Incorporation of Technological Advancements in CME to Improve Comprehension and Translation to Practice within Cardiovascular Care

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Introduction
With educational grant support from Sanofi and Regeneron, Med Learning Group implemented a variety of live and online CME events on the management of patients with hypercholesterolemia. All programs included virtual reality (VR), which has proven to engage learners, enhance comprehension, and improve recall in medical education. Participants also had access to a variety of point-of-care tools such as downloadable VR animations, an augmented reality (AR) app, and personalized posters. The outcomes data shows how these tools supported continuous learning and HCP-patient dialogue.

The Educational Activity Consisted of Expert-Led Interactive Elements

- Educational Program Reached the Appropriate Audience
  - Live Booth: 1,504
  - Live Symposium with Simulcast: 413
  - Posters: 1,863
  - Smart Reach Enduring: 1,027
  - AR: N = 802

- Educational Gains Were Observed Across Objectives
  - N = 2,902
  - Pretest: 26% knowledge gain, 30% competence gain
  - Posttest: 70% knowledge gain, 86% competence gain

- Commitments to Practice Change
  - N = 2,902
  - 91% of participants indicated they would make a change in practice based on this education

- Personalized Posters Were Effective Reference Resources & Patient Education Tools
  - 1,863 posters ordered
  - 72% will use to discuss with patients
  - 85% will use to discuss with colleagues

- Innovative Presentation of Content Through VR Enhanced the Learning Experience
  - AR improves understanding of the pathology of hypercholesterolemia
  - AR facilitates recall of education
  - AR is useful educating for patients and the care team

Conclusion
Use of virtual animations improves overall comprehension and recall of education, particularly in terms of hypercholesterolemia pathophysiology and MoA of new / emerging treatments, with 97% indicating the VR improved their learning experience. Tools to facilitate continuous learning and patient education are valued, with 93% indicating the VR / AR enhanced recall and 71% indicating they are using one of the tools for patient education.

Based on pre/posttest results, while participants showed improvement across objectives, the lower baseline knowledge in terms of applying best practices for detection and management of persistently elevated LDL-C levels in patients at high-risk for CVD indicates a need for continued focus. Professionally, baseline knowledge among primary care / internal medicine MDs indicate this could be a key target for continued education.

View AR Content
Supported by an educational grant from Sanofi and Regeneron
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Learning Objectives

- Review evidence demonstrating that lowering LDL-C can reduce the risk for CVD in patients with persistently elevated cholesterol levels
- Discuss the latest clinical trial data available on nonstatin LDL-C lowering agents and their position in treatment regimens for patients with elevated LDL-C levels
- Describe best practices for detection and management of persistently elevated LDL-C levels in patients at high-risk for CVD
- Explain the pharmacoeconomic data on the use of nonstatin lipid lowering drugs and their managed care implications

Faculty

- Henry N. Ginsberg, MD
  Irving Professor of Medicine
  Director, Irving Institute for Clinical and translational Research
  Columbia University
  New York, NY

- Harold E. Bays MD, FOMA, FTOS, FACC, FACE, FNLA
  Medical Director/President
  Louisville Metabolic and Atherosclerosis Research Center Inc.
  Louisville, KY

- Deepak L. Bhatt, MD, MPH
  Executive Director of Interventional Cardiovascular Programs
  Professor, Harvard Medical School
  Brigham and Women’s Hospital
  Boston, MA
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Educational Program Reached the Appropriate Audience

- 74% MDs N = 2,847
- 13% Other (i.e. Lipidologist) N = 500
- 12% MD Cardiologist N = 462
- 9% MD Primary Care/Internal Medicine N = 346
- 8% N = 307
- 3% N = 115
- 1% Nurse N = 39
- 1% N = 39

N = 3,847

Live Booth: 1,504
Live Symposium with Simulcast: 413
Virtual Pathways Enduring: 903
Smart Reach Enduring: 1,027

N = 2,847
3% N = 115
50% N = 1,924

Educational Program Reached the Appropriate Audience
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Educational Gains Were Observed Across Learning Objectives

18% change

Knowledge of evidence demonstrating that lowering LDL-C can reduce the risk for CVD in patients with persistently elevated cholesterol levels

