Conversations in Primary Care: 2020

Current and Emerging Strategies for Addressing Statin Intolerance and Cardiovascular Risk

Final Outcomes Report

October 15, 2020

Esperion Therapeutics, Inc. Grant ID: 2020-1062

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Conversations in Primary Care: 2020

This curriculum focused on management of patients with hypercholesteremia and statin intolerance.

Participation

8,606* Total Attendees

6 Virtual Sessions

3604 certificates issued to date

2020 Session	Date	Attendees
Conversations in Primary Care, Episode 1	2/8/20	1,026
Conversations Episode 1, Rebroadcast	2/15/20	329
Conversations in Primary Care, Episode 2	3/14/20	1,821
Conversations Episode 2, Rebroadcast	3/21/20	905
Conversations in Primary Care, Episode 3	4/4/20	3,169
Conversations Episode 3, Rebroadcast	4/11/20	1,358
Total		**8,608**

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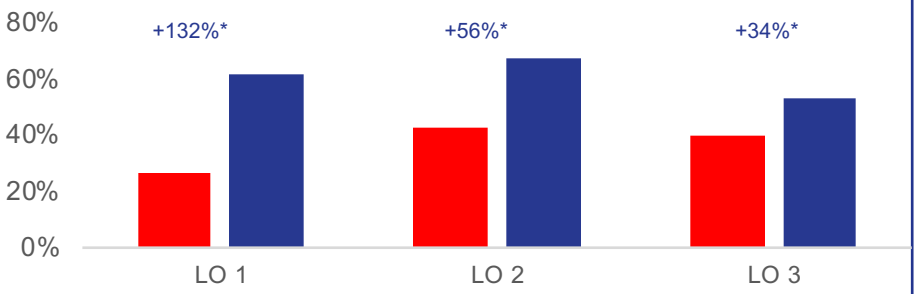
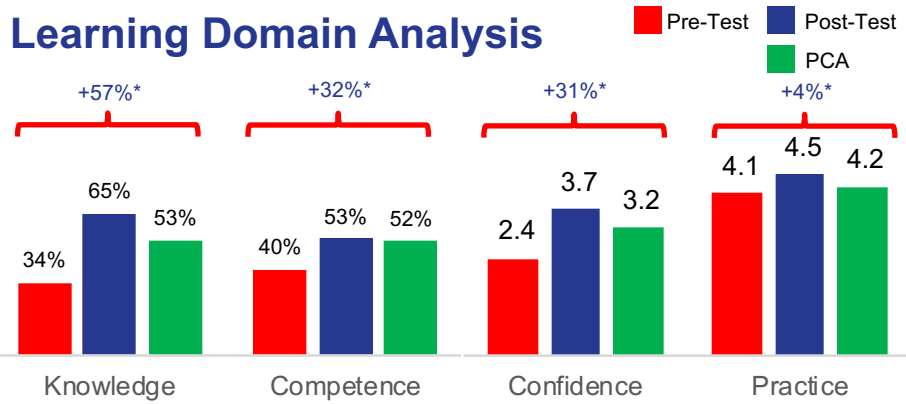
Learning Gains Across Objectives



- **LO 1, 132%* Improvement:** Discuss the impact of statin intolerance on ASCVD event risk
- **LO 2, 56%* Improvement:** Recognize the ways in which the unique mechanisms of action for current and emerging non-statin therapies can be useful for hypercholesteremia management
- **LO 3, 34%* Improvement:** Incorporate strategies to reduce cardiovascular risk in statin-intolerant patients, utilizing therapeutic combinations and lifestyle modification

Learning Domain Analysis



- In each of the four curriculum learning domains, substantial and significant gains were achieved from Pre- to Post-Test
- Strong gains (34% to 89%) from very low Pre-Test scores (34%, 40%, 2.4) were measured in Knowledge, Competence, and Confidence, reflecting an unfamiliarity with this subject of the audience prior to the education
- Low Post-Test scores in Knowledge and Competence (64% and 53%) represent opportunities for further education
- Practice strategy ratings, on assessment of adherence to and tolerance of statin therapy, were high at both Pre- and Post-Test

Persistent Learning Gaps/Needs

Selecting between statin and non-statin therapies

Despite improvements in score on two Competence items presenting cases of patients in need of therapy modification, learners struggled at Post-Test to correctly identify the most appropriate statin and non-statin options.

Impact of adherence to statin therapy on rate of cardiovascular events

Despite improvements in score on a Knowledge item on a study of outcomes for patients with with statin intolerance vs those with high statin adherence, low scores were measured at Post-Test.

Mechanism of action of bempedoic acid

Though improvements were made from Pre- to Post-Test, low Post-Test scores were measured on an item discussing the mechanism of action of bempedoic acid

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Commercial Support

The Conversations in Primary Care: 2020 series of CME activities were supported through educational grants or donations from the following companies:

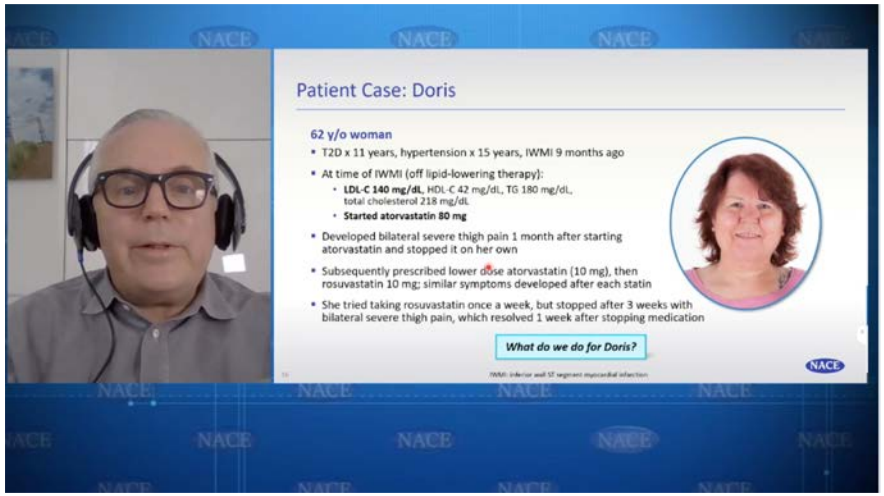
- Astellas Pharma Global Development, Inc.
- Esperion Therapeutics, Inc.
- Ferring Pharmaceutical, Inc.
- Grifols
- Kaneka Pharma America LLC
- Novartis Pharmaceuticals Coproration
- Novo Nordisk, Inc.
- Takeda Pharmaceuticals U.S.A., Inc.

Learning Objectives

- Discuss the impact of statin intolerance on ASCVD event risk
- Recognize the ways in which the unique mechanisms of action for current and emerging non-statin therapies can be useful for hypercholesteremia management
- Incorporate strategies to reduce cardiovascular risk in statin-intolerant patients, utilizing therapeutic combinations and lifestyle modification

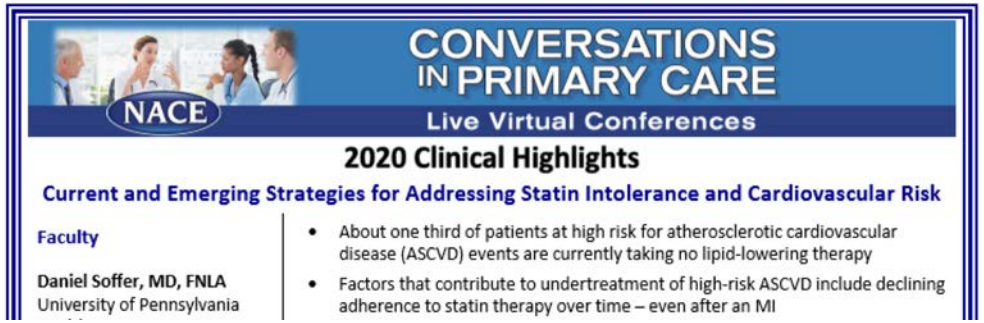
Curriculum Overview

3 Accredited Live Virtual Symposium with 3 Rebroadcasts: February 2020 – April 2020



Clinical Highlights eMonograph

eMonograph, containing key teaching points from the CME activity, was distributed 1 week after the meeting to all attendees.



