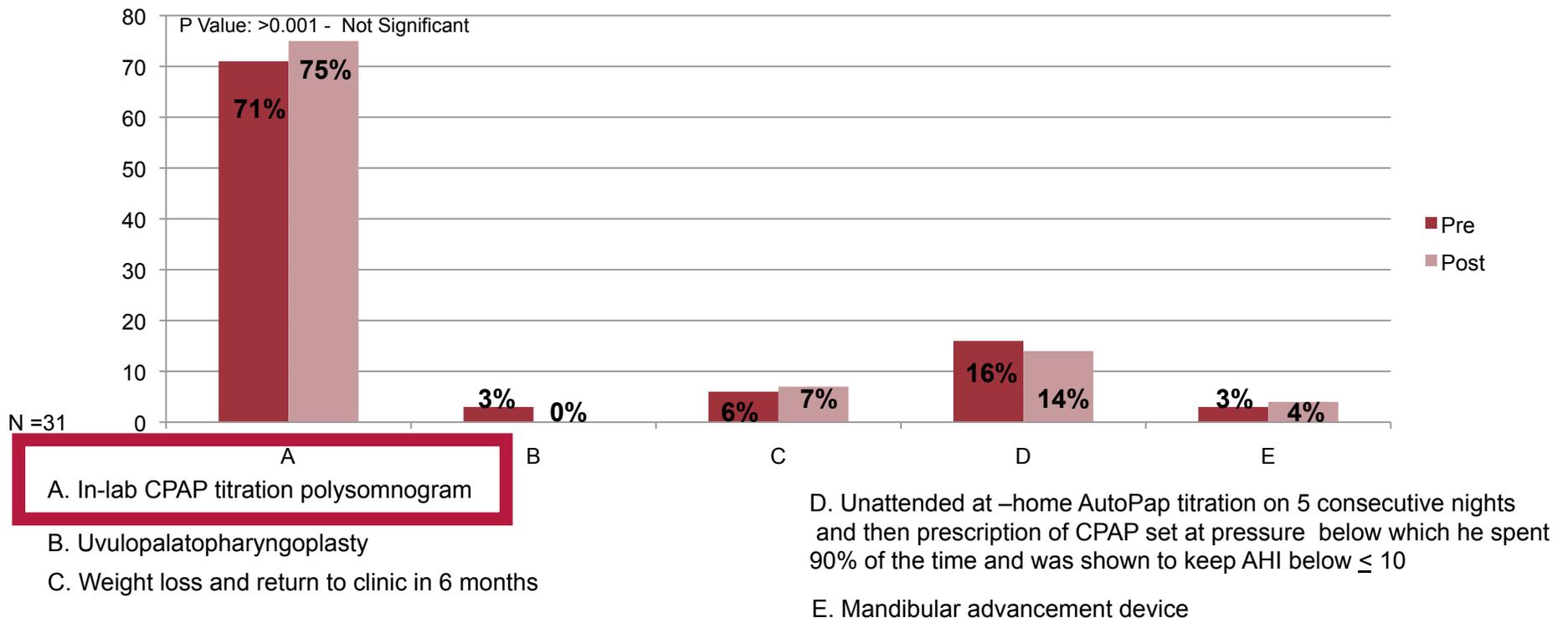
TRT :   8 hrs

apneas and hyponeas : 160 + 80

REI : 30

oxyhemoglobin nadir   83%   (spends about 40 min with sat less than 88 %)

Ekg/pulse : av. rate 66 , nadir 39, zenith 110

What is your suggested intervention ?

A. In-lab CPAP titration polysomnogram

B. Uvulopalatopharyngoplasty

C. Weight loss and return to clinic in 6 months

D. Unattended at –home AutoPap titration on 5 consecutive nights
 and then prescription of CPAP set at pressure below which he spent
90% of the time and was shown to keep AHI below $\leq$ 10

E. Mandibular advancement device

Red highlight indicates no significant difference between pre and post testing.

Case Vignette Knowledge and Competence Assessment Questions
(Presented before and after lecture. Boxed answer is correct.)

What is true about melatonin in the case of our patient ?

