Clinical Diabetes and Endocrinology in 2017

**Presented by National Jewish Health
and the Clinical Diabetes Endocrine Institute**

Executive Summary: Activity Details

Background: This 53rd annual live 4-day conference addressed healthcare provider educational needs in diabetes and endocrine-related issues.

Target Audience: Endocrinologists, Primary Care Physicians and other healthcare professionals with an interest in diabetes, endocrinology and metabolism

Features include:
- ✓Interactive didactic presentations
- ✓Case-based panel learning
- ✓Group discussions

January 21-24, 2017
Snowmass Conference Center
Snowmass, CO

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Learning Objectives

Outcomes

1. Compare and contrast recent developments in type 2 diabetes therapies
2. Review approaches to addressing obesity as a comorbidity of diabetes
3. Describe the role of induced pluripotent stem (iPS) cells in understanding and treating diabetes
4. Summarize the latest clinical data on insulin therapy and insulin delivery systems for patients with diabetes
5. Evaluate the clinical profiles of GLP-1 receptor agonists for the treatment of type 2 diabetes

Level 4 Outcomes
Strategies to measure participants' knowledge and competence:
✓Pre-tests, post-tests
✓Evaluations
✓45-day follow up surveys

Dashboard: Activity Impact

Met Educational Needs

98%

Reinforced/Improved Skills

98%

Improved Ability to Treat and Manage Patients

98%

96
Learners
84%
Prescribers
16%
RN, PharmD

Overall relative knowledge gain from pre- to post-activity **22%**

Estimated # of **patients** with diabetes and other endocrine-related issues seen per **week** by participants **>760**

Overview: Faculty Presenters

David D'Alessio, MD
Professor of Medicine
Director, Division of Endocrinology, Metabolism, and Nutrition
Associate Director, Duke Molecular Physiology Institute
Duke University Durham, NC

Robert H. Eckel, MD
Charles A. Boettcher Endowed Chair in Atherosclerosis
Professor of Medicine – Division of Endocrinology, Metabolism, and Diabetes
Program Director, Adult General Clinical Research Center
University of Colorado Denver

Ron Kahn, MD
Chief Academic Officer
Joslin Diabetes Center
Mary K. Iacocca Professor of Medicine
Harvard Medical School Boston, MA

E. Michael Lewiecki, MD, FACP, FACE
Clinical Assistant Professor of Medicine
University of New Mexico School of Medicine
Director, New Mexico Clinical Research & Osteoporosis Center Albuquerque, NM

Cecilia Low Wang, MD
Associate Professor of Medicine
Associate Director for the Fellowship and Education, Endocrinology Division
University of Colorado Denver

David Maahs, MD, PhD
Associate Professor of Medicine
Division of Renal and Hypertension
University of Colorado Denver

Overview: Self-Reported Performance (45-Day Survey Results)

N = 47
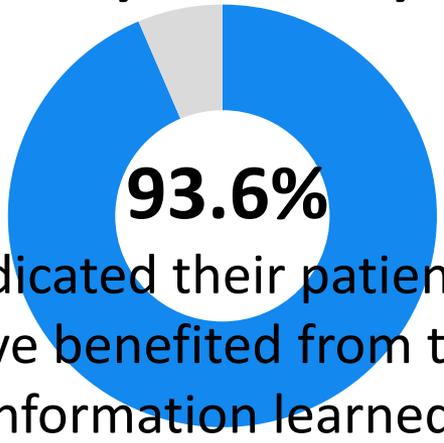
93.6%
indicated their patients have benefited from the information learned
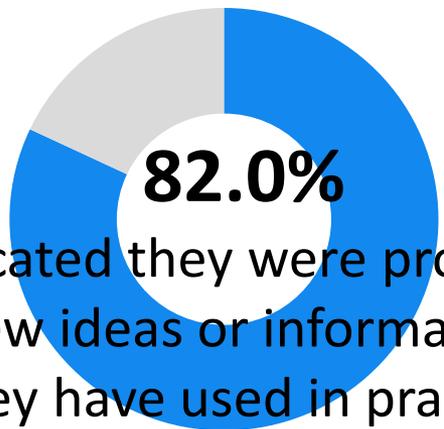
82.0%
indicated they were provided new ideas or information they have used in practice

The **top three changes** respondents have made or intend to make (for those that had not seen any COPD patients within the 45-day time period) are:

✓ Modify **treatment plans**

✓ Change my **screening/prevention practice**

✓ Incorporate **different diagnostic strategies** into patient evaluation

Key Lessons Learned

- Safe and effective use of GLP-1s
- Cost-effective diabetes treatment
- Data on new insulin drugs
- Exacerbations risk and assessment
- Treatment in young T1D

Needs for Further Education

- Managing T2D patients
- Insulin resistence
- Pregnancy-related endocrine issues
- Genetic adrenal disorders
- Glycemic emergencies
- Treatment of pediatric diabetic patients

What Attendees are Saying

"I have now attended this meeting for about 25 years. Without question, it is the most informative educational meeting I attend."