Enduring CME Symposium Webcast

Available at: https://www.naceonline.com/courses/current-and-emerging-strategies-for-addressing-statin-intolerance-and-cardiovascular-risk

Current and Emerging Strategies for Addressing Statin Intolerance and Cardiovascular Risk

COURSE SUMMARY

Cost: Free

Start Date: 04/25/2020

Expiration Date: 04/24/2021

Target Audience: Primary Care Providers

Format: Webcast

Estimated Time To Complete CME Activity: 1.0 hour

Credit(s):
1.0 *AMA PRA Category 1 Credit(s)*™
1.0 AANP Hour which includes 0.75 Pharmacology hours

Hardware/Software Requirements: Any web browser

Speaker

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Lipidology & Cardiovascular Disease Prevention
Diplomate American Board of Clinical Lipidology
Clinical Assistant Professor of Medicine
NYU Medical School & NYU Center for CV Prevention
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Outcomes Methodology

Learning outcomes were measured using matched Pre-Test and Post-Test scores for Knowledge, Performance, Confidence, and practice strategy and across all of the curriculum's Learning Objectives.

Outcomes Metric	Definition	Application
Percentage change	This is how the score changes resulting from the education are measured. The change is analyzed as a relative percentage difference by taking into account the magnitude of the Pre-Test average.	Differences between Pre-Test, Post-Test, and PCA score averages
P value (p)	This is the measure of the statistical significance of a difference in scores. It is calculated using dependent or independent samples t-tests to assess the difference between scores, taking into account sample size and score dispersion. Differences are considered significant for when $p \leq .05$.	Significance of differences between Pre-Test, Post-Test, and PCA scores and among cohorts
Effect size (d)	This is a measure of the strength/magnitude of the change in scores (irrespective of sample size). It is calculated using Cohen's d formula, with the most common ranges of d from 0-1: d < .2 is a small effect, d=.2-.8 is a medium effect, and d > .8 is a large effect.	Differences between Pre-Test and Post-Test score averages
Power	This is the probability (from 0 to 1) that the "null hypothesis" (no change) will be appropriately rejected. It is the probability of detecting a difference (not seeing a false negative) when there is an effect that is dependent on the significance (p), effect size (d), and sample size (N).	Differences between Pre-Test and Post-Test score averages
Percentage non-overlap	This is the percentage of data points at the end of an intervention that surpass the highest scores prior to the intervention. In this report, it will reflect the percentage of learners at Post-Test who exceed the highest Pre-Test scores.	Differences between Pre-Test and Post-Test score averages

Participation

2020 Session	Date	Attendees
Conversations in Primary Care, Episode 1	2/8/20	1,026
Conversations Episode 1, Rebroadcast	2/15/20	329
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Total		**8,608**

Participation

Level 1
Participation
Demographics
Patient Reach

8.608*
Total Attendees

6 Virtual Sessions

2,233 Follow-up Participants
26% Rate of follow-up engagement

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*These numbers represent the total number of attendees, irrespective of assessment participation

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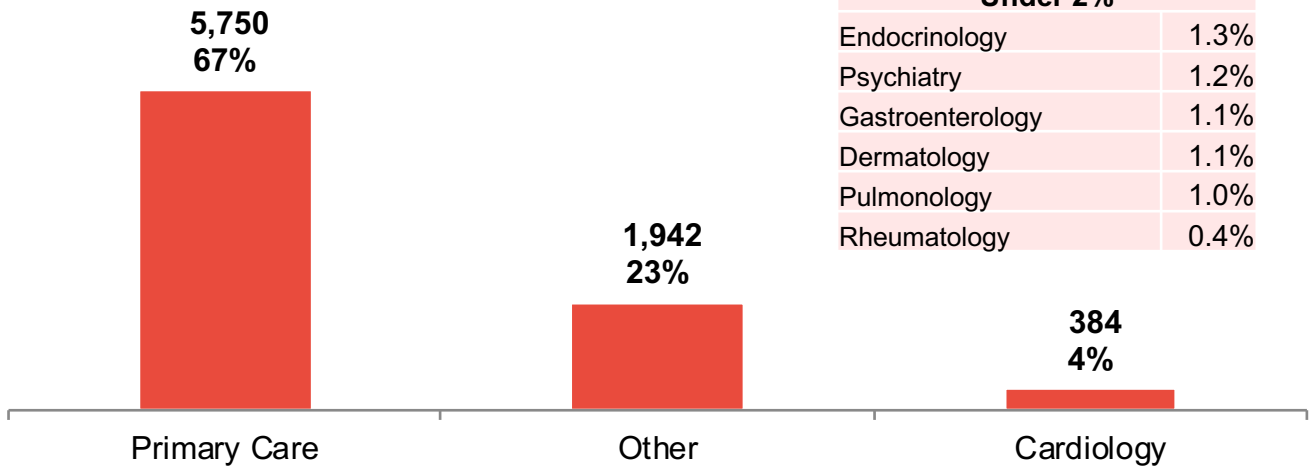
Level 1: Demographics and Patient Reach

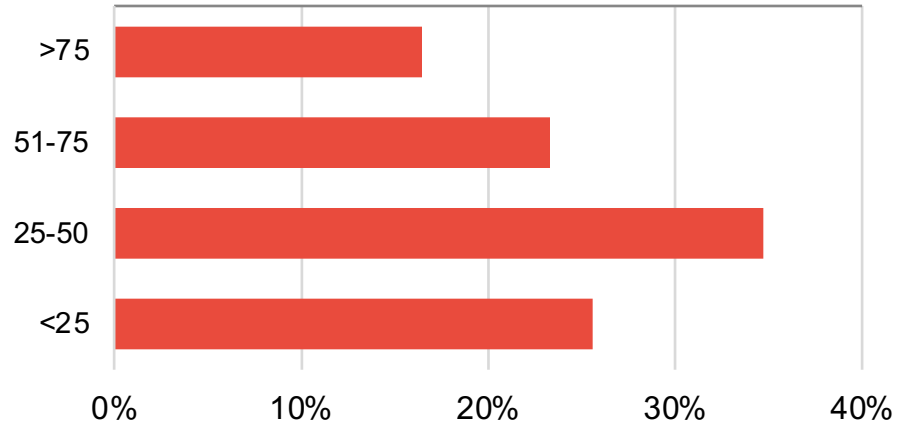
Specialty



Under 2%	
Endocrinology	1.3%
Psychiatry	1.2%
Gastroenterology	1.1%
Dermatology	1.1%
Pulmonology	1.0%
Rheumatology	0.4%

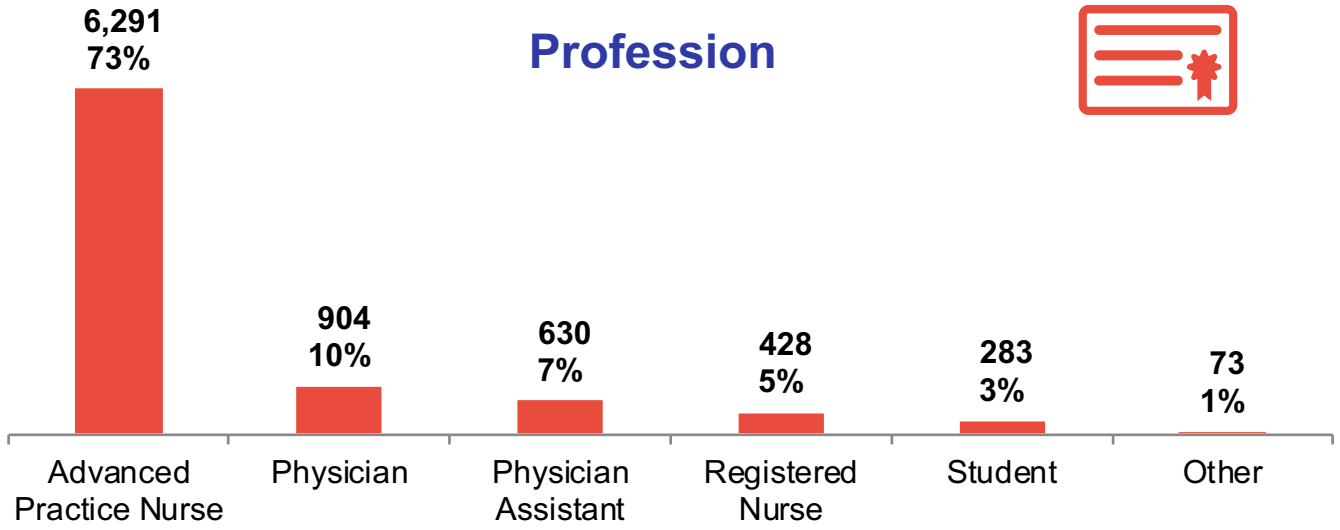
Patient Care Focus: 94%

Patients seen each week, in any clinical setting:

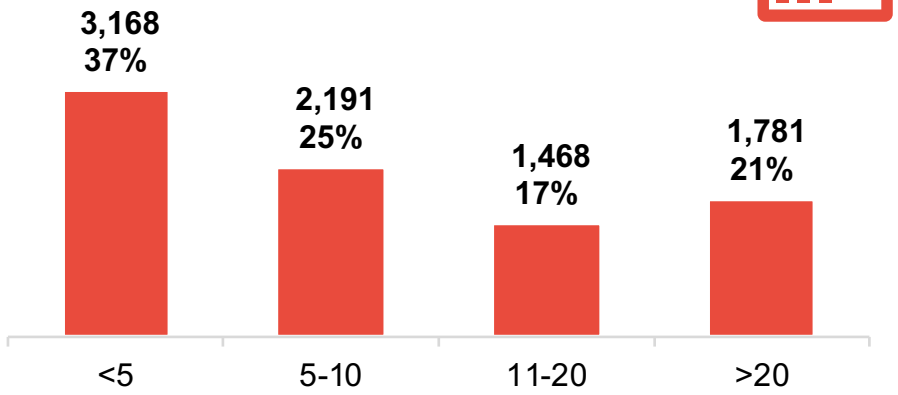


Average number of patients seen each week per clinician: 45

Profession



Years in Practice



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Level 2-5:
Outcomes Metrics

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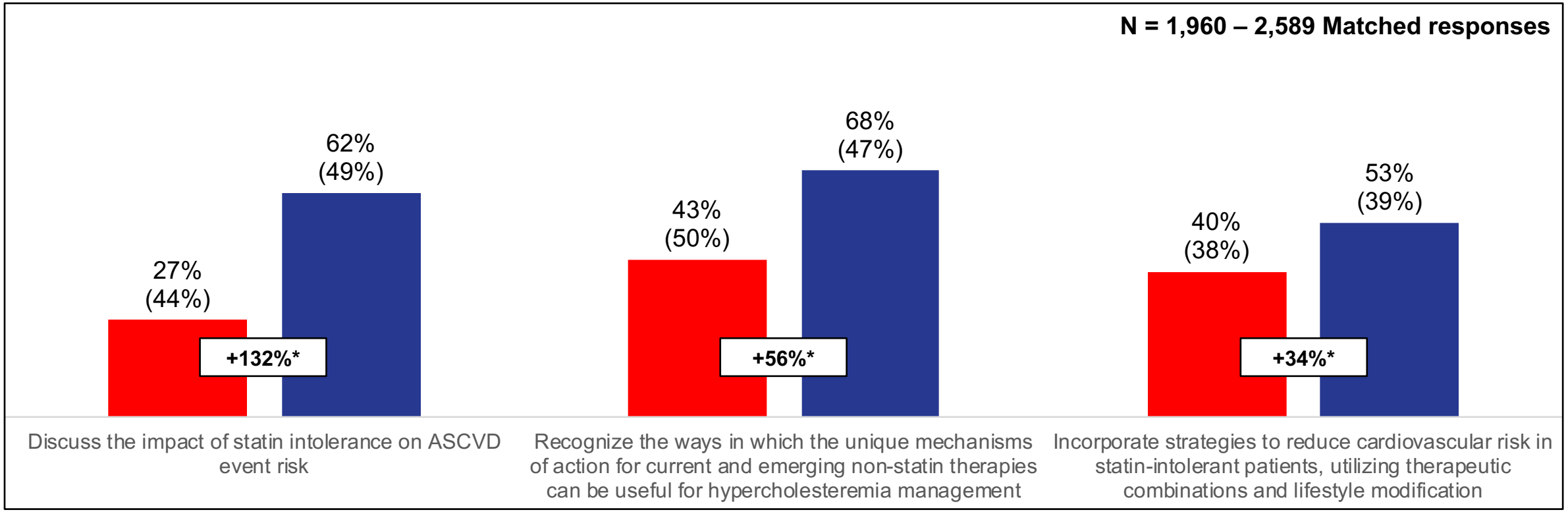
Learning Objective Analysis



- Across all three curriculum Learning Objectives, substantial and significant improvements were measured from low scores at Pre-Test (< 44%)
- The strongest gains, and highest Post-Test scores, were measured on the impact of statin intolerance on ASCVD event risk and on mechanisms of action for current and emerging non-statin therapies
- The smallest gains, and lowest Post-Test scores, were measured on strategies to reduce cardiovascular risk in statin-intolerant patients
    - Gains in this area were driven down by a Competence item presenting the case of a patient with muscle pain in need of switching to a different statin therapy in a low dosage

* indicates significance, $p < 0.05$

Learning Objective Analysis

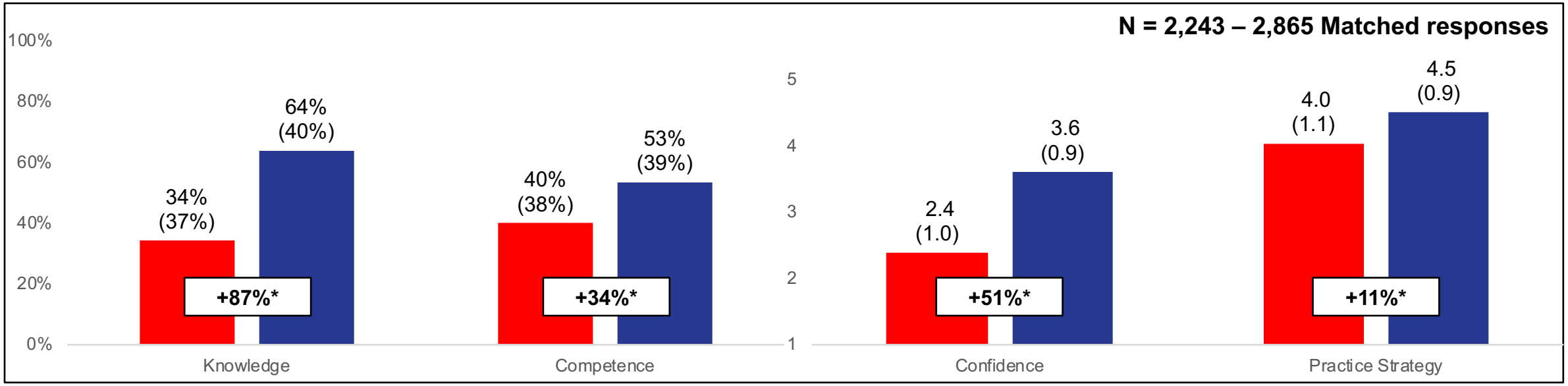
Cohort comparison by profession

Matched data, * indicates significance, $p < 0.05$

Learning Objective	Advanced Practice Nurses				Physicians			
	N	Pre-Test	Post-Test	% Change	*N*	Pre-Test	Post-Test	% Change
Discuss the impact of statin intolerance on ASCVD event risk	752	28% (45%)	62% (48%)	+127%*	101	30% (46%)	78% (41%)	+163%*
Recognize the ways in which the unique mechanisms of action for current and emerging non-statin therapies can be useful for hypercholesteremia management	734	43% (49%)	66% (47%)	+56%*	104	43% (50%)	75% (43%)	+73%*
Incorporate strategies to reduce cardiovascular risk in statin-intolerant patients, utilizing therapeutic combinations and lifestyle modification	947	40% (37%)	57% (38%)	+44%*	144	43% (38%)	54% (40%)	+27%*