P Value: >0.001 - Not Significant

Pre
Post
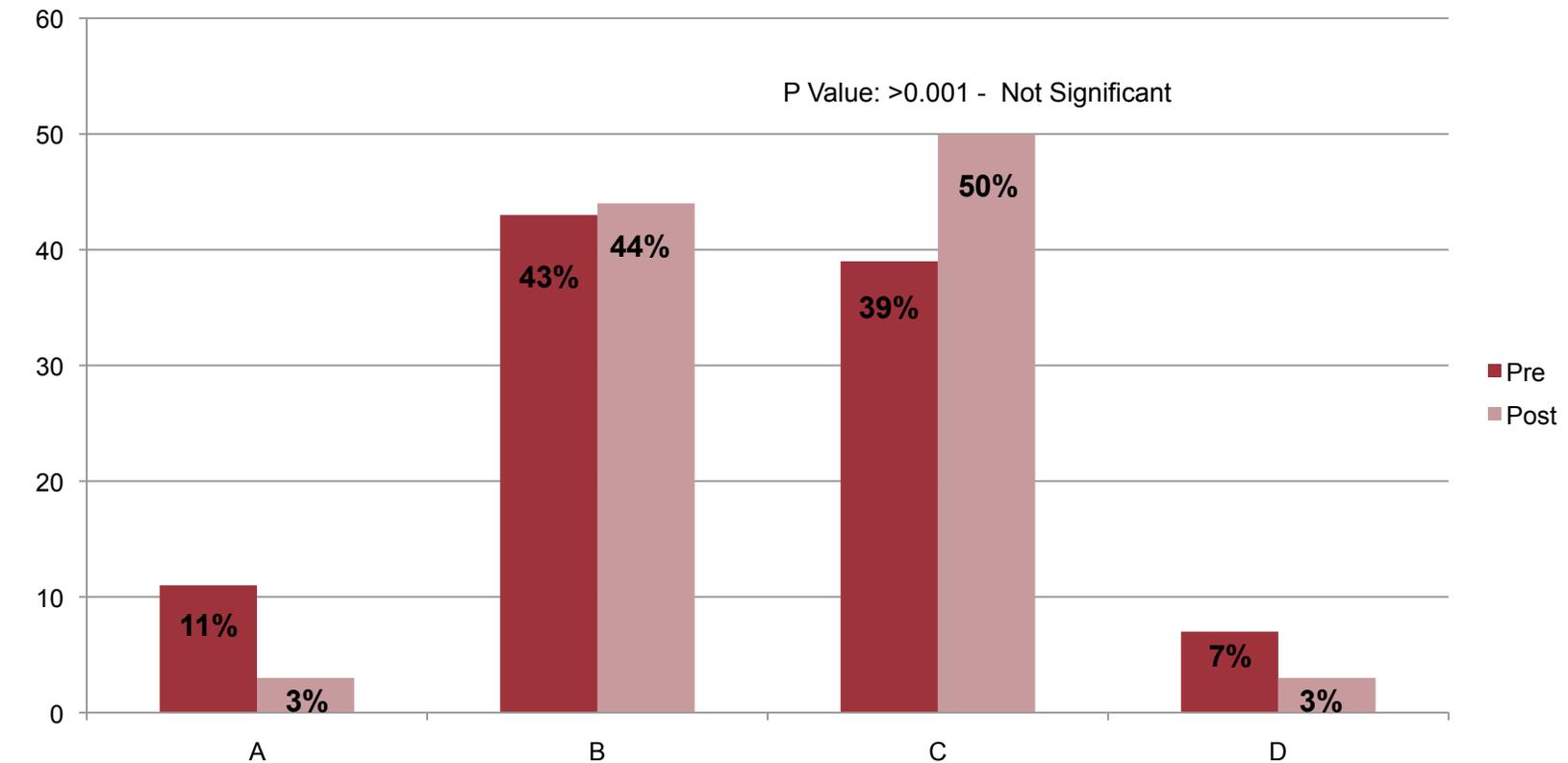
N =34

A. He needs to take it whenever he uses CPAP

B. It has no role in his care

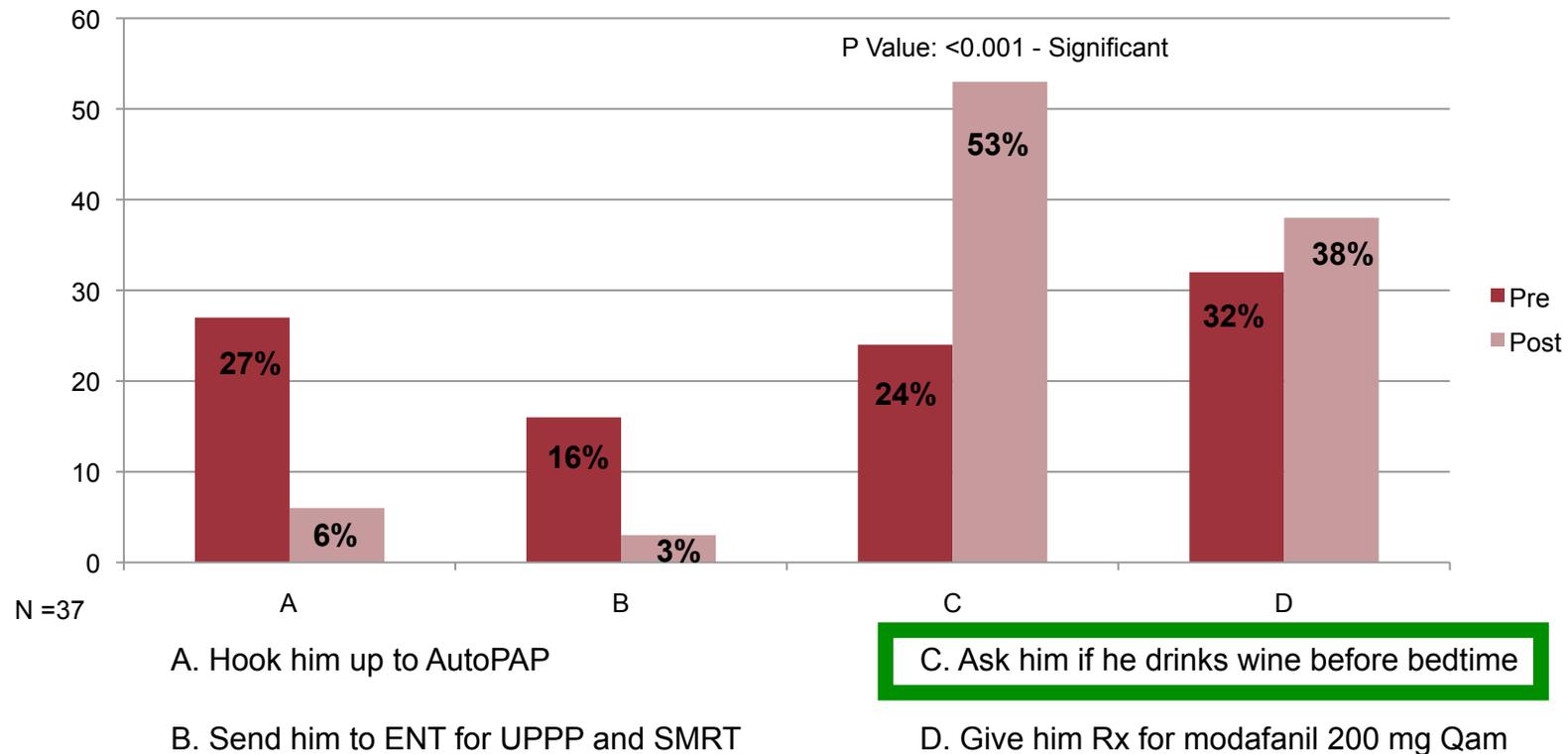C. If he had delayed sleep phase syndrome it would be indicated

D. He can depend on the per pill content of the melatonin he buys at the health food store

Red highlight indicates no significant difference between pre and post testing.

Case Vignette Knowledge and Competence Assessment Questions
(Presented before and after lecture. Boxed answer is correct.)