"Excellent presenters discussing pertinent clinical information."

"This conference is so valuable."

"Excellent lectures and good clinical information for patient care."

"Very informative conference, interesting topics."

Level 1 Outcomes: Participation

Bar chart:
- Other: 13
- RN: 2
- NP/PA: 14
- DO: 7
- MD: 60

*Other: BS, MS, PhD, PharmD

96 Learners

84% Prescribers

16% Other

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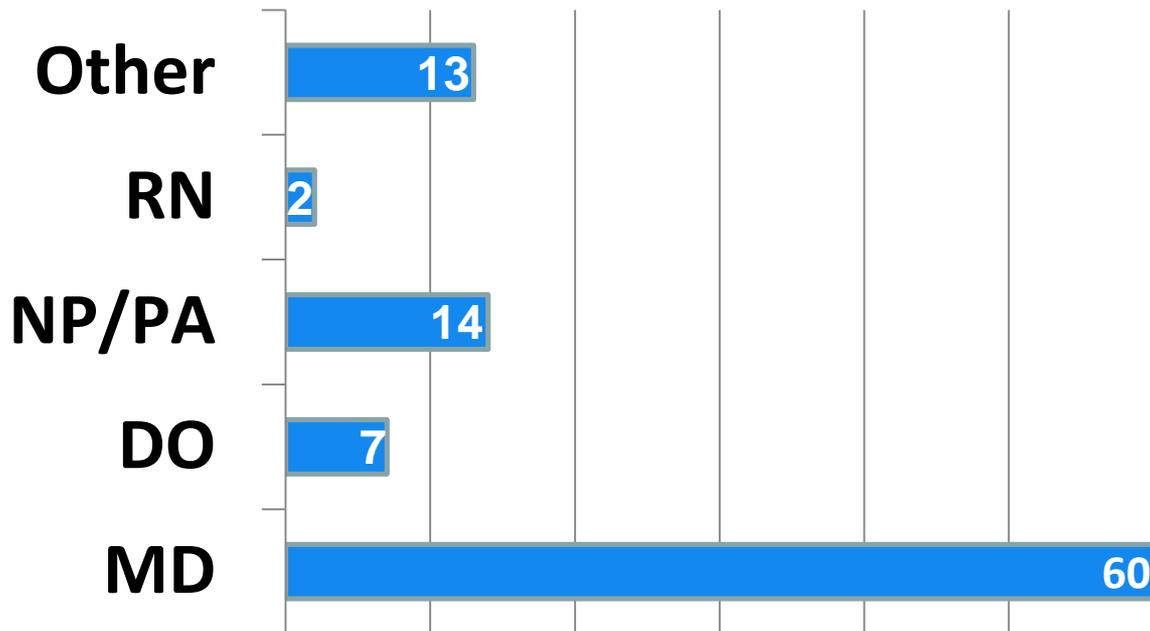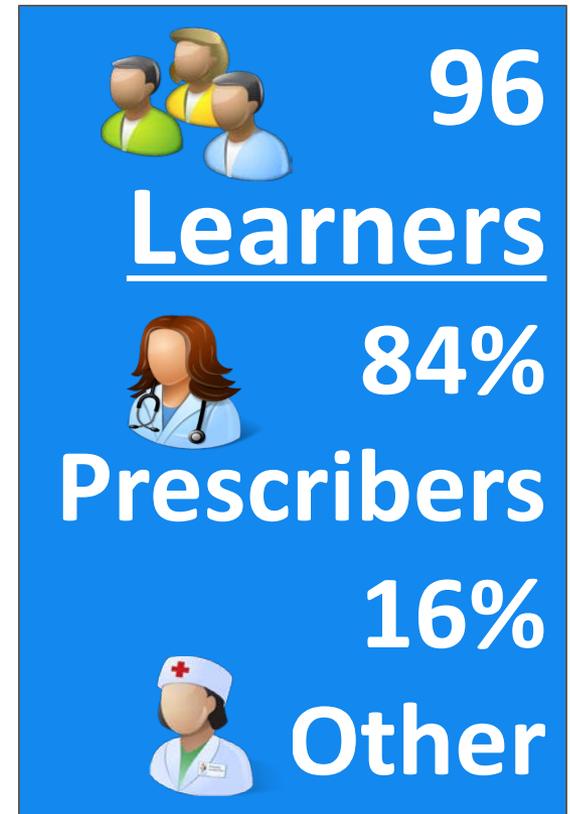
Level 1 Outcomes: Participation Specialty Breakdown