- For both advanced practice nurses and physicians, substantial and significant gains were measured from Pre- to Post-Test on each of the three curriculum Learning Objectives
- On the impact of statin intolerance on ASCVD event risk, and mechanisms of action for current and emerging non-statin therapies, physicians achieved stronger improvements from similar Pre-Test scores to higher Post-Test scores
- On strategies for reduction of cardiovascular risk in statin-intolerant patients, advanced practice nurses had stronger gains and higher Post-Test scores

Learning Domain Analysis



- In each of the four curriculum learning domains, substantial and significant gains were achieved from Pre- to Post-Test
- Strong gains (34% to 89%) from very low Pre-Test scores (34%, 40%, 2.4) were measured in Knowledge, Competence, and Confidence, reflecting an unfamiliarity with this subject of the audience prior to the education
- Low Post-Test scores in Knowledge and Competence (64% and 53%) represent opportunities for further education
- Practice strategy ratings, on assessment of adherence to and tolerance of statin therapy, were high at both Pre- and Post-Test

* indicates significance, $p < 0.05$

Learning Domain Analysis

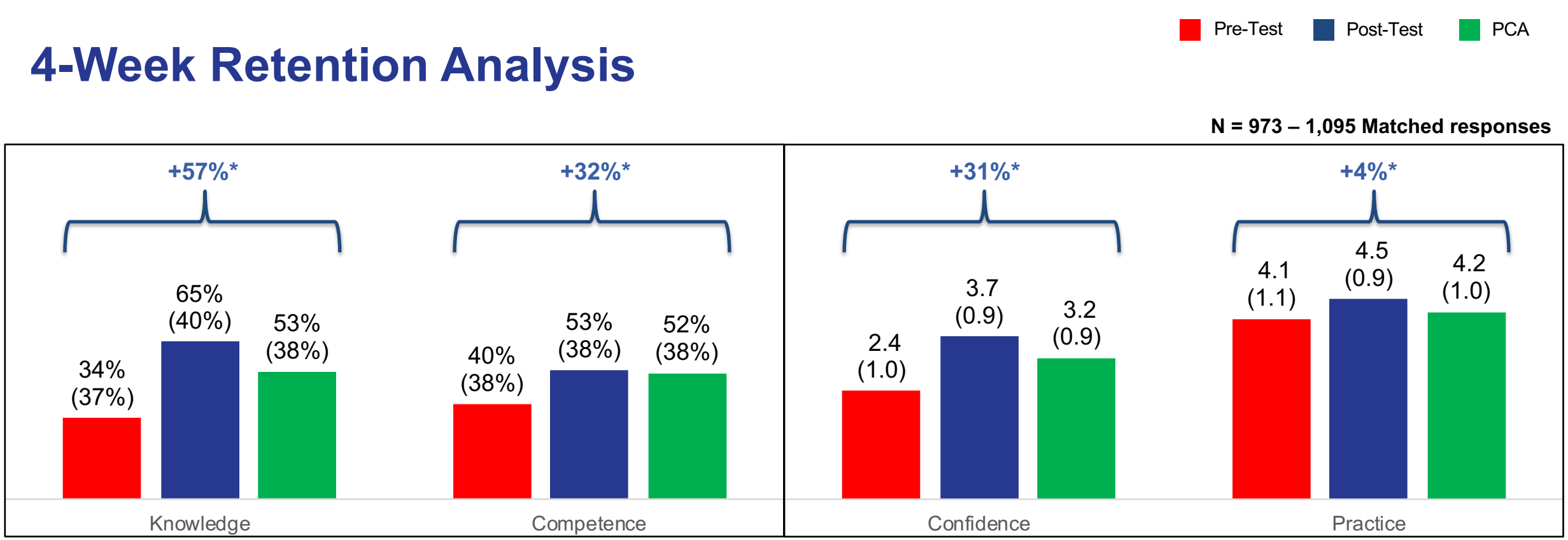
Cohort comparison by profession

Matched data, * indicates significance, $p < 0.05$

Learning Domain	Advanced practice nurses				Physicians			
	N	Pre-Test	Post-Test	% Change	*N*	Pre-Test	Post-Test	% Change
Knowledge	842	34% (37%)	64% (40%)	+87%*	123.0	36% (38%)	75% (37%)	+109%*
Competence	947	40% (37%)	57% (38%)	+44%*	144.0	43% (38%)	54% (40%)	+27%*
Confidence	1062	2.3 (0.9)	3.6 (0.9)	+56%*	151.0	2.6 (1.0)	3.9 (0.9)	+51%*
Practice	909	4.1 (1.1)	4.6 (0.8)	+12%*	135.0	4.1 (1.0)	4.5 (0.9)	+11%*

- When comparing the scores of advanced practice nurses and physicians by learning domain, both groups achieved substantial and significant gains from Pre- to Post-Test, across all four curriculum domains
- In Knowledge, physicians achieved stronger gains to higher Post-Test scores, while advanced practice nurses achieved stronger gains compared to physicians in Competence
- Similar gains in Confidence and practice strategy were measured for advanced practice nurses and physicians

4-Week Retention Analysis



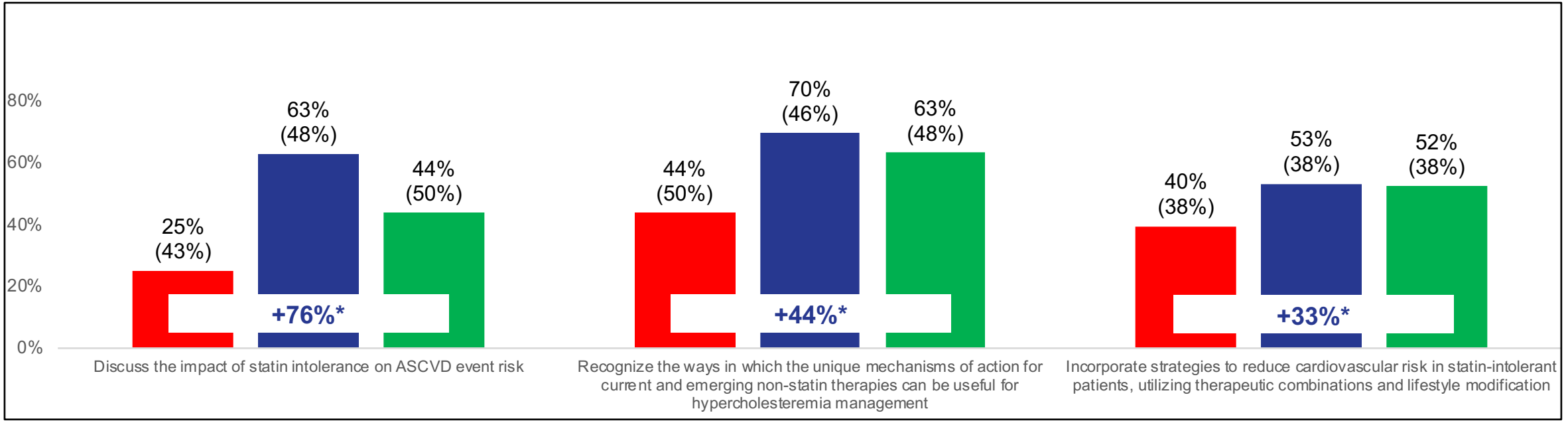
- Four to six weeks following their engagement in one of the curriculum sessions, learners were prompted to complete a brief Post Curriculum Assessment (PCA), which repeated items from each of the four curriculum learning domains
- In each of the four domains, substantial and significant net gains were achieved from Pre-Test to PCA measurements
  - Despite these gains, some score slippage was seen from Post-Test to PCA in all domains