Your patient relents and has split -night polysomnogram in lab and has excellent response. On a post-sleep questionnaire he indicates that he felt much better that morning after the CPAP. Five weeks later on f/u in clinic he says he uses it 7 nights /week for 7.5 hrs and the download of his chip confirms 95% of the nights he uses the CPAP for more than 4 hrs, with average nightly use 7hrs and 26 minutes with no significant leaks. His ESS is 13 . What do you do now?
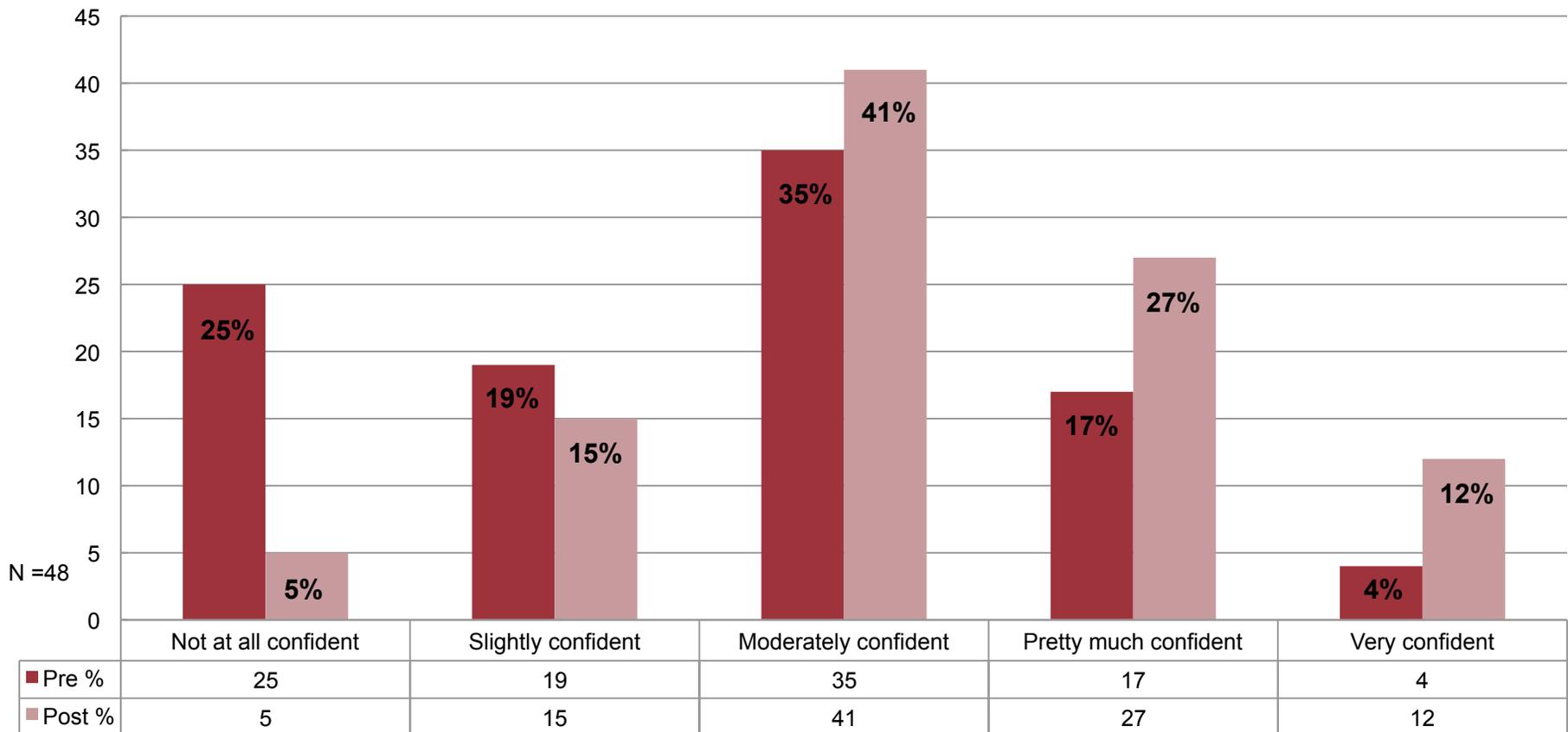

P Value: <0.001 - Significant

Pre | Post

A. Hook him up to AutoPAP

B. Send him to ENT for UPPP and SMRT

C. Ask him if he drinks wine before bedtime

D. Give him Rx for modafanil 200 mg Qam

N =37

Green highlight indicates significant difference between pre and post testing.

# Changes in Confidence from Pre to Post-Testing
Sleep Medicine: Latest Advances in Sleep Medicine: Diagnosis and Treatment

On a scale of 1 to 5 please rate how confident you would be in treating patients with this condition.

	Not at all confident	Slightly confident	Moderately confident	Pretty much confident	Very confident
Pre %	25	19	35	17	4
Post %	5	15	41	27	12

N =48

Intention to Change Practice Behavior and Implement Learning
Sleep Medicine: Latest Advances in Sleep Medicine: Diagnosis and Treatment

How likely are you to implement strategies learned from this presentation in your practice?

