Clinical Cases in Rhythm Control for Atrial Fibrillation: Online CME Improves Physicians' Competence and Confidence

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BACKGROUND

In clinical practice, rhythm control strategies are currently used for the management of patients with atrial fibrillation (AF). However, despite different randomized trials, real-world data, and new guidelines, clinicians have varied degree of competence and confidence integrating the latest evidence and recommendations for the use of rhythm control strategies to treat AF in real-world practice. The effectiveness of a continuing medical education (CME) intervention to address these gaps in competence and confidence are unknown.

OBJECTIVES/PURPOSE

This study was examined whether online CME could improve the competence and confidence of cardiologists and primary care physicians (PCPs) regarding the diagnosis and appropriate selection of antiarrhythmic drug (AAD) therapy in patients with AF.

METHODS

The CME intervention comprised of a 15-minute online discussion between 2 expert faculty. Educational effect was assessed using a repeated-pair design with pre-/post-assessment. Three multiple choice questions assessed 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 activity posted on March 24, 2023; data were collected through May 16, 2023.

Cardiologists (n = 210)
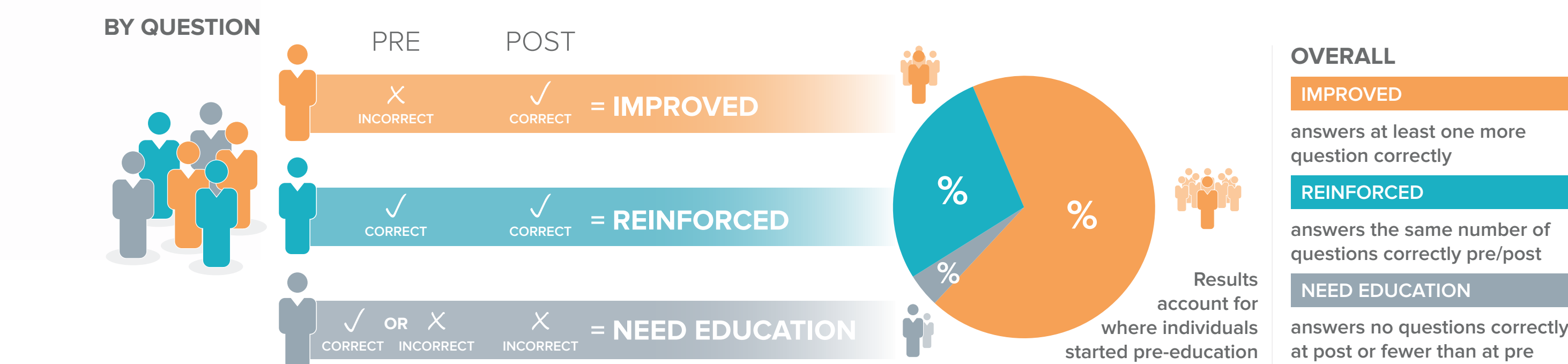Primary Care Physicians (PCPs) (n = 144)
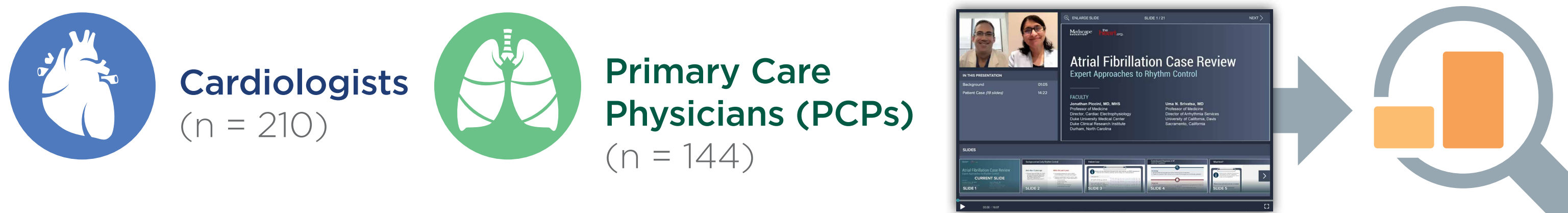
How to Read the Linked Learner Assessment

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

SUMMARY STATISTICS FOR PARTICIPANTS WHO PROVIDE COMPLETE DATA

% Correct
PRE / POST
pre n = post n

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

BY QUESTION
PRE / POST
CORRECT / INCORRECT = IMPROVED
CORRECT / CORRECT = REINFORCED
CORRECT or INCORRECT / INCORRECT = NEED EDUCATION

IMPROVED answers at least one more question correctly
REINFORCED answers the same number of questions correctly pre/post
NEED EDUCATION answers no questions correctly at post or fewer than at pre

Results account for where individuals started pre-education

RESULTS

OVERALL

Cardiologists (n = 210)