* indicates significance, $p < 0.05$

4-Week Retention Analysis

By Learning Objective

N = 795 – 1,016 Matched responses



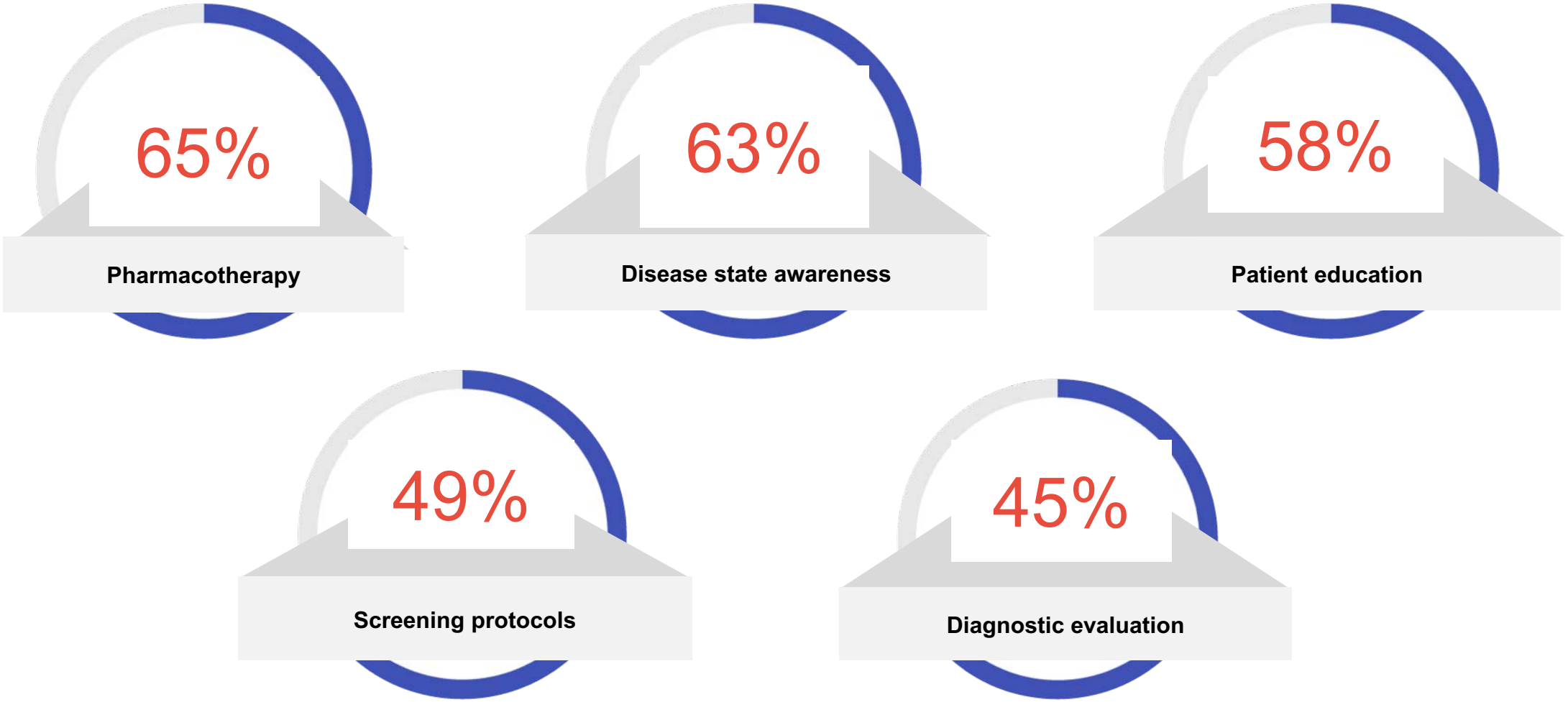
- When examining results by Learning Objective, substantial and significant net gains were achieved from Pre-Test to PCA measurements on each of the three Objectives, with some score slippage from Post-Test to follow-up
- The strongest gains, from the lowest Pre-Test scores, were measured in discussing the impact of statin intolerance on ASCVD event risk
- Despite these gains on all Objectives, low scores at follow-up (< 63%) reflect opportunities for further reinforcement in this area

* indicates significance, $p < 0.05$

(4-week Post Assessment)

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

N = 1,972



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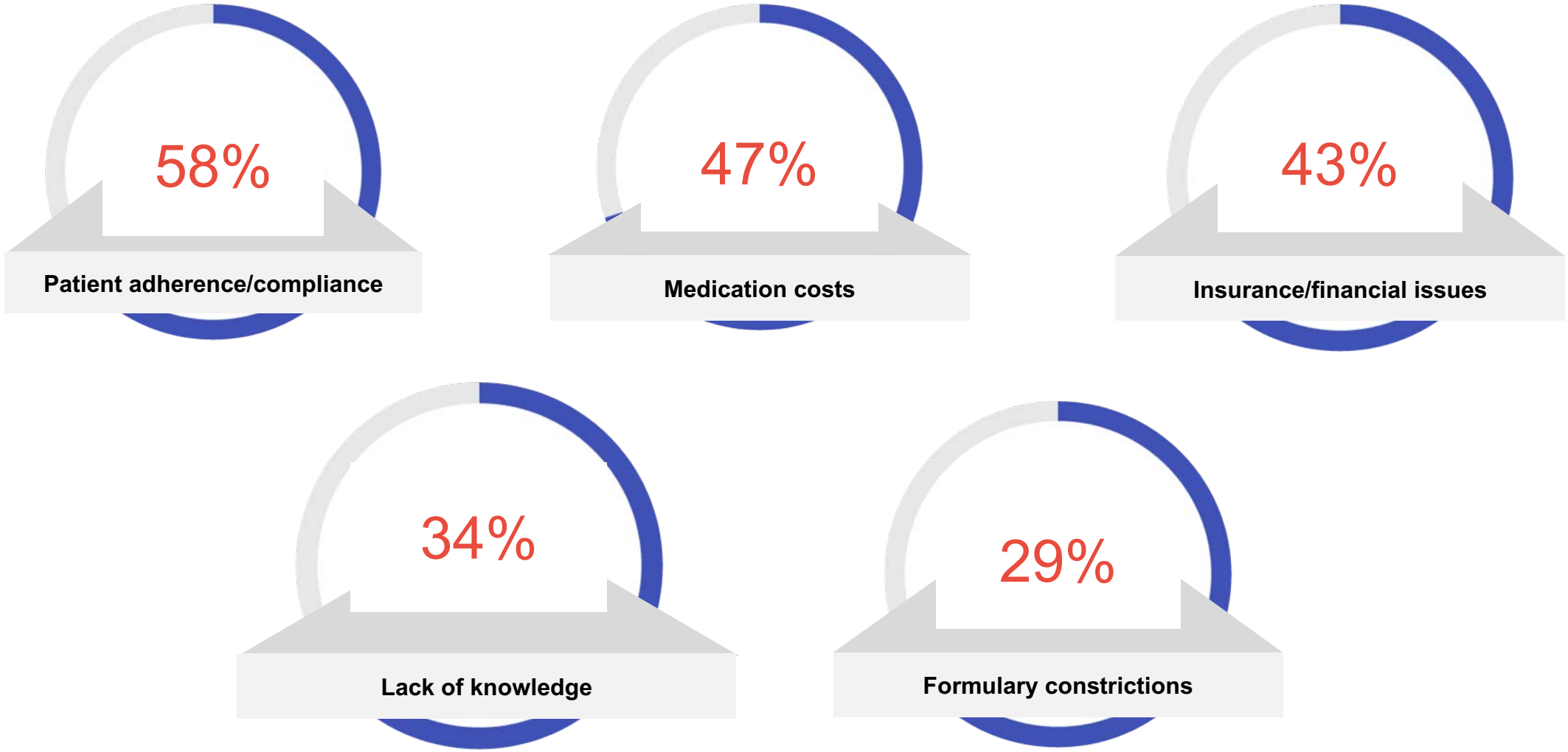
(4-week Post Assessment)

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

N = 1,972



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Identified Learning Gap, 1 of 3:
Selecting between statin and non-statin therapies

Despite improvements in score on two Competence items presenting cases of patients in need of therapy modification, learners struggled at Post-Test to correctly identify the most appropriate statin and non-statin options.

59 y/o man with history of hypertension, obesity, and prediabetes Hospitalized for NSTEMI 6 months ago; atorvastatin 80 mg initiated At time of MI, LDL-C 138 mg/dL (no lipid-lowering therapy). Counseled on lifestyle interventions 1 month later, stopped statin due to onset of muscle pain. Pain returns 3 weeks after switching to atorvastatin 20 mg qd What might be appropriate for this patient at this time?