N=96
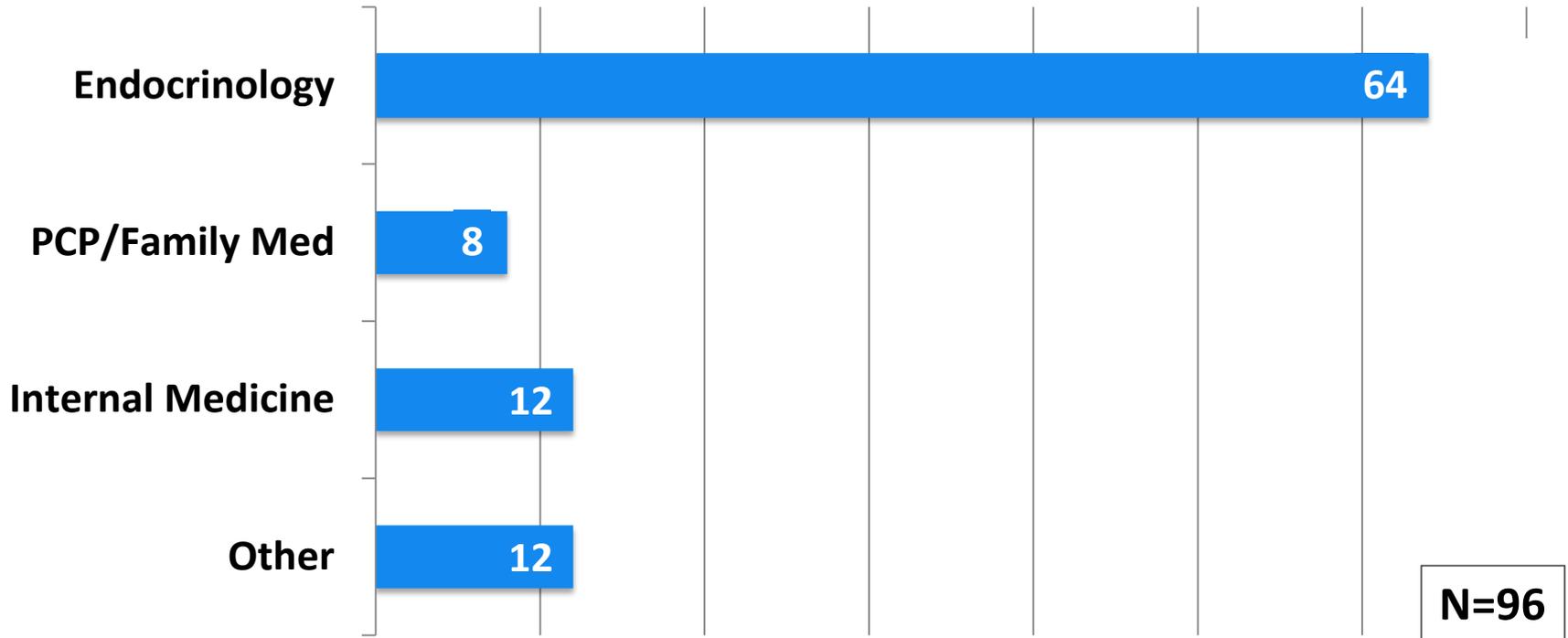
*Other: Thyroid, oncology, bariatric, nuclear medicine, pain management, no specialty selected

Level 2 & 3 Outcomes: Satisfaction and Learning

Analysis of participants responses related to educational needs
How well did:

...the activity meet your educational needs? — 84% / 14%

...the information presented reinforce and/or improve your current skills? — 80% / 18%

...the conference enhance your ability to apply the learning objectives to your practice? — 75% / 23%

...the conference improve your ability to treat or manage your patients — 86% / 13%

N=56

■ Fair   ■ Good   ■ Excellent

Level 3 & 4 Outcomes: Learning (Knowledge and Competence)

53.6%

65.3%

Pre-Test (n=67)   Post-Test (n=81)