AGGREGATED RESULTS

PRE 39% — POST 55%
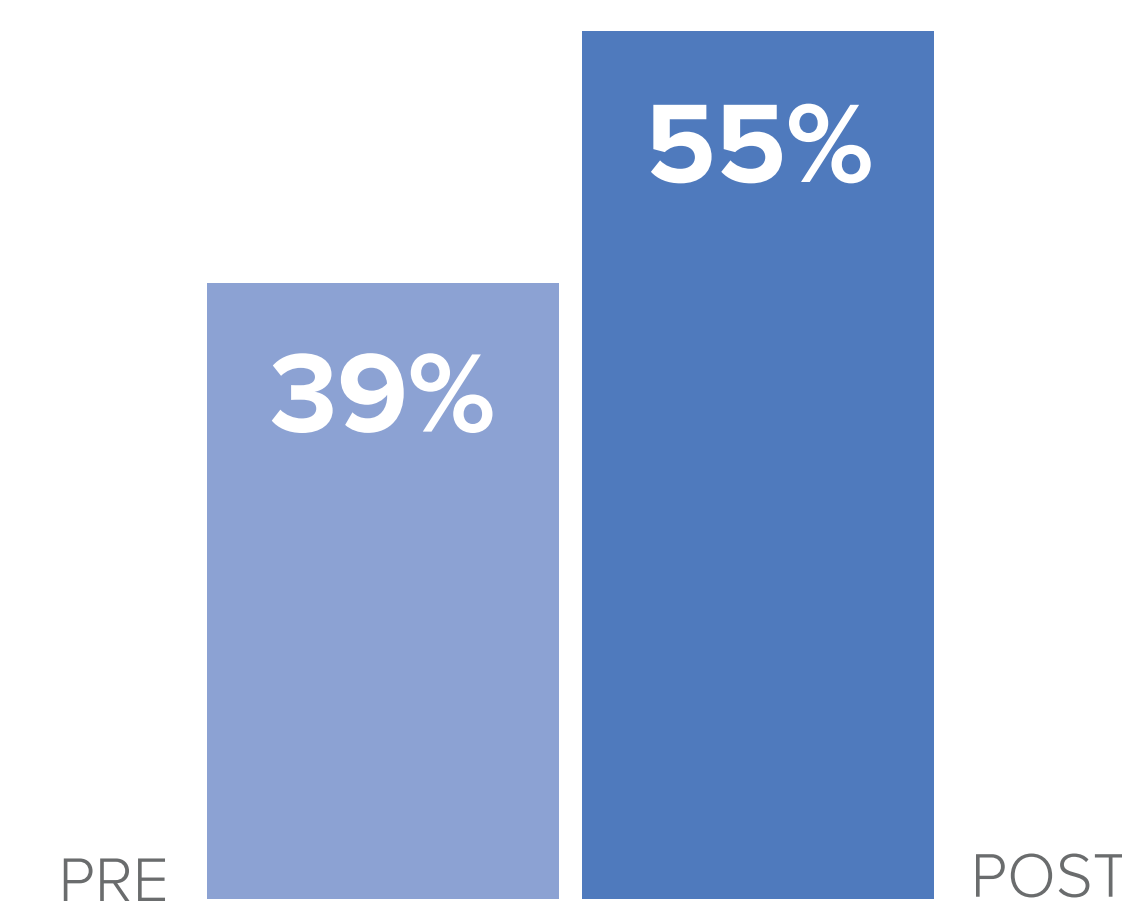
CHI-SQUARE TEST **P <.001**
SIGNIFICANCE (P <.05)

PCPs (n = 144)