- At Post-Test, 47% of learners correctly answered: “Try different statin at lowest dose”

60 y/o woman with history of T2D and hypertension Hospitalized for NSTEMI 3 months ago LDL-C at MI: 145 mg/dL Atorvastatin 80 mg started Stopped atorvastatin after onset of muscle pain 3 weeks later Muscle symptoms persisted when dose reduced to 20 mg/qd and after trying two daily low-dose statins and once-a-week dosing of rosuvastatin What might be appropriate for this patient at this time?

- At Post-Test, 60% of learners correctly answered: “Initiate ezetimibe 10 mg qd”

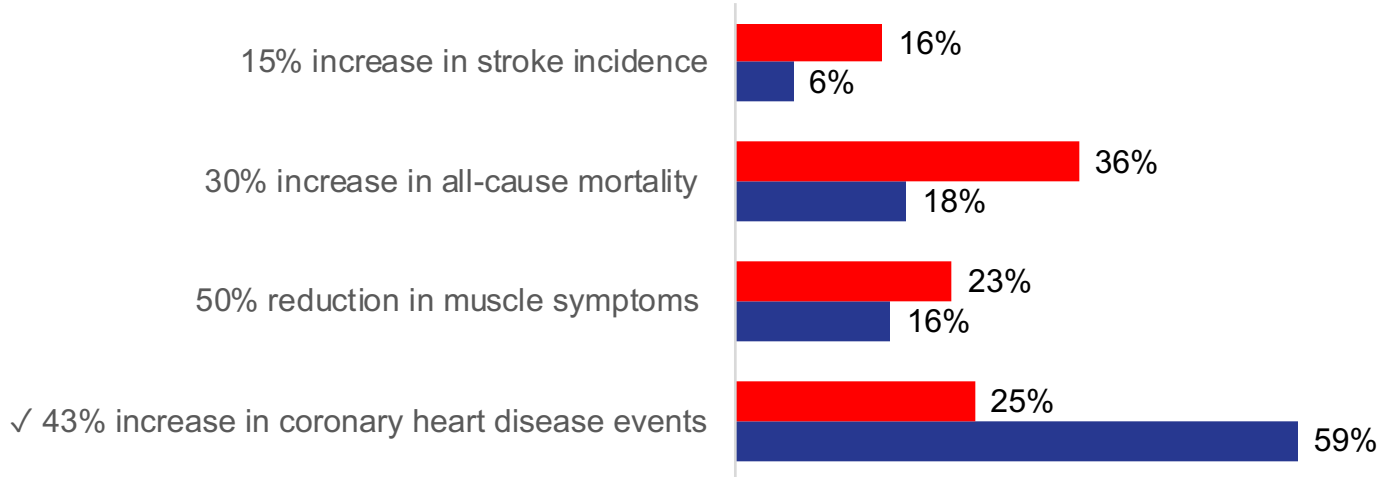
Identified Learning Gap, 2 of 3:
Impact of adherence to statin therapy on rate of cardiovascular events

Despite improvements in score on a Knowledge item on a study of outcomes for patients with high statin adherence and those with statin intolerance, low scores were measured at Post-Test.

A study of Medicare beneficiaries who started statin therapy after a myocardial infarction reported which of the following outcomes among patients with statin intolerance, compared to patients with high statin adherence?

Results:

- At Post-Test, 59% of learners correctly answered: “43% increase in coronary heart disease events”



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Identified Learning Gap, 3 of 3:
Mechanism of action of bempedoic acid

Though improvements were made from Pre- to Post-Test, low Post-Test scores were measured on an item discussing the mechanism of action of bempedoic acid

Bempedoic acid is unlikely to cause myalgias as it promotes lipid lowering because?

Results:

- At Post-Test, 67% of learners correctly answered: “It is converted to its active form in the liver and not the muscle”

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Overall Educational Impact

- Substantial, significant improvements of 87% and 34% were seen in learner Knowledge and Competence, from Pre- to Post-Test
    - In Knowledge, physicians demonstrated stronger gains, while advanced practice nurses improved more in Competence
    - Though strong improvements were made, low Post-Test scores following very low Pre-Test scores reflect a need for further education despite the success of this education
- Practice strategy ratings, on assessing adherence to and tolerance of statin therapy, were high at Pre- and Post-Test
- Net gains were measured across all learning domains from Pre-Test to a follow-up Post Curriculum Assessment, though some slippage was seen in all areas
- The analysis of the Knowledge and Competence domains identified three **opportunities for further education related to:**
    - Selecting between statin and non-statin therapies
    - Impact of adherence to statin therapy on rate of cardiovascular events
    - Mechanism of action of bempedoic acid

Appendix

Slides 25 – 27: Pre-Test to Post-Test matched item responses

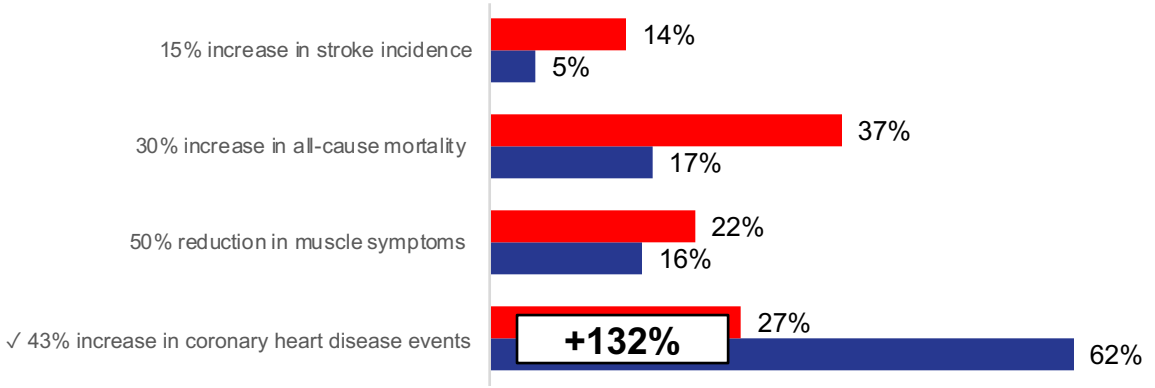
Slides 28 – 30: Pre-Test, Post-Test, and PCA matched item responses*

*Both sets of response distributions are included due to the smaller sample size of matched PCA respondents

Knowledge Items

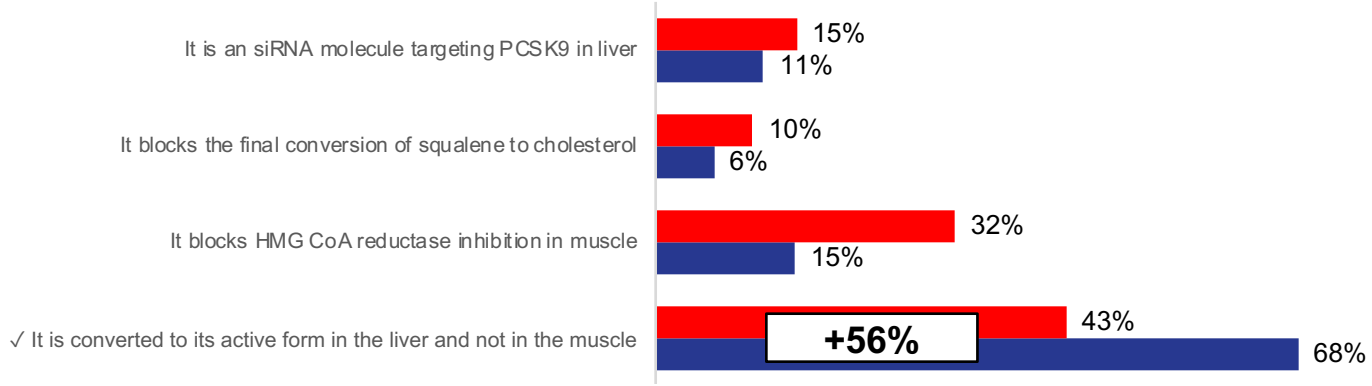
A study of Medicare beneficiaries who started statin therapy after a myocardial infarction reported which of the following outcomes among patients with statin intolerance, compared to patients with high statin adherence?

N = 1,960



Bempedoic acid is unlikely to cause myalgias as it promotes lipid lowering because?

