TOPIC INFO

TOPIC:	MAKING A DIFFERENCE IN DIABETES: EVALUATING ETIOLOGY AND FACING FEARS AND FALSEHOODS
SPEAKER:	JANET LEUNG
TITLE:	ENDOCRINOLOGY/METABOLISM
AFFILIATION	VIRGINIA MASON
TIME:	30 minutes

PRACTICE GAP ANALYSIS: *MAKING A DIFFERENCE IN DIABETES: EVALUATING ETIOLOGY AND FACING FEARS AND FALSEHOODS*

Describe the problems or gaps in practice this activity will address:

What are you trying to change?

The prevalence of diabetes worldwide is predicted to increase by 69% in adults in developing countries between 2010 and 2030. 1 Between 2010 and 2030, diabetes prevalence is expected to increase by 72% in India, from 7.6% to 9.1%, with an estimated 87 million diabetic adults by year 2030

1. Data from the U.S. National Health Interview Survey from 1997–2008 showed that age- and sex-adjusted prevalence of type 2 diabetes in the U.S. was higher in Asian Americans (4.3–8.2%) than in whites (3.8–6.0%) and most notably, Asian Indians had the highest odds of diabetes
2. A population-based study of U.S. Asian Indians found diabetes prevalence in adults was 17% compared to 8% in non-Hispanic whites, 13% in non-Hispanic blacks, 10% in Hispanic Latinos and 15% in Native Americans/Alaskan natives
3. Dampening the spread of diabetes across the South Asian population has significant health and economic implications.

This increasing prevalence of diabetes in South Asians is multifactorial – due to both biologic and lifestyle factors, with urbanization and immigration playing a large role. South Asians have increased visceral adiposity and insulin resistance, impaired β-cell function, and a genetic predisposition to diabetes which culminates in a markedly increased risk of diabetes.

4. Additionally, urbanization across Asia is leading to decreased physical activity, increased intake of dietary fats and processed foods and increased mental stress which amplify the effects of insulin resistance and abdominal obesity.

What is the problem?

Asians have an increased incidence of CAD and cerebrovascular disease but a lower incidence of PAD, which is not entirely understood. In terms of microvascular complications, compared to Caucasians, South Asians have an increased incidence of retinopathy and nephropathy but a lower incidence of neuropathy which is also not well understood. Research is underway to understand the biologic mechanisms and genetic polymorphisms that are playing a role in the development of these diabetes complications. Given the great economic and health burden of diabetes and its complications in South Asians, the focus should be on prevention. Lifestyle modification and metformin therapy have been proven to prevent or delay diabetes in South Asians. Several ongoing studies are investigating the effectiveness of different culturally appropriate lifestyle interventions. 159–161 We are optimistic that the results of these studies will help to foster changes in public health and health policy and thereby help to reduce the incidence of diabetes and its complications in the South Asian community worldwide.

How did you assess and/or measure these issues?

How was the educational need/practice gap for this activity identified? Place an X by each source utilized to identify the need for this activity.

Attach copies of documentation for each source indicated (REQUIRED)

* please make sure when selecting your needs assessment data and references that you highlight applicable components.

Method	**Example of required document**

x	Previous participant evaluation data	Copy of tool and summary data
	Research/literature review	Abstract(s) or articles
x	Expert Opinion	Summary
	Target audience survey	Copy of tool and summary data
	Regulatory body requirements	Requirements summary
	Data from public health sources	Abstract, articles, references
	Other (describe)	

Describe the needs of learners underlying the gaps in practice:

What are the causes of the gaps in practice? MAKING A DIFFERENCE IN DIABETES: EVALUATING ETIOLOGY AND FACING FEARS AND FALSEHOODS

xx	Lack of awareness of the problem,		Poor self-efficacy,
	Lack of familiarity with the guideline,		Inability to overcome the inertia of previous practice, and
	Non-agreement with the recommendations,		Presence of external barriers to perform recommendations
	Other		

Why does the gap exist? MAKING A DIFFERENCE IN DIABETES: EVALUATING ETIOLOGY AND FACING FEARS AND FALSEHOODS

x	Lack of Knowledge competence		Lack of time to assess or counsel patients
	Performance-based.		Cost / Insurance/reimbursement issues
	Lack of consensus on professional guidelines		Patient Compliance Issues
	Other:		

What do learners need to be able to know or do to be able to address the gaps in practice?

A better Understanding of diabetes by below means will help in better control.
Compare how risk factors for diabetes in South Asian populations differ from US (with majority Caucasian ethnicity)
Discuss when to consider evaluating for T1DM in adult onset diabetes, T2DM in childhood onset diabetes, and pancreatic (Type 3c) diabetes
Outline misconceptions patient (and their communities) have about T1DM and T2DM and how that can affect management

CME OBJECTIVES *MAKING A DIFFERENCE IN DIABETES: EVALUATING ETIOLOGY AND FACING FEARS AND FALSEHOODS*

State at least three or more things that participants should be able to do after they participate in this CME activity. Please note these objectives should be measurable, specific, actionable and timely.
Upon completion of this activity, attendees should be able to:

1	Compare how risk factors for diabetes in South Asian populations differ from US (with majority Caucasian ethnicity)
2	Discuss when to consider evaluating for T1DM in adult onset diabetes, T2DM in childhood onset diabetes, and pancreatic (Type 3c) diabetes
3	Outline misconceptions patient (and their communities) have about T1DM and T2DM and how that can affect management

The ACCME does not want you to use the words - think, understand, know, appreciate, learn, comprehend, be aware of, be familiar with, etc. as they are not measurable.