AGGREGATED RESULTS

PRE 31% — POST 45%
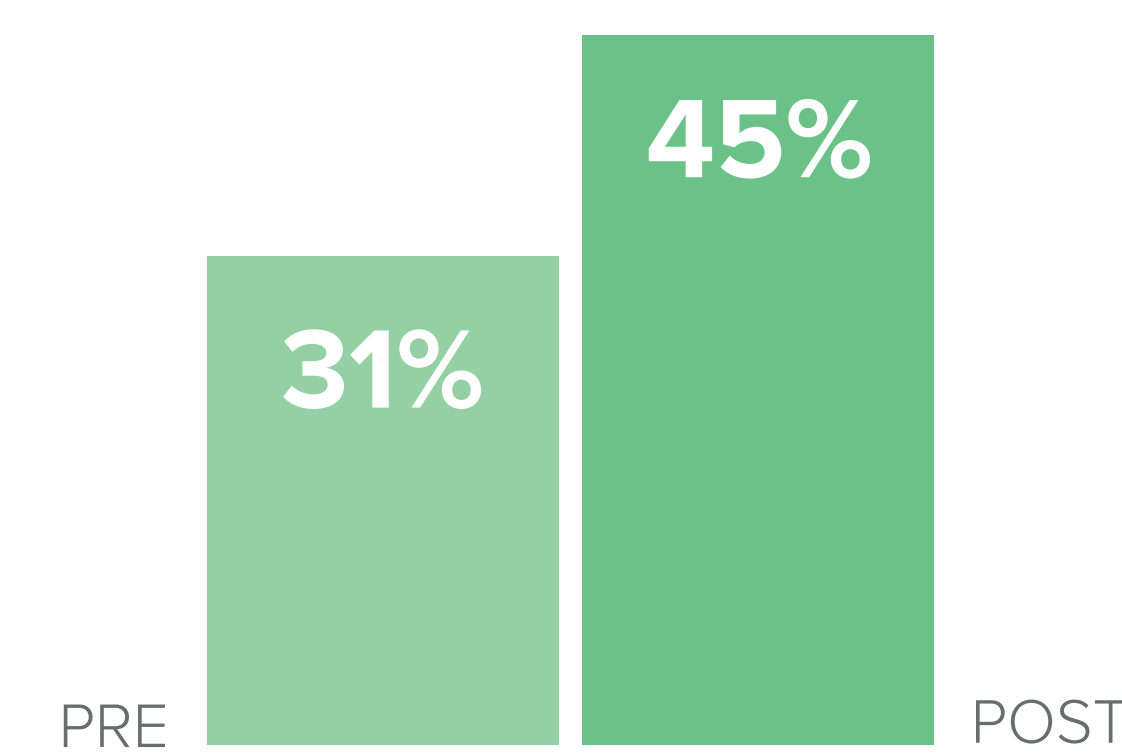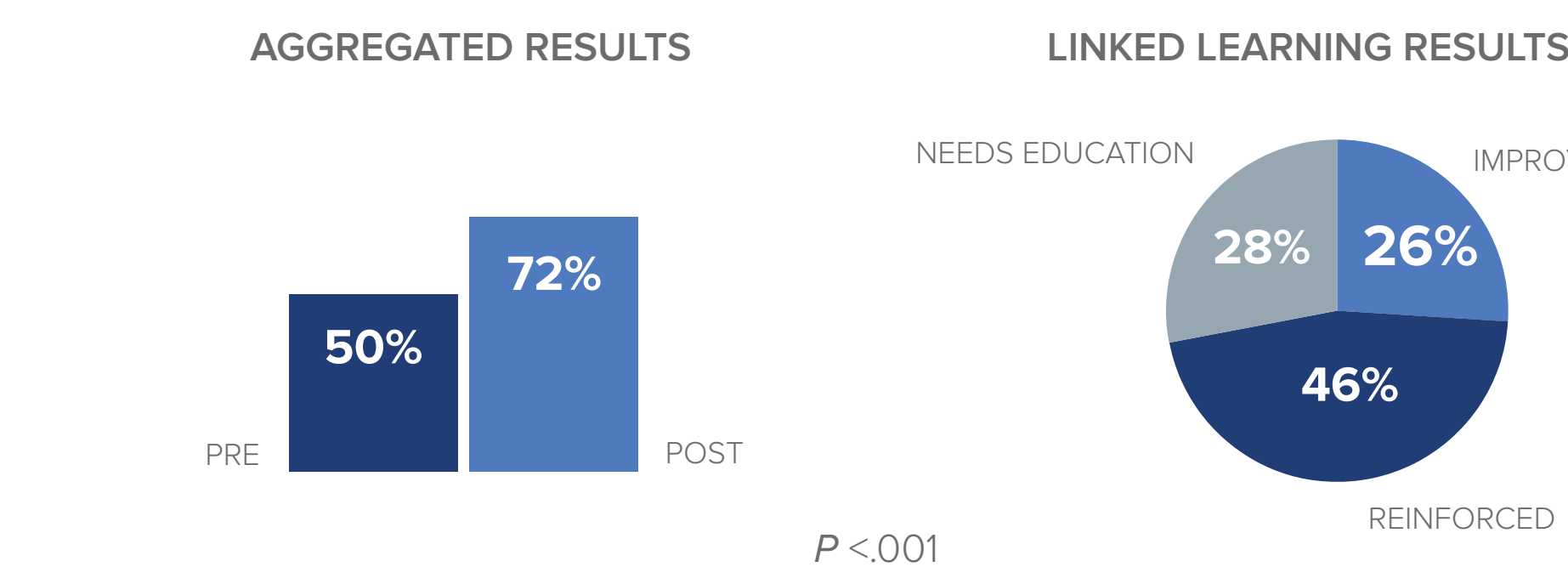
