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
Learning Objectives

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

Outcomes

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Affiliation</th>
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<tbody>
<tr>
<td>David D’Alessio, MD</td>
<td>Professor of Medicine, Director, Division of Endocrinology, Metabolism, and Nutrition Associate Director, Duke Molecular Physiology Institute Duke University Durham, NC</td>
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<tr>
<td>Robert H. Eckel, MD</td>
<td>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</td>
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<tr>
<td>Ron Kahn, MD</td>
<td>Chief Academic Officer Joslin Diabetes Center Mary K. Iacocca Professor of Medicine Harvard Medical School Boston, MA</td>
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<td>E. Michael Lewiecki, MD, FACP, FACE</td>
<td>Clinical Assistant Professor of Medicine University of New Mexico School of Medicine Director, New Mexico Clinical Research &amp; Osteoporosis Center Albuquerque, NM</td>
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<td>Cecilia Low Wang, MD</td>
<td>Associate Professor of Medicine Associate Director for the Fellowship and Education, Endocrinology Division University of Colorado Denver</td>
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<tr>
<td>David Maahs, MD, PhD</td>
<td>Associate Professor of Medicine Division of Renal and Hypertension University of Colorado Denver</td>
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Overview: Self-Reported Performance (45-Day Survey Results)

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 resistance
- 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

- MD: 60
- NP/PA: 14
- DO: 7
- RN: 2
- Other: 13
- *Other: BS, MS, PhD, PharmD

Learners: 96 (84%)
Prescribers: 16 (16%)
Other: 13
Level 1 Outcomes: Participation Specialty Breakdown

- Endocrinology: 64
- PCP/Family Med: 8
- Internal Medicine: 12
- Other: 12

*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% Excellent
- the information presented reinforce and/or improve your current skills? 80% Excellent
- the conference enhance your ability to apply the learning objectives to your practice? 75% Good
- the conference improve your ability to treat or manage your patients 86% Excellent

N=56
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.
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?

- 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 bedtime with 10 units of insulin aspart before each meal; stop glipizide
Pre/Post Test Comparison: (Addresses LO 3)

What three factors have been suggested as beta cell growth factors?

- Thyroid hormone, GLP-1 and its analogues, and the protease inhibitor serpin B1
- Thyroid hormone, GLP-1 and its analogues, and the angiotensin receptor blocker losartan
- Glucose, thyroid hormone, and the angiotensin receptor blocker losartan
- Glucose, GLP-1 and its analogues, and the protease inhibitor serpin B1

Average increase pre- to post-activity: 35%
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?
Level 4 Outcomes: Competence

Learner’s Average Years in Practice

- Less than 5 years: 7
- 5-10 years: 13
- 11-15 years: 6
- 16-20 years: 5
- More than 20 years: 25

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

- Less than 5 patients: 3
- 5-9 patients: 6
- 10-15 patients: 9
- More than 15 patients: 38

Average number of years in practice: 11

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:

<table>
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<tr>
<th>Change</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Change my screening/prevention practice</td>
<td>55.4%</td>
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<td>Incorporate different diagnostic strategies</td>
<td>58.9%</td>
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<td>into patient evaluation</td>
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<td>Use alternative communication methodologies</td>
<td>26.8%</td>
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<td>with patients and families</td>
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<tr>
<td>Modify treatment plans</td>
<td>66.1%</td>
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<tr>
<td>Other (please specify)</td>
<td>3.6%</td>
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“Other” includes:
- Referral to University endocrinologist for transexual evaluation and treatment
- Monitoring/different treatment for pregnant patients with Graves disease

N = 56
Overview: Self-Reported Performance (45-Day Survey Results)

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.
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.