**Overall relative increase** from pre- to post-activity

22%
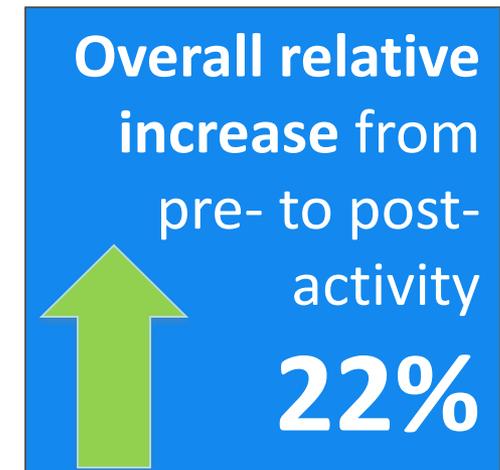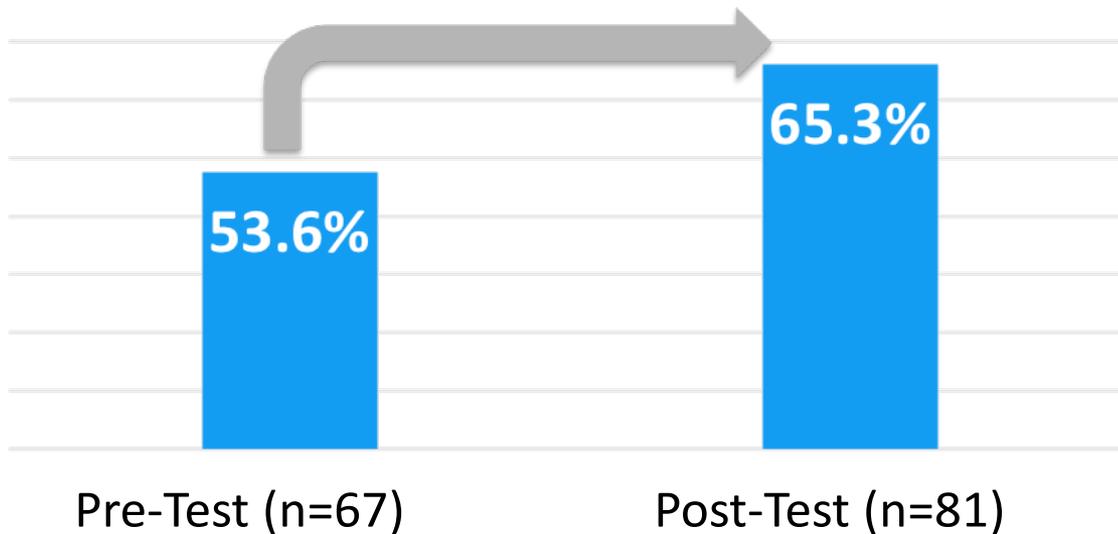
Level 3 and 4 outcomes were measured by comparing participants' pre- and post-test answers. The attendees' responses to these questions demonstrated that participants gained knowledge as a result of the activity.

53.6% Pre- Test   **65.3% Post-Test**

Pre/Post Test Comparison: (Addresses Learning Objective (LO) 4)