CHI-SQUARE TEST **P <.001**
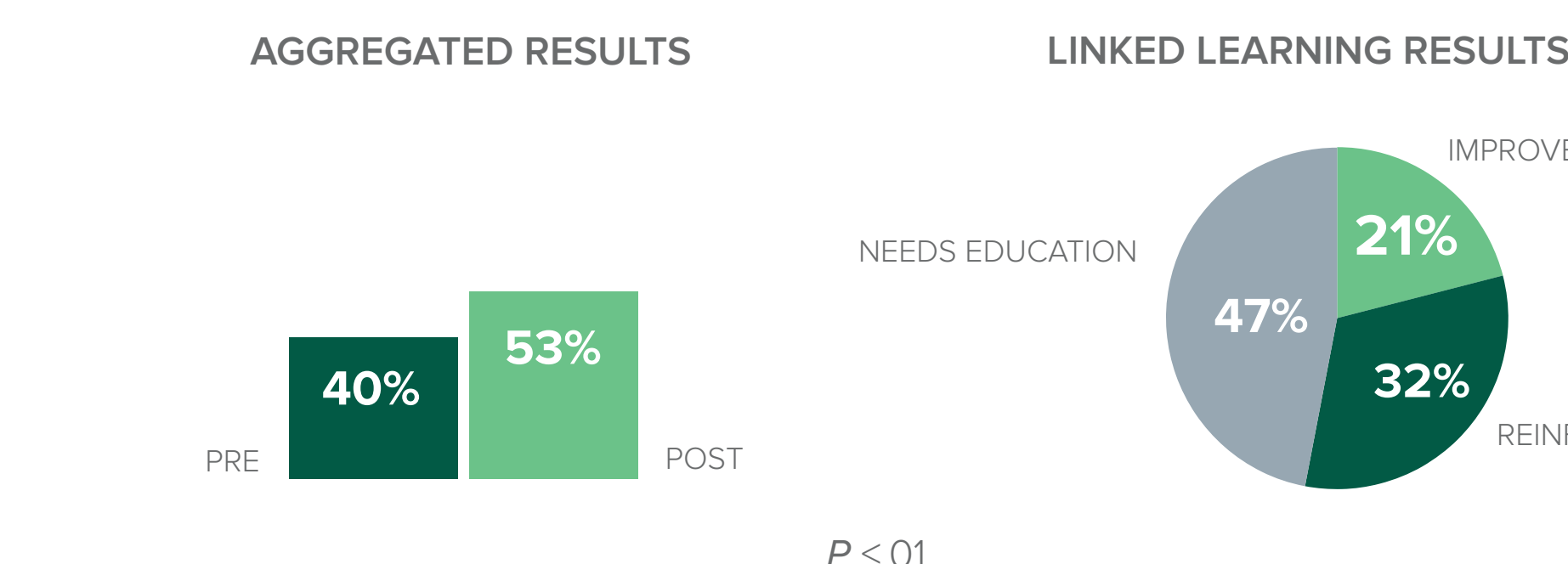SIGNIFICANCE (P <.05)