N = 1,962



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Note: data are matched.
Correct answer is designated by a ✓.

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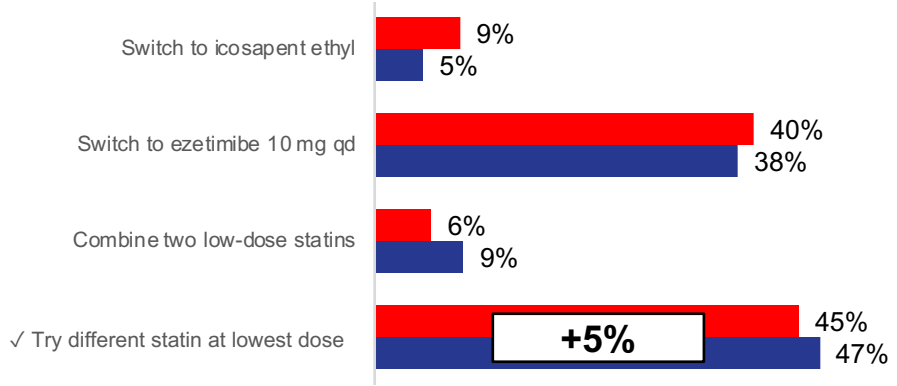
Competence Items

Pre-Test
Post-Test

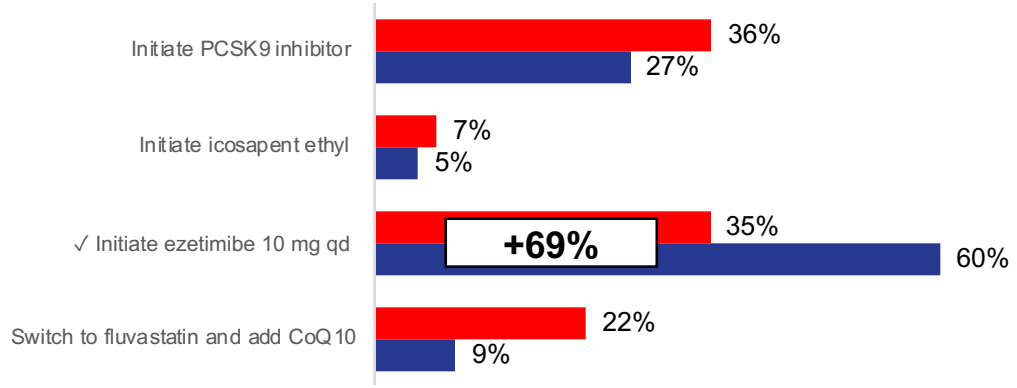
59 y/o man with history of hypertension, obesity, and prediabetes Hospitalized for NSTEMI 6 months ago; atorvastatin 80 mg initiated At time of MI, LDL-C 138 mg/dL (no lipid-lowering therapy). Counseled on lifestyle interventions 1 month later, stopped statin due to onset of muscle pain Pain returns 3 weeks after switching to atorvastatin 20 mg qd What might be appropriate for this patient at this time?

N = 2,287



60 y/o woman with history of T2D and hypertension Hospitalized for NSTEMI 3 months ago LDL-C at MI: 145 mg/dL Atorvastatin 80 mg started Stopped atorvastatin after onset of muscle pain 3 weeks later Muscle symptoms persisted when dose reduced to 20 mg/qd and after trying two daily low-dose statins and once-a-week dosing of rosuvastatin What might be appropriate for this patient at this time?

N = 2,343



RealCME

Note: data are matched.
Correct answer is designated by a ✓.

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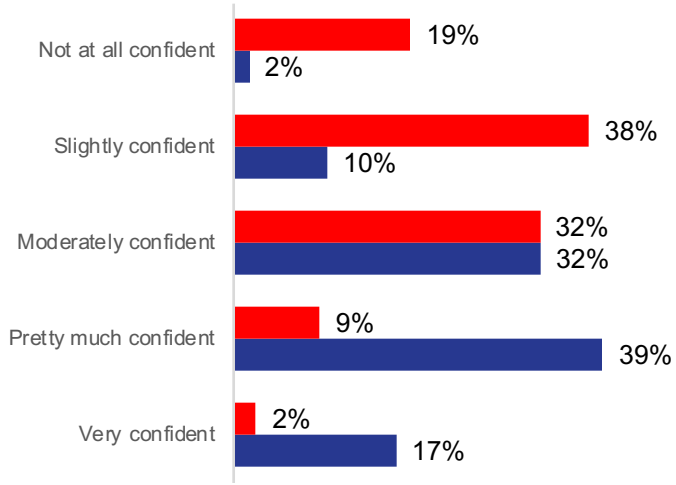
Confidence and Practice Strategy Items

Pre-Test
Post-Test

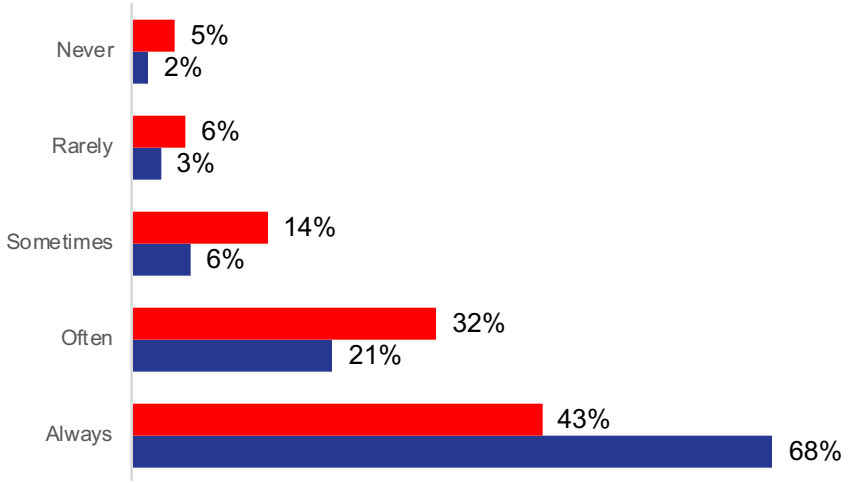
How confident are you in your ability to manage patients with ASCVD risk who do not tolerate statins?

N = 2,865



How often do you assess patients' adherence to, and tolerance of, statin therapy?

N = 2,461



RealCME

Note: data are matched.

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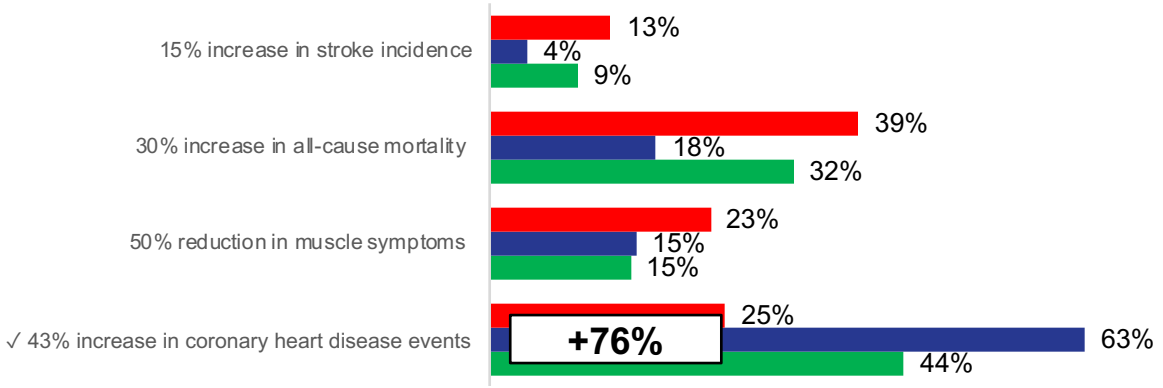
Post Curriculum Assessment