You can use words such as Analyze, Categorize, Classify, Compare, Conclude, Construct, Critique, Define, Demonstrate, Describe, Discuss, Evaluate, Identify, List, Name, Outline, Show

COMPETENCIES: *MAKING A DIFFERENCE IN DIABETES: EVALUATING ETIOLOGY AND FACING FEARS AND FALSEHOODS*

What ACGME or IOM related competency is associated with this activity? (MAKING A DIFFERENCE IN DIABETES: EVALUATING ETIOLOGY AND FACING FEARS AND FALSEHOODS)

x	Patient Care	x	Practice-Based Learning and Improvement		Medical/Clinical Knowledge
	Procedural Skills		Interdisciplinary Teams		Teams and Teamwork
	Communication Skills		Professionalism		Systems-based Practice
	Quality Improvement		Utilization of Informatics		Evidence-based Practice

What is the activity designed to change

x	**Competence** - (knowing how to do something) Selecting this option requires the CME activity being planned provide participants with an opportunity to: • hear information related to advances or best practice • hear examples of application in practice of information presented
	Performance- (actually doing something) Selecting this option requires the CME activity being planned provide participants with an opportunity to: • practice what they have learned during the CME activity • receive feedback about doing what they have learned during the CME activity
	Patient Outcomes- (actually measure change in patients) Selecting this option requires the CME activity track change in patient outcomes: • provide tangible improvements and data to support overall change to patient outcomes

What potential barriers do you anticipate attendees may encounter when incorporating new objectives into their practice?

x	Lack of time to assess or counsel patients	Other – describe:
	Cost	
	No perceived barriers	
	Lack of administrative support/resources	
	reimbursement issues	
	Insurance/	

Describe how will this educational activity address these potential barriers and the strategies used?

RESULTS: MAKING A DIFFERENCE IN DIABETES: EVALUATING ETIOLOGY AND FACING FEARS AND FALSEHOODS

please describe the results expected (outcomes) for this activity in terms of specific improvements in patient care and/or other work related to the practice of medicine.

	Your Description
x	Improvements in patient care based on evidence-based treatment
	Reduce Health care costs
x	Streamline care of patients
	Other

MEASURING YOUR SUCCESS: MAKING A DIFFERENCE IN DIABETES: EVALUATING ETIOLOGY AND FACING FEARS AND FALSEHOODS

Will use pre-and post CME activity questionnaire to measure success.
Please provide 3 questions and answers that will asked to the audience before and after your talk. The answer to these questions should be in your presentation. Please highlight the correct answer and limit your possible answers to a maximum of 4 with only one correct answer. The others can be partially correct or wrong

Question 1. According to a survey of family physicians, which of the following was the most common reason they cited for avoiding or delaying insulin initiation?

	Answers
1	Fear of weight gain
2	Fear of hypoglycemia
3	Fear of pain from the injection
4	Fear that insulin is a treatment of last resort

Feedback:

1. Fear of weight gain: Wrong Answer.
2. Fear of hypoglycemia: Correct Answer.

   According to a study by Nakar and colleagues, more than 80% of the 157 respondents said that fear of hypoglycemia was the principal barrier to initiating insulin. That was followed by pain from blood tests (54%) and injection pain (47%). Only 30% of the survey respondents said that weight gain was a barrier to initiating insulin.
3. Fear of pain from the injection: Wrong Answer.
4.
5. Fear that insulin is a treatment of last resort: Wrong Answer.
6.

Question 2. According to a study in Diabetes Care, approximately what percentage of patients with type 1 diabetes mellitus (T1DM) might have asymptomatic hypoglycemia?

	Answers
1	30%
2	45%
3	60%
4	75%

Feedback:

1. 30%: Wrong Answer.
2. 45%: Wrong Answer.
3. 60%: Correct Answer.

   Explanation: In research conducted by Chico and colleagues, continuous glucose monitoring uncovered evidence that in 62.5% of patients with T1DM, hypoglycemia went unrecognized, as compared with 46% in patients with T2DM.
4. 75%: Wrong Answer.

Question 3: Ultra-rapid-acting insulins have been shown to have an

	Answers
1	Improvement in postprandial glucose
2	Increased risk of hypoglycemia
3	Reduction in diabetes complications
4	Reduction in hypoglycemia

Feedback:

1. Improvement in postprandial glucose Correct Answer.

   There is no increase or decrease in hypoglycemia associated with ultra-rapid-acting insulins, and these agents do not have an effect on diabetes complications. However, a just released study has shown that compared with insulin aspart, fast-acting insulin aspart showed a statistically significant improvement in controlling postprandial glucose control at all post-mealtime points (from 1 to 4 hours). (Bowering K, Harvey J, Kolaczynski JW, Snyder JW, Bode BW. Mealtime fast-acting insulin aspart versus insulin aspart for controlling postprandial hyperglycemia in people with insulin-resistant type 2 diabetes. Diabetes Med. 2019;36(6):771-775.)
2. Increased risk of hypoglycemia Wrong Answer.
3. Reduction in diabetes complications Wrong Answer.
4. Reduction in hypoglycemia Wrong Answer.

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