QUESTION 1 RESULTS

Competence related to the timely diagnosis of AF in accordance with the latest guideline-based screening recommendations

Cardiologists (n = 210)

AGGREGATED RESULTS: PRE 50% — POST 72%

LINKED LEARNING RESULTS: NEEDS EDUCATION 28%, IMPROVED 26%, REINFORCED 46%

$P <.001$

PCPs (n = 144)

AGGREGATED RESULTS: PRE 40% — POST 53%

LINKED LEARNING RESULTS: NEEDS EDUCATION 47%, IMPROVED 21%, REINFORCED 32%
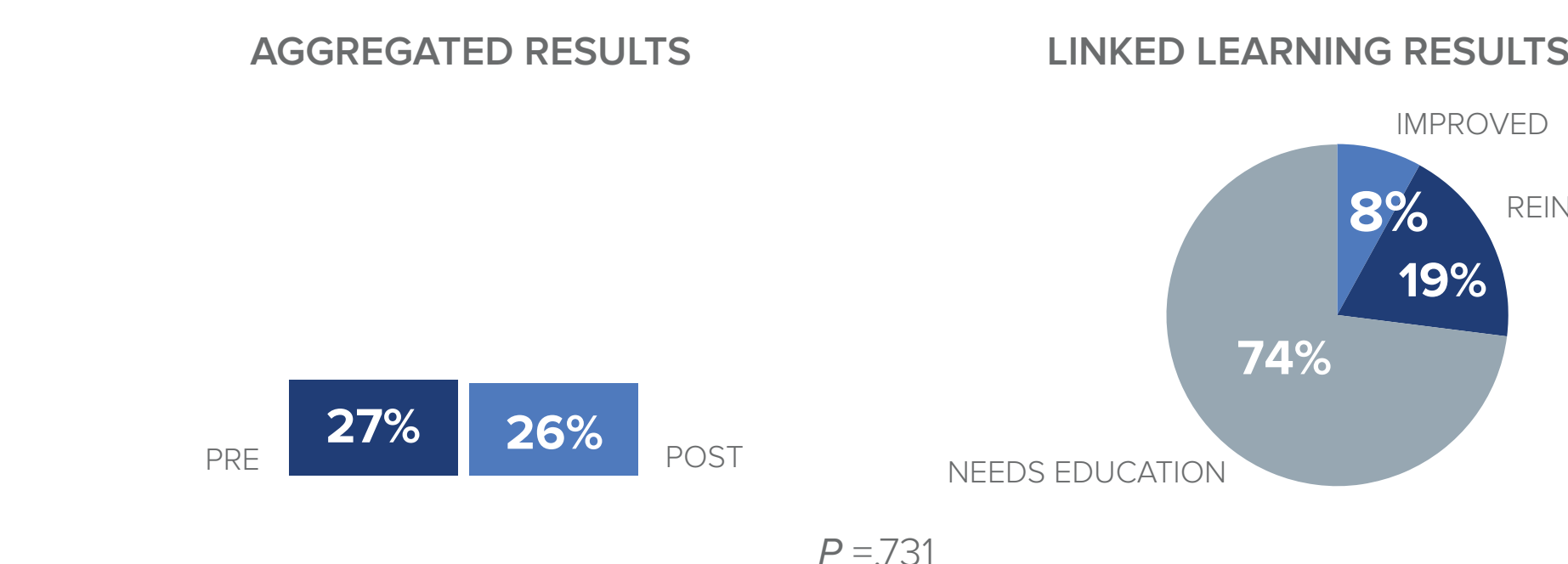
$P <.01$

QUESTION: A patient presenting with symptoms of atrial fibrillation (AF) was referred for an electrocardiogram (ECG). What is the minimum time requirement for a single-lead ECG recording when diagnosing AF? *(Correct Answer: 30 seconds)*
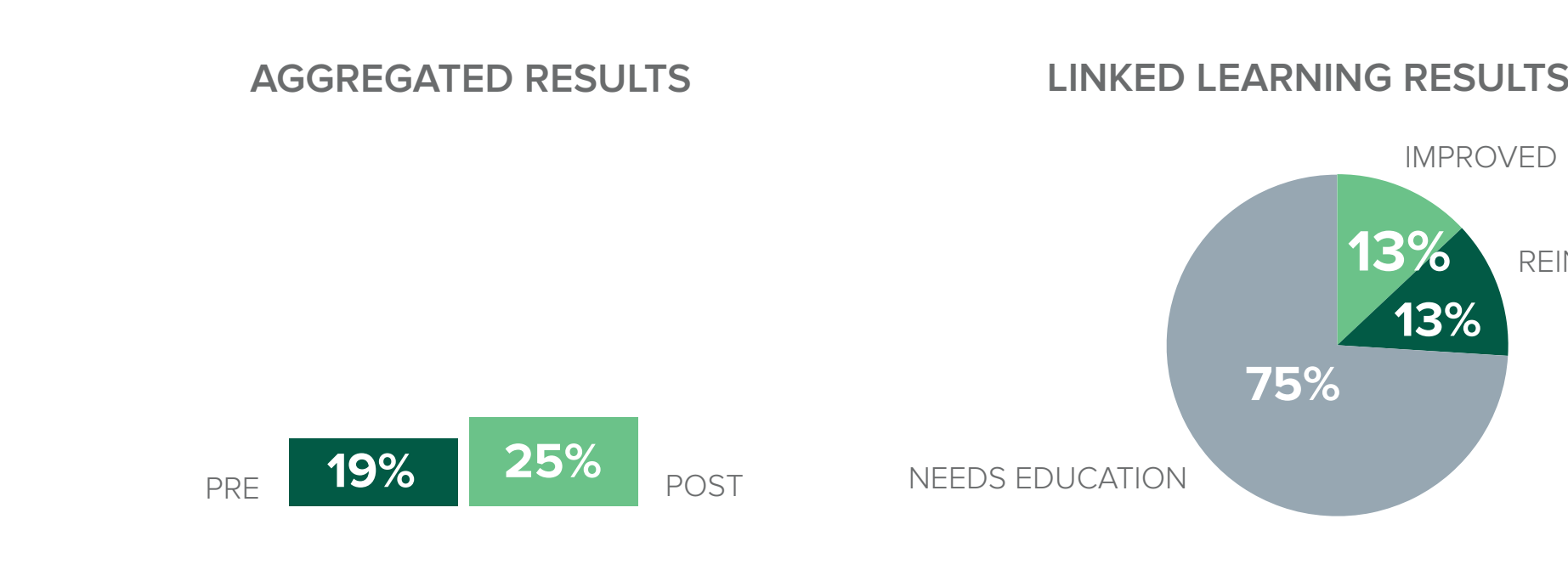
QUESTION 2 RESULTS