A 70 year old man is referred for poor glucose control. He was diagnosed with diabetes 20 years ago and has been treated with insulin for the past 10 years. He has no microvascular complications, but had a myocardial infarction 8 years ago. His recent hemoglobin A1c levels have been between 8.5% and 9.0%, and he has frequent nocturia. His primary care physician prescribed a regimen of glipizide, 10 mg daily, and NPH insulin, 40 units twice daily, which he takes before breakfast and his evening meal. Home glucose monitoring shows a mean fasting glucose concentration of 224 mg/dL. He reports waking in the middle of the night with sweating and intense hunger several times a month. On the basis of his age and comorbidities, you recommend a hemoglobin A1c target of 8.0%. Which of the following adjustments to his insulin regimen is most likely to safely improve his glucose control?
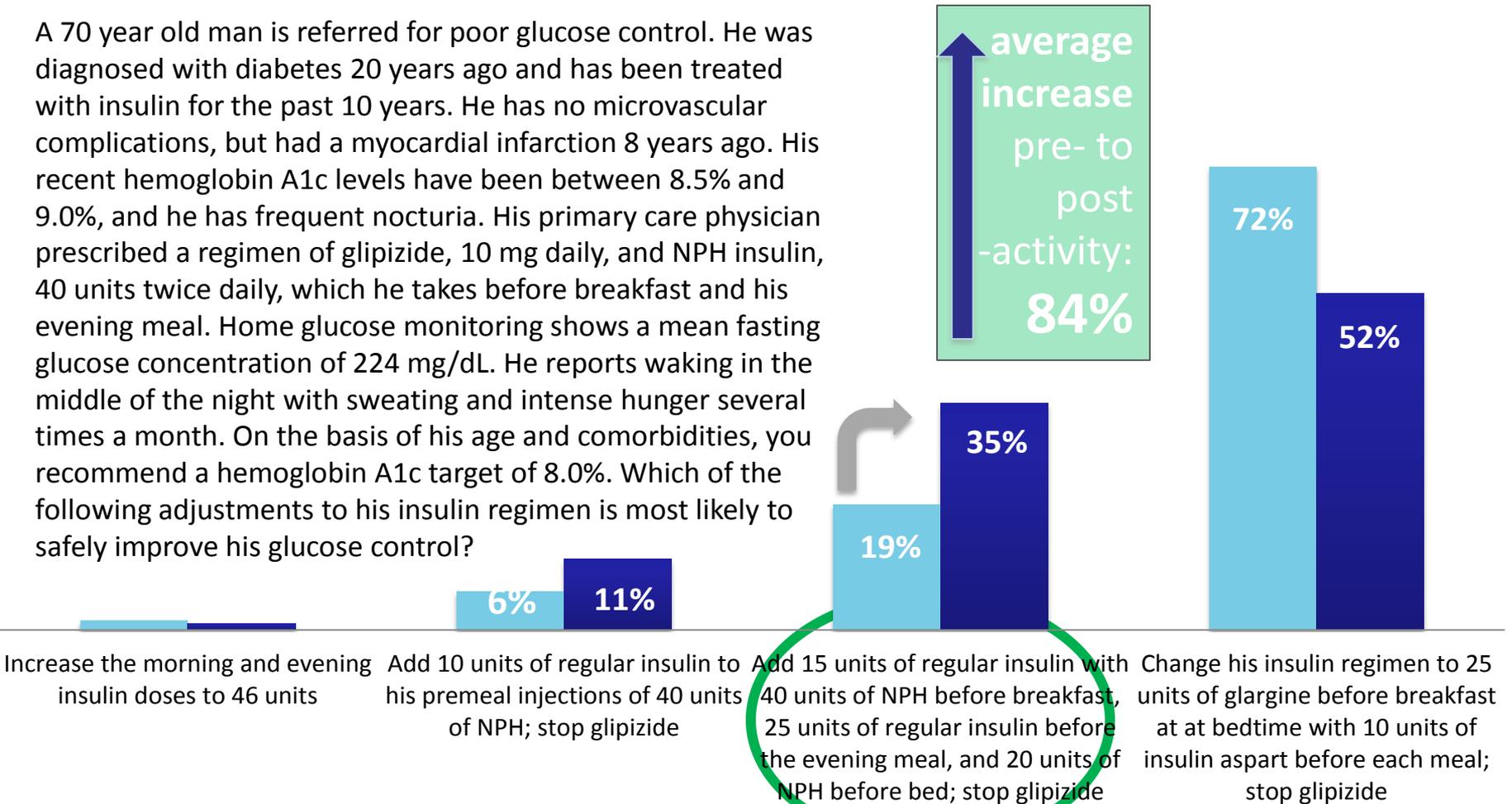
average increase pre- to post-activity: **84%**

19%
35%

72%
52%

6%
11%

Increase the morning and evening insulin doses to 46 units

Add 10 units of regular insulin to his premeal injections of 40 units of NPH; stop glipizide

Add 15 units of regular insulin with 40 units of NPH before breakfast, 25 units of regular insulin before the evening meal, and 20 units of NPH before bed; stop glipizide

Change his insulin regimen to 25 units of glargine before breakfast at at bedtime with 10 units of insulin aspart before each meal; stop glipizide

![National Jewish Health]
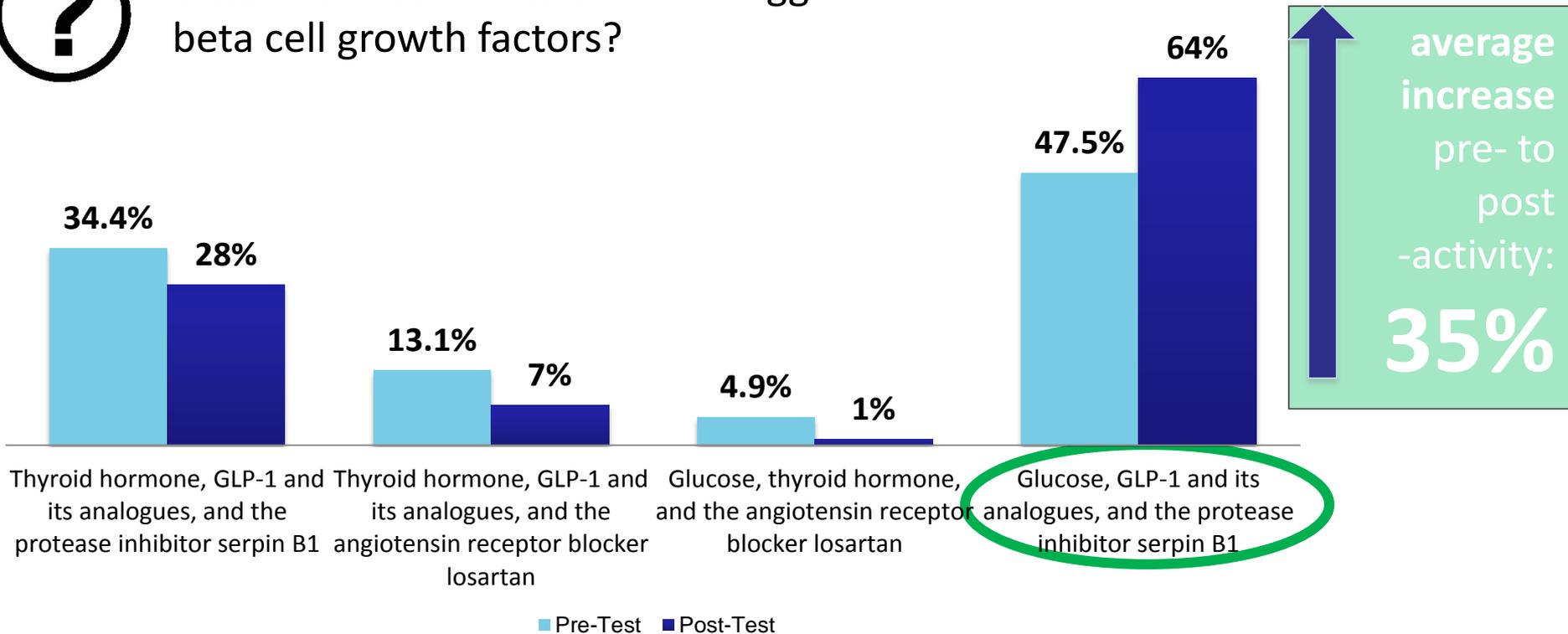
Pre/Post Test Comparison: (Addresses LO 1)