70% Pretest 88% Posttest

19% change

Awareness of the latest clinical trial data available on nonstatin LDL-C-lowering agents, with a focus on PCSK9 antibody therapy, and their position in treatment regimens for patients with elevated LDL-C levels

69% Pretest 88% Posttest

18% change

Ability to apply best practices for detection and management of persistently elevated LDL-C levels in patients at high-risk for CVD

64% Pretest 82% Posttest

19% change

Awareness of the medical economics of PCSK9 inhibition in the patient post-ACS on maximally-tolerated statin therapy

71% Pretest 90% Posttest

Educational Gains By Profession

Interventional Cardiologist MD

N = 2,902

Pretest: 76% Posttest: 95%

Clinical Cardiologist MD

Pretest: 71% Posttest: 93%

Endocrinologist MD

Pretest: 66% Posttest: 84%

Internal Medicine / Primary Care MD

Pretest: 60% Posttest: 78%

Other HCP

Pretest: 56% Posttest: 75%
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Commitments to Practice Change

Total Respondents

- MD Cardiologists: 23%
- MD Endocrinologists: 24%
- MD Primary Care / Internal Medicine: 10%
- Nurse: 25%
- PA: 13%
- Pharmacist: 2%
- Dietician / Nutritionist: 3%

The Majority Identified Specific Practice Changes

- Treatment Approach: 85%
- Patient Safety: 80%
- Patient Education: 78%
- Physician-Patient Communication: 74%
- Quality Improvement: 65%
- Diagnosis Techniques: 41%

Sustained Practice Changes Were Reported

- More readily apply best practices for detecting and managing persistently elevated LDL-C levels: 83%
- More readily review clinical trial data on nonstatin LDL-C lowering agents and their role in treatment regimens: 69%
- More readily consider evidence that lowering LDL-C can reduce risk for CVD in patients with persistent high cholesterol: 84%

What factors, if any, prevent you from making practice changes you would aim for?

- Patient adherence/Patient non-compliance
- Cost/Insurance
- Practice setting limitation
- Time
- Comorbidities

N = 2,902

N = 273
**Personalized Posters**

Approximately 55% of the selected posters included one of the below images illustrating inhibition of PCSK9 (left) and illustrating ways to manage high cholesterol (right). Both serve to educate patients on their health concerns and their role in their care.
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Participant Feedback on the VR
Click the following videos of participants’ immediate feedback on the VR:

A VIRTUAL REALITY TOUR of Nonstatin LDL-lowering Agents that Decrease Cardiovascular Risk for Patients with Persistent HYPERCHOLESTEROLEMIA
June 22-26, 2018
Orlando, FL

Downloadable VR Animations

814 downloads
69% report use with patients
94% report the VR facilitates recall of the education

64% report use with colleagues

“The VR is awesome. After visiting booth I shared it with our whole team. Great way to better understand the why behind treatment.”  
- MD, Cardiologist

“The VR is awesome. After visiting booth I shared it with our whole team. Great way to better understand the why behind treatment.”  
- MD, Cardiologist

“Helps with patient education. Once they understand what is happening inside their body, more likely to adhere to medicine.”  
- NP

“Sharing the VR leads to better dialogue with patients, they are engaged and appreciate the experience”  
- MD, Cardiologist

N = 84
Participant Feedback on the AR

1098 AR downloads as of 3/1/19

72% report use with patients

63% report use with colleagues

92% report the AR facilitates recall of the education

95% report the AR improves understanding of the pathology of hypercholesterolemia

“Good teaching tool. Shows patients what happens inside their body when that results in hypercholesterolemia.”
– MD, Cardiologist

“The AR is great. My team has had a lot of fun with it and many of our patients appreciate the education too.”
– MD, Cardiologist

N = 86
To use this augmented reality card, please download the “Hypercholesterolemia Augmented Reality” app from the Apple App Store or Google Play Store on your phone or tablet.

Open the Hypercholesterolemia Augmented Reality app and point it at the image below.

A Virtual Reality Tour of Nonstatin LDL-C-lowering Agents that Decrease Cardiovascular Risk for Patients with Persistent Hypercholesterolemia