Competence related to the selection of appropriate AADs for rhythm control in patients with AF in different clinical situations in accordance with the latest clinical evidence and practice guidelines

Cardiologists (n = 210)

AGGREGATED RESULTS: PRE 39% — POST 65%

LINKED LEARNING RESULTS: NEEDS EDUCATION 35%, IMPROVED 30%, REINFORCED 36%

$P <.001$

PCPs (n = 144)

AGGREGATED RESULTS: PRE 33% — POST 56%

LINKED LEARNING RESULTS: NEEDS EDUCATION 44%, IMPROVED 30%, REINFORCED 26%

$P <.001$

QUESTION: A patient diagnosed with AF is also found to have left ventricular hypertrophy (wall thickness = 22 mm) and ejection fraction > 45%. Which of the following antiarrhythmic agents are indicated for this patient? *(Correct Answer: Amiodarone and dronedarone)*

QUESTION 3 RESULTS

Competence related to the selection of appropriate AADs for rhythm control in patients with AF in different clinical situations in accordance with the latest clinical evidence and practice guidelines

Cardiologists (n = 210)

AGGREGATED RESULTS: PRE 27% — POST 26%

LINKED LEARNING RESULTS: IMPROVED 8%, REINFORCED 19%, NEEDS EDUCATION 74%

$P =.731$

PCPs (n = 144)