A 46 year old man presents for advice on treatment of type 2 diabetes mellitus. He has been treated with metformin for 4 years, since an elevated blood glucose concentration was detected on a preoperative evaluation. His glucose control has varied, and a sulfonylurea was added last year when his hemoglobin A1c increased to greater than 8.0%. However, he gained 5 kg with this treatment and stopped the drug after 6 months. He is otherwise healthy and his only medications are metformin and lisinopril. On physical examination, his BMI is 33 kg/m2, and his blood pressure is 138/84 mm Hg. A repeated hemoglobin A1c measurement is 8.4%. Which of the following treatments is the best option for this man?

average increase pre- to post-activity: **19%**

	Repaglinide	Sitagliptin	Liraglutide	Pioglitazone	Insulin glargine
Pre-Test	0.0%	23.0%	70.5%	1.6%	4.9%
Post-Test	3.0%	8.0%	84.0%	1.0%	4.0%

■ Pre-Test ■ Post-Test
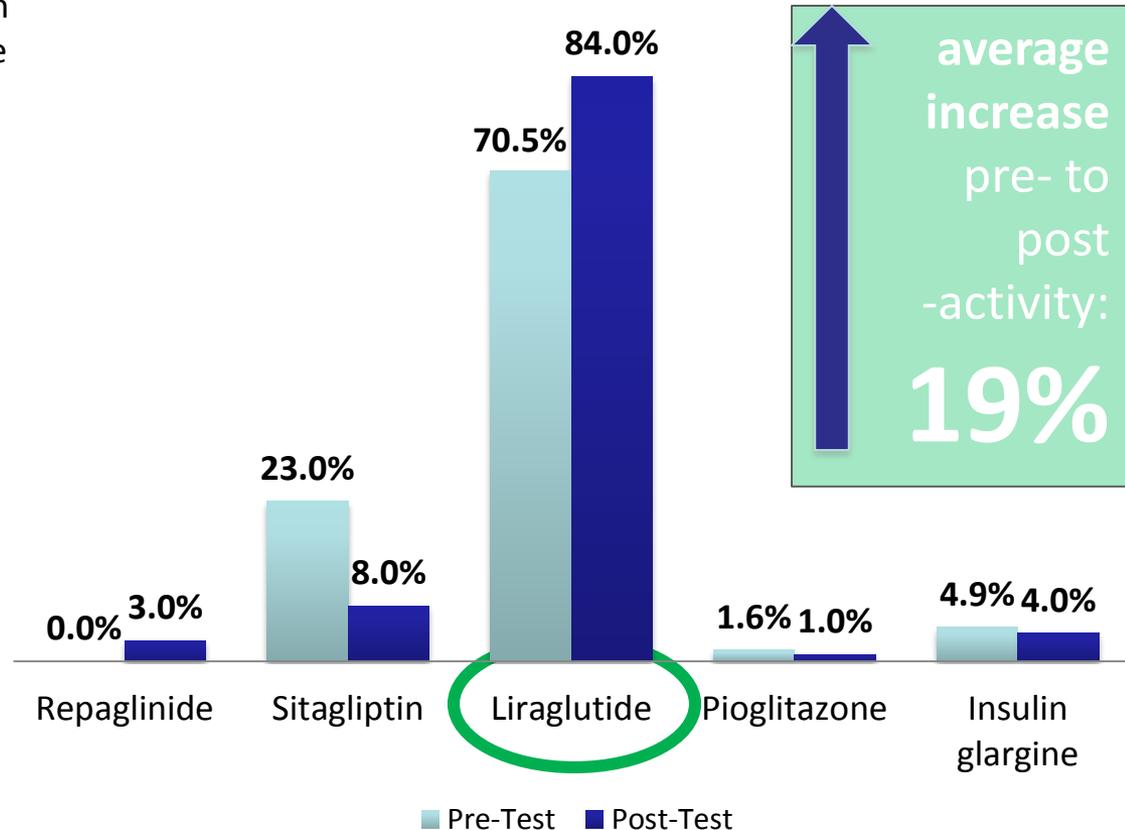
Level 4 Outcomes: Competence