Knowledge Items

Pre-Test
Post-Test
PCA

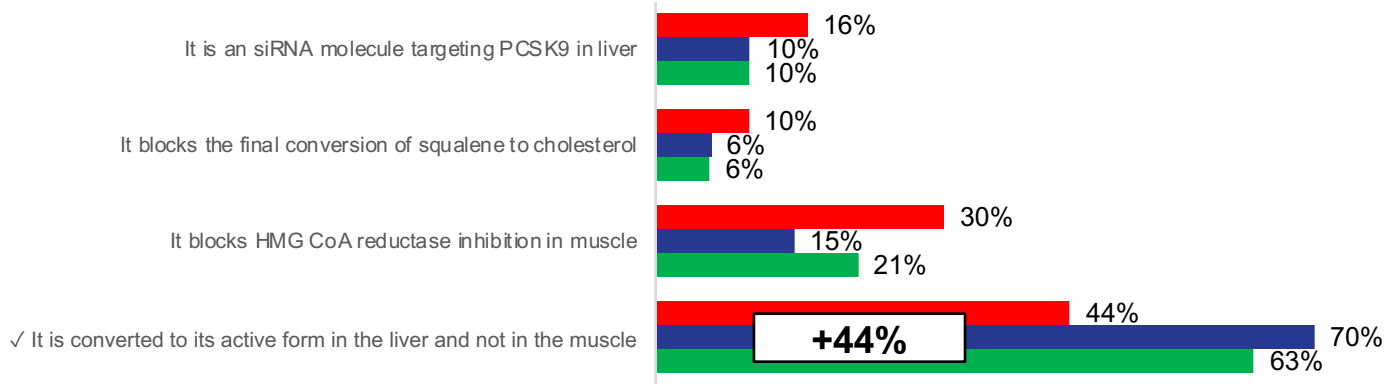
A study of Medicare beneficiaries who started statin therapy after a myocardial infarction reported which of the following outcomes among patients with statin intolerance, compared to patients with high statin adherence?

N = 795



Bempedoic acid is unlikely to cause myalgias as it promotes lipid lowering because?

N = 788



RealCME

Note: data are matched.
Correct answer is designated by a ✓.

NACE

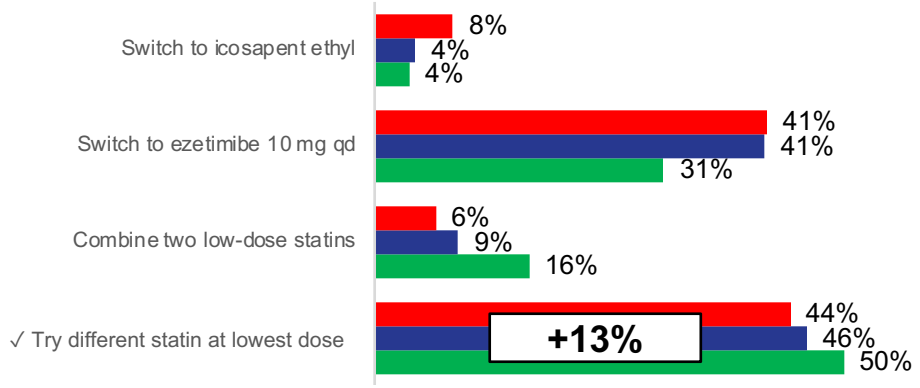
Post Curriculum Assessment

Competence Items

Pre-Test
Post-Test
PCA

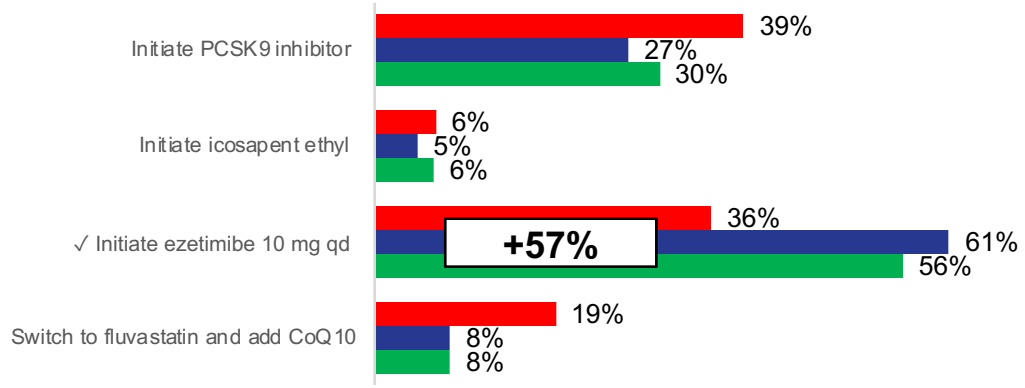
59 y/o man with history of hypertension, obesity, and prediabetes Hospitalized for NSTEMI 6 months ago; atorvastatin 80 mg initiated At time of MI, LDL-C 138 mg/dL (no lipid-lowering therapy). Counseled on lifestyle interventions 1 month later, stopped statin due to onset of muscle pain. Pain returns 3 weeks after switching to atorvastatin 20 mg qd What might be appropriate for this patient at this time?

N = 903



60 y/o woman with history of T2D and hypertension Hospitalized for NSTEMI 3 months ago LDL-C at MI: 145 mg/dL Atorvastatin 80 mg started Stopped atorvastatin after onset of muscle pain 3 weeks later Muscle symptoms persisted when dose reduced to 20 mg/qd and after trying two daily low-dose statins and once-a-week dosing of rosuvastatin What might be appropriate for this patient at this time?

N = 929



RealCME

Note: data are matched.
Correct answer is designated by a ✓.

NACE

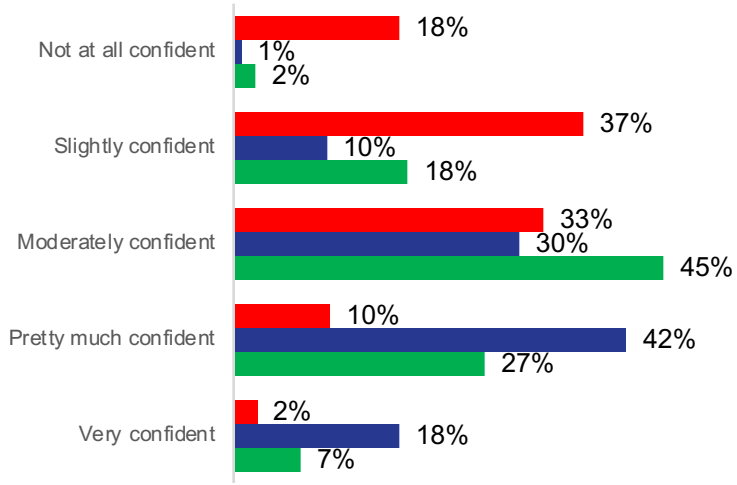
Post Curriculum Assessment

Confidence and Practice Strategy Items

Pre-Test
Post-Test
PCA

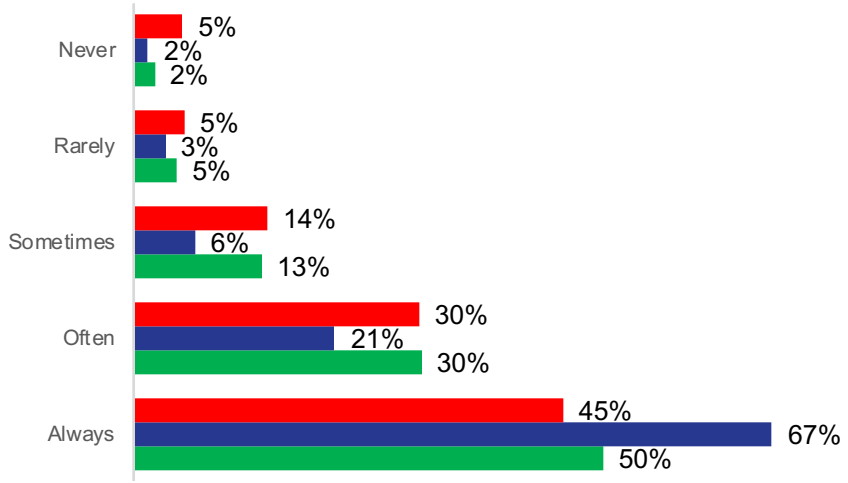
How confident are you in your ability to manage patients with ASCVD risk who do not tolerate statins?

N = 1,095



How often do you assess patients' adherence to, and tolerance of, statin therapy?

N = 973



RealCME

Note: data are matched.

NACE