AGGREGATED RESULTS: PRE 19% — POST 25%

LINKED LEARNING RESULTS: IMPROVED 13%, REINFORCED 13%, NEEDS EDUCATION 75%
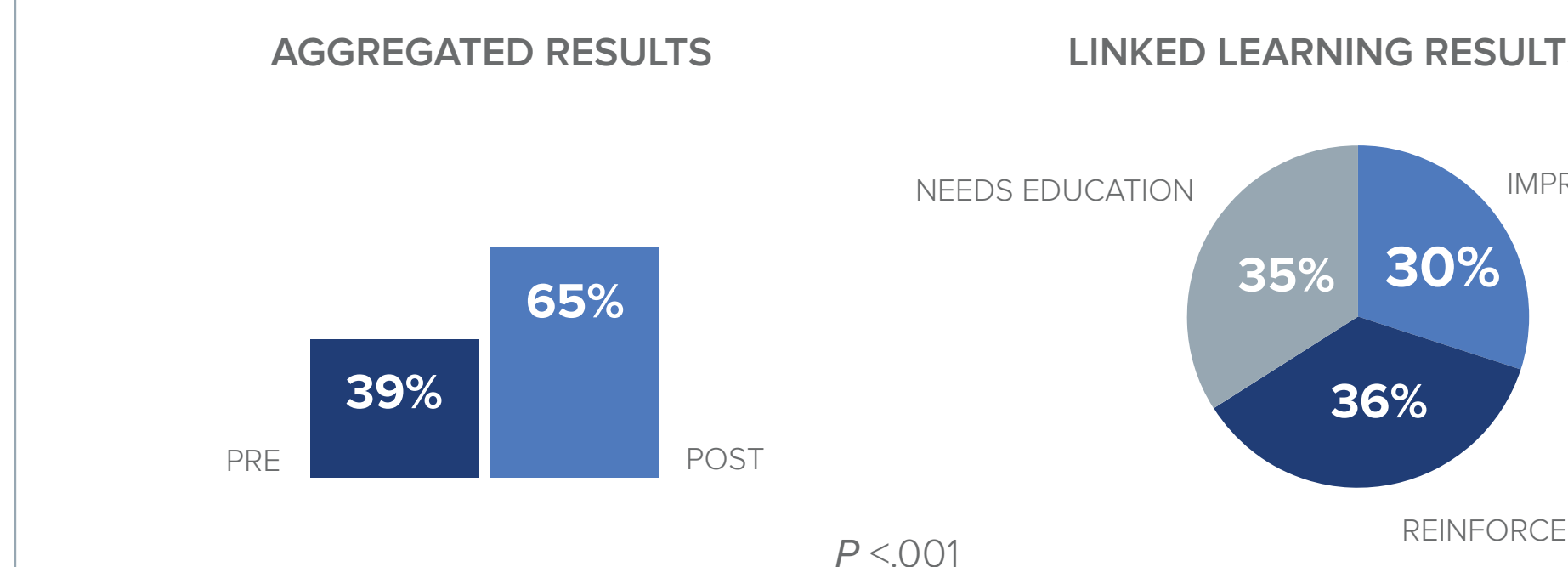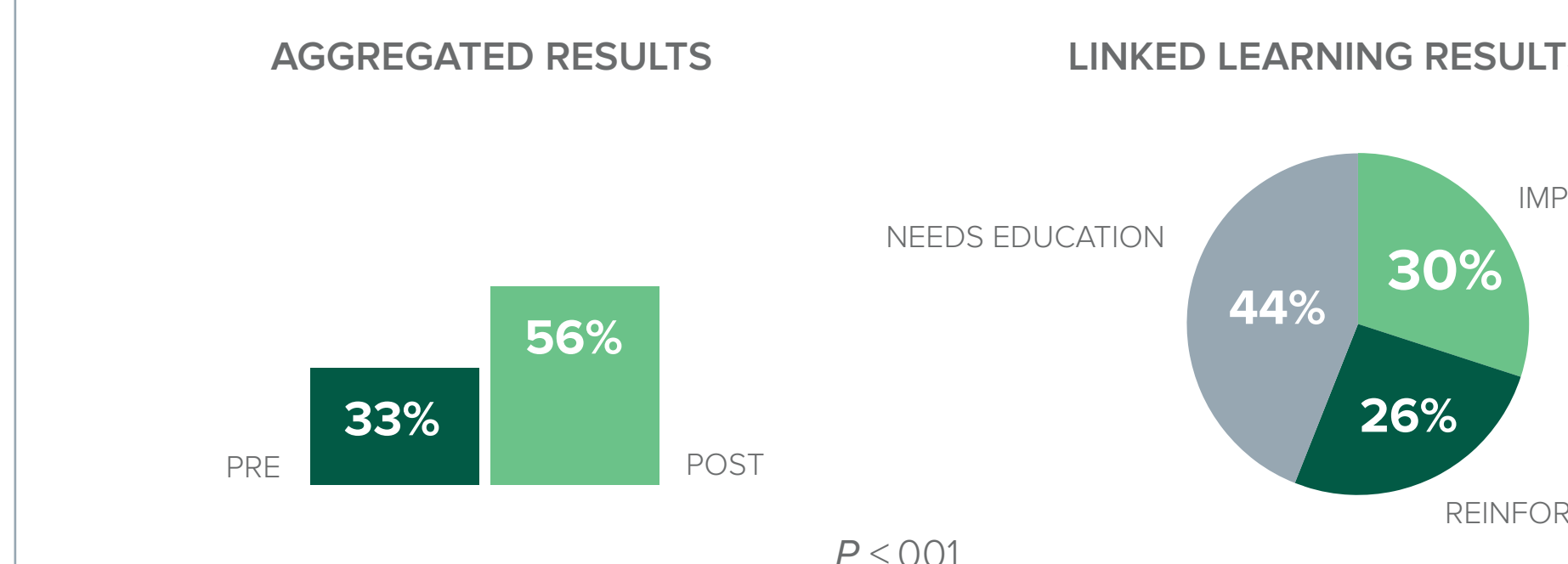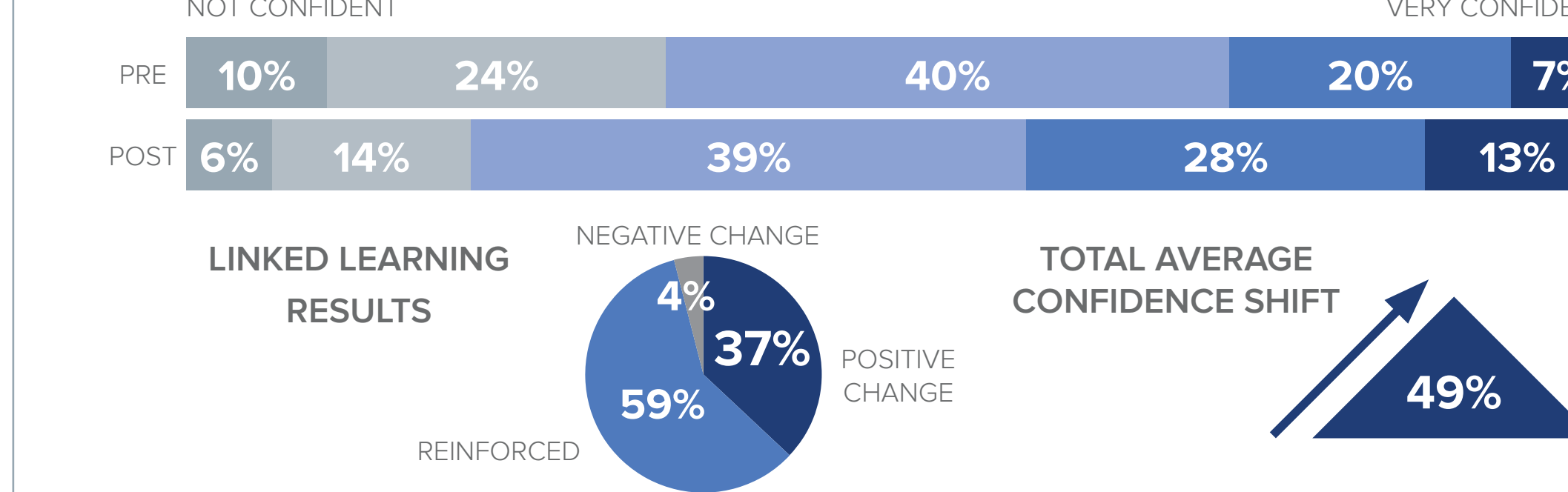
$P =.131$