Learner's Average Years in Practice

Category	Value
Less than 5	7
5-10 years	13
11-15 years	6
16-20 years	5
More than 20	25
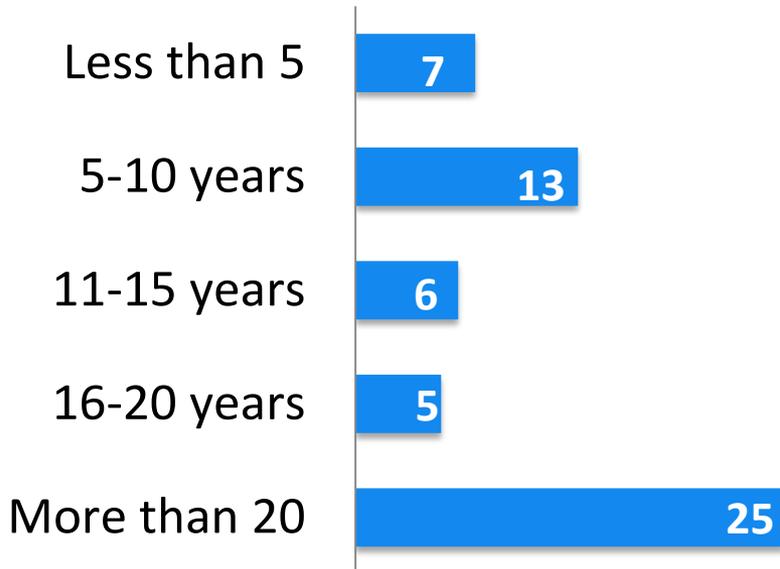
Average number of years in practice: **11**

Average # of patients learner treats per week with conditions discussed in this activity

Category	Value
Less than 5	3
5-9 patients	6
10-15 patients	9
More than 15	38
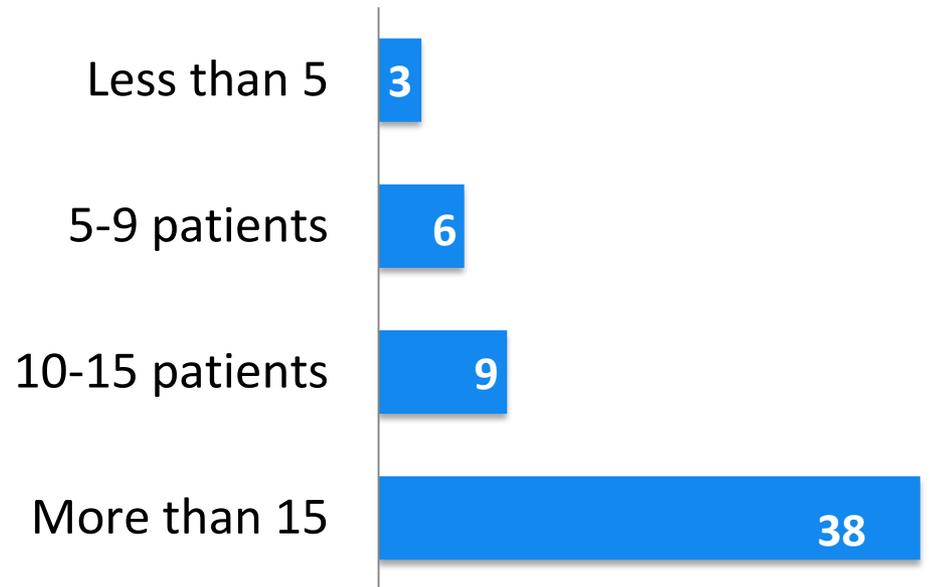
Estimated # of patients impacted per month: **767**

Level 4 Outcomes: Competence (Intent to Change)

100% of post-test respondents stated they intend to incorporate changes into their practice as a result of the knowledge acquired during this activity. Those changes include:

N = 56

Change my screening/prevention practice — **55.4%**

Incorporate different diagnostic strategies into patient evaluation — **58.9%**

Use alternative communication methodologies with patients and families — **26.8%**

Modify treatment plans — **66.1%**

Other (please specify) — 3.6
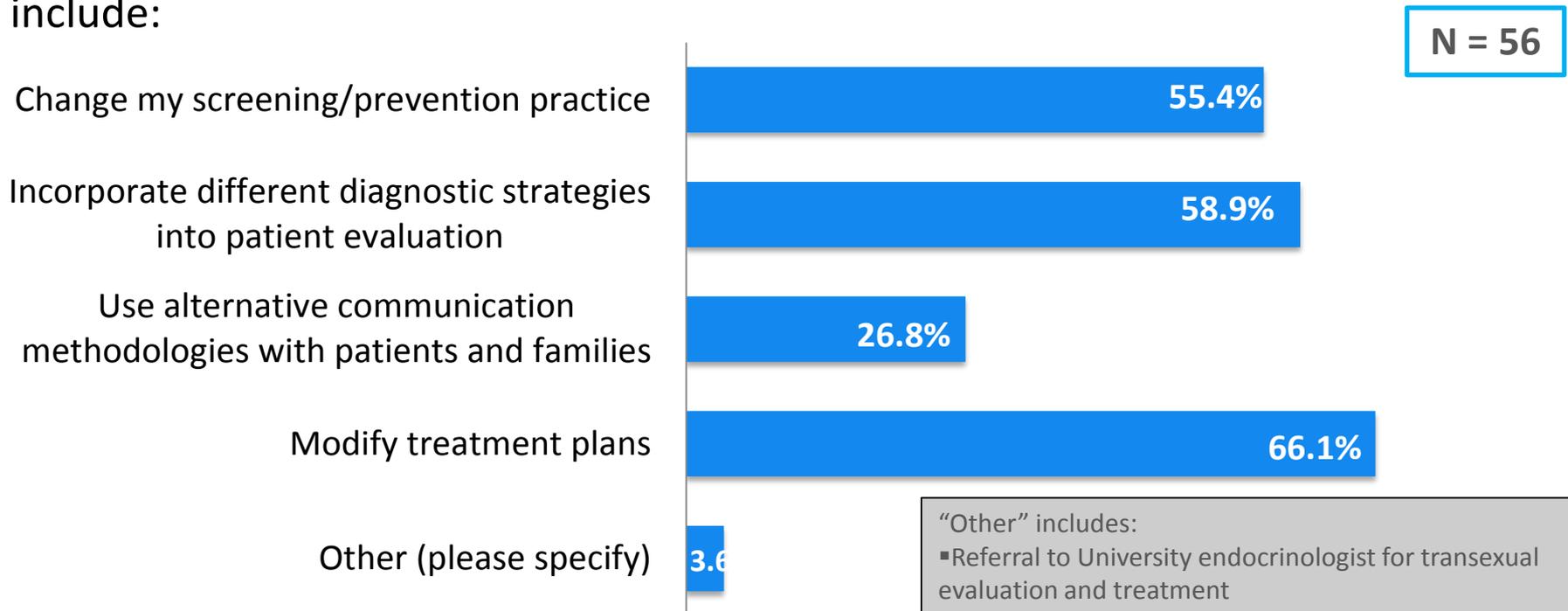
"Other" includes:
- Referral to University endocrinologist for transexual evaluation and treatment
- Monitoring/different treatment for pregnant patients with Graves disease

Overview: Self-Reported Performance (45-Day Survey Results)

N = 47

The **top three barriers** respondents have experienced since the meeting that may impact patient outcomes and/or optimal patient care:

- ✓ Patient adherence
- ✓ Lack of time
- ✓ Organization or institutional barriers

◆ 66% of respondents indicated the activity **provided** education, tools or resources to address these barriers.

◆ 19% of respondents indicated the activity did not provide these.

◆ 15% of respondents did not experience any barriers.

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Overall Activity Impact

Main Findings: The attendees' (n=56) responses to post-test evaluation questions demonstrated the following:

✓**100%** of participants indicated that the materials were **presented objectively and free of commercial bias.**

✓**100%** of participants indicated that the activity **addressed strategies for overcoming barriers to optimal patient care.**

✓**100%** of participants stated that the content **presented was evidence-based and clinically relevant.**

✓**100%** of participants indicated that the **content contributed valuable information that will assist in improving quality for patients.**

✓**82%** of participants in the 45-day post meeting survey indicated they **had used new ideas and information from the activity** in their practice. (n=50)

Executive Summary: Certification

National Jewish Health is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

National Jewish Health designates this live activity for a maximum of 18.25 *AMA PRA Category 1 Credits™*. Participants should claim only the credit commensurate with the extent of their participation in the activity.