N =102
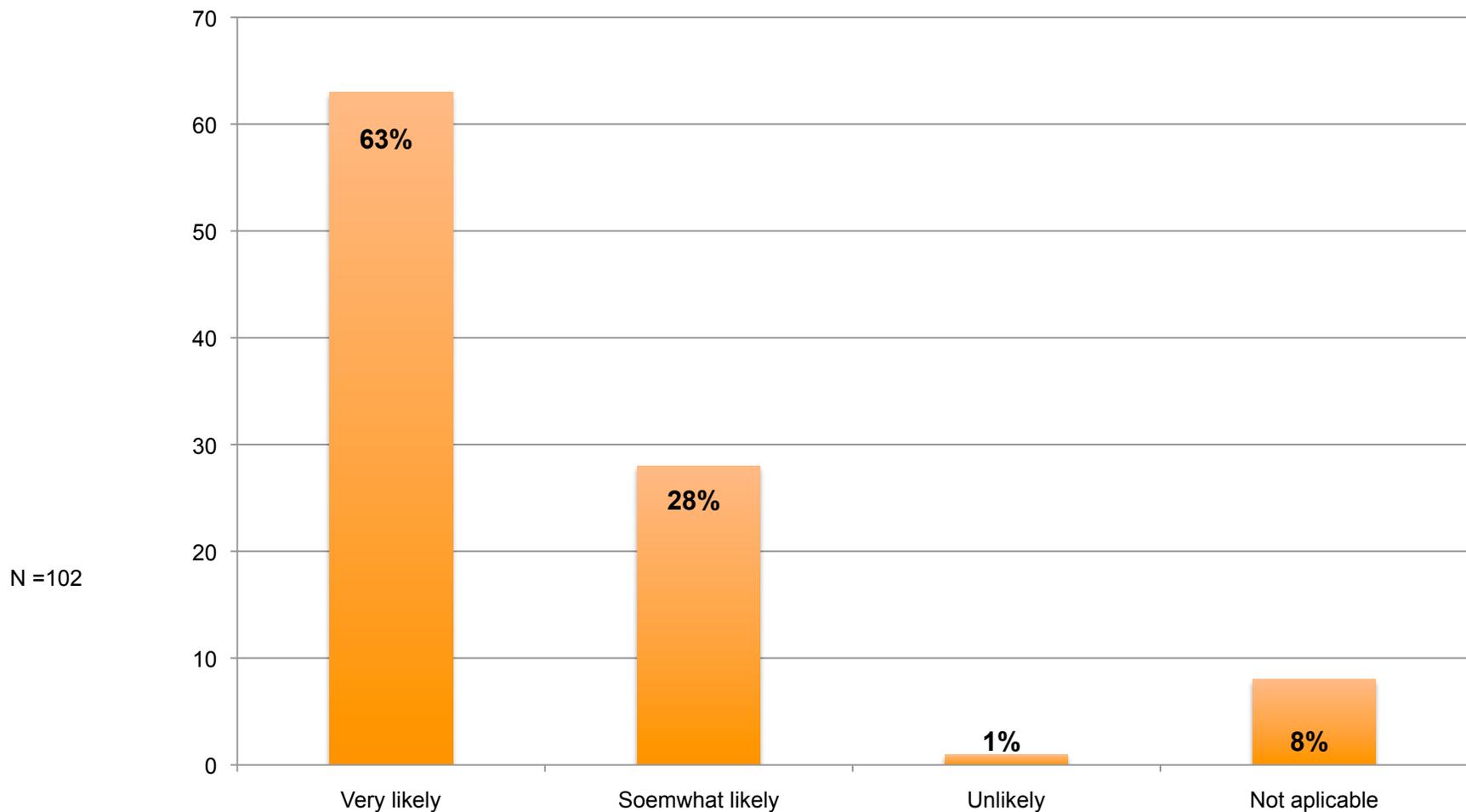
Discussion and Implications

Sleep Medicine: Latest Advances in Sleep Medicine: Diagnosis and Treatment

Learning objectives for this educational activity focused on improving physician knowledge and competence in the latest advances in diagnosis of sleep disorder such as sleep apnea, the indications and applications of home sleep testing, and the indications and applications of certain drugs to treat sleep disorders.

To assess the educational effectiveness of the activity, attendee knowledge was assessed at 2 points for this program: prior to the lecture and immediately following the lecture using the case vignettes and knowledge questions listed above. Attendees showed improved scores in four of the four questions asked. Significant improvements were demonstrated in two of the four questions. Thus, the educational activity was effective in this respect.

Nearly all the attendees who responded to a survey approximately three weeks after the program concluded, stated that they used the information they learned in their practice with patients showing problems with sleep.

Furthermore, attendees indicated that they were more confident in treating patients with sleep disorders as a result of the educational activity.

Based on the data collected at this educational activity, there appears to be a need for further education on this topic with respect to outpatient sleep studies and the evolution of non-CPAP treatment strategies.