QUESTION: Which of the following best describes the findings in the ATHENA trial post hoc analysis of dronedarone compared with placebo in AF with concomitant heart failure with preserved ejection fraction (HFpEF) and heart failure with mildly reduced ejection fraction (HFmrEF)? *(Correct Answer: Risk reductions for death and CV hospitalization were fairly comparable across a broad range of ejection fractions)*
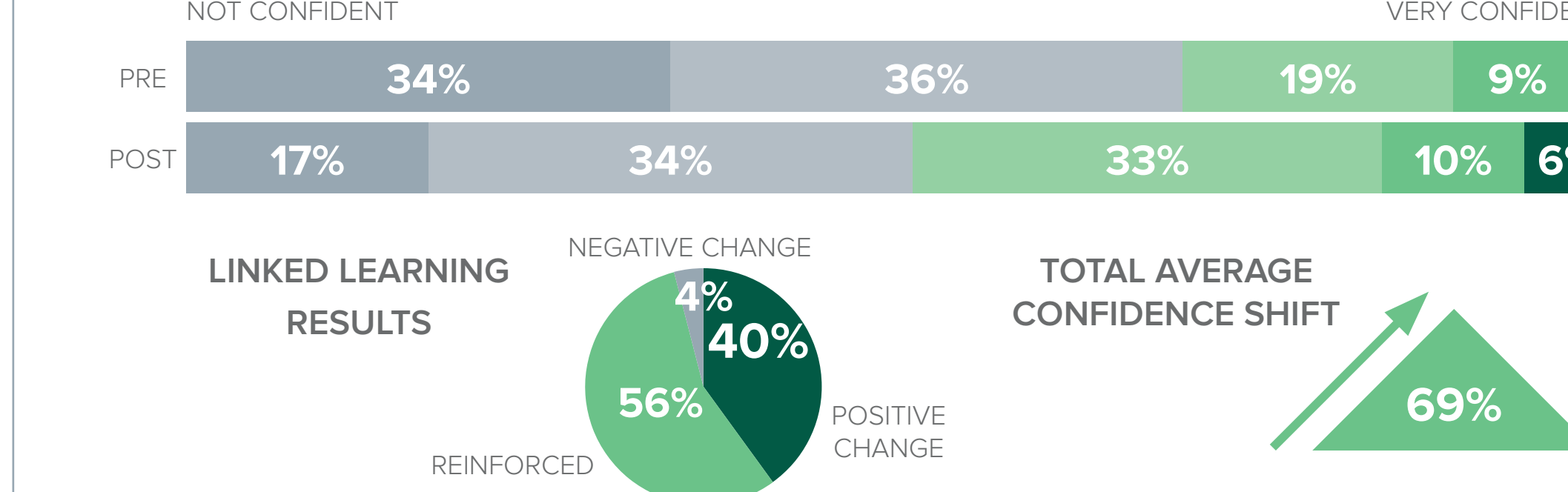
CONFIDENCE ANALYSIS

Confidence in ability to collaborate with the interprofessional team to improve/address patient adherence to prostacyclin therapy ($P < .05$).

Cardiologists (n = 210)

NOT CONFIDENT — VERY CONFIDENT
PRE: 10% | 24% | 40% | 20% | 7%
POST: 6% | 14% | 39% | 28% | 13%

LINKED LEARNING RESULTS: NEGATIVE CHANGE 4%, POSITIVE CHANGE 37%, REINFORCED 59%

TOTAL AVERAGE CONFIDENCE SHIFT 49%

PCPs (n = 144)

NOT CONFIDENT — VERY CONFIDENT
PRE: 34% | 36% | 19% | 9%
POST: 17% | 34% | 33% | 10% | 6%

LINKED LEARNING RESULTS: NEGATIVE CHANGE 4%, POSITIVE CHANGE 40%, REINFORCED 56%

TOTAL AVERAGE CONFIDENCE SHIFT 69%

QUESTION: How confident are you right now in communicating the risks and benefits of AADs for rhythm control with your patients with AF? (Select ranking from 1 [Not confident] to 5 [Very confident])

CONCLUSIONS

This study demonstrated the success of online CME at improving the competence and confidence of cardiologists and PCPs related to the diagnosis and appropriate application of rhythm control strategies in patients with AF. Persistent educational gaps were identified for future educational targets.

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