Type 2 Diabetes: Challenges in Care for Hispanic Americans

Event Type
Live Online

ACPE Expiration Date
7/2/2015

Credits
1 Contact Hour

Target Audience
Nurses, Pharmacists, Pharmacy Technicians

Program Overview
Nearly 26 million Americans have diabetes. Overall, minority groups bear a disproportionate burden of this epidemic. The prevalence of diabetes in Hispanic Americans, both diagnosed and undiagnosed, is about 70 to 80 percent higher than that of non-Hispanic whites. Due to the rapidly growing number of Hispanics in many areas of the United States, pharmacists must be aware of common communication and cultural barriers that exist between the medical community and Hispanic patients.

Nurse Educational Objectives
- Review the epidemiology, comorbidities, and diagnosis of type 2 diabetes mellitus (T2DM) specific to the Hispanic population, including an update for health professionals on recent approaches for the screening and prevention of T2DM.
- Review and update of T2DM treatment options, including newer incretin-based therapies.
- Update medical professionals on newer models on the care and management of T2DM, including an awareness of common communication barriers that exist between the medical community and Hispanic patients, with an emphasis on improving communication in order to educate patients about the benefits of patient self-management.
Pharmacist Educational Objectives

- Review the epidemiology, comorbidities, and diagnosis of type 2 diabetes mellitus (T2DM) specific to the Hispanic population, including an update for health professionals on recent approaches for the screening and prevention of T2DM.
- Review and update of T2DM treatment options, including newer incretin-based therapies.
- Update medical professionals on newer models on the care and management of T2DM, including an awareness of common communication barriers that exist between the medical community and Hispanic patients, with an emphasis on improving communication in order to educate patients about the benefits of patient self-management.

Pharmacy Technician Educational Objectives

- Describe the importance of awareness of communication barriers with Hispanic patients

Activity Type
Knowledge

Accreditation

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<th>Accreditation Number</th>
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<tr>
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Faculty

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University of Maryland, School of Pharmacy

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OBJECTIVES

1. Review the epidemiology, comorbidities, and diagnosis of type 2 diabetes mellitus (T2DM) specific to the Hispanic population, including an update for health professionals on recent approaches for the screening and prevention of T2DM.

2. A review and update of T2DM treatment options, including newer incretin-based therapies.

3. Update medical professionals on newer models on the care and management of T2DM, including an awareness of common communication barriers that exist between the medical community and Hispanic patients, with an emphasis on improving communication in order to educate patients about the benefits of patient self-management.

PATIENT CASE

- MR is a 54 yo Hispanic woman for follow-up of her diabetes (2 years duration)
- CC: “I want to quit smoking”
  - ½-1 ppd x 15 yrs
- BMI: 38 kg/m² BP: 145/90 mm Hg HbA1c-8%
- Problem/Medication List
  - Diabetes: Metformin 1,000 mg one tablet twice a day and she has a prescription for DDP-4 inhibitor
  - Dyslipidemia: Simvastatin 20 mg one at bedtime
  - Hypertension: Hydrochlorothiazide 25 mg one a day
PATHOPHYSIOLOGY OF T2DM

- Insulin resistance vs. beta-cell dysfunction
- While IR is not the primary cause of T2DM, it remains an important treatment target
  - An independent risk factor for atherosclerosis and cardiovascular disease
  - If untreated, promotes hyperglycemia and a glucotoxic environment
- Consensus opinion is that beta-cell dysfunction is primarily responsible for T2DM

Campbell K. JAPhA 2009;49(suppl 1):S10-S15

DIAGNOSIS AND SCREENING OF DIABETES

AMERICAN DIABETES ASSOCIATION

<table>
<thead>
<tr>
<th>Category</th>
<th>A1c</th>
<th>FPG</th>
<th>2 hour OGTT</th>
<th>Random plus symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>&gt; 6.5%</td>
<td>&gt; 126 mg/dl</td>
<td>&gt; 200 mg/dl</td>
<td>&gt; 200 mg/dl</td>
</tr>
<tr>
<td>Prediabetes</td>
<td>5.7-6.4%</td>
<td>100-125 mg/dl</td>
<td>140-189 mg/dl</td>
<td></td>
</tr>
</tbody>
</table>

Screening: Consider testing overweight/obese adults (BMI ≥25 kg/m²) with one or more additional risk factors: In those without risk factors, begin testing at age 45 years (B)

If tests are normal: Repeat testing at least at 3-year intervals (E)

Use A1c, FPG, or 2-h 75-g OGTT (B)

In those with increased risk for future diabetes, identify and, if appropriate, treat other CVD risk factors (B)

CRITERIA FOR TESTING FOR DIABETES IN ASYMPOTOMATIC ADULT INDIVIDUALS (1)

TESTING SHOULD BE CONSIDERED IN ALL ADULTS WHO ARE OVERWEIGHT (BMI 25 KG/M²) AND WHO HAVE ONE OR MORE ADDITIONAL RISK FACTORS

- Physical inactivity
- First-degree relative with diabetes
- High-risk race/ethnicity (e.g., African American, Latino, Native American, Asian American, Pacific Islander)
- Women who delivered a baby weighing ≥9 lb or were diagnosed with GDM
- Hypertension (≥140/90 mmHg or on therapy for hypertension)
- HDL cholesterol level <35 mg/dl (0.90 mmol/L) and/or a triglyceride level >250 mg/dl (2.82 mmol/L)
- Women with polycystic ovarian syndrome (PCOS)
- A1C ≥5.7%, IGT, or IFG on previous testing
- Other clinical conditions associated with insulin resistance (e.g., severe obesity, acanthosis nigricans)
- History of CVD


CORMORBIDITIES AND COMPLICATIONS

- Overweight and obesity – people with DM
  - 55% are obese; 85% are overweight
  - 80% have insulin resistance
- Macrovascular complications
  - DM is the seventh leading cause of death
  - Heart attack, stroke, peripheral vascular disease
- Microvascular complications
  - Retinopathy, nephropathy
- Neuropathic complications
  - Autonomic, sensorimotor
Type 2 Diabetes: Challenges in Care For Hispanic Americans

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RECOMMENDATIONS FOR ADULTS WITH DM

<table>
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<tr>
<th>Metabolic Variable</th>
<th>Recommendation</th>
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<tbody>
<tr>
<td>A1c</td>
<td>&lt; 7 %</td>
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<tr>
<td>Preprandial PG</td>
<td>70-130 mg/dl</td>
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<tr>
<td>Peak postprandial PG</td>
<td>&lt; 180 mg/dl</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>&lt; 130/80 mmHg</td>
</tr>
<tr>
<td>LDL Cholesterol</td>
<td>&lt; 100 mg/dl without overt CVD</td>
</tr>
<tr>
<td></td>
<td>&lt; 70 mg/dl with overt CHD</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>&lt; 150 mg/dl</td>
</tr>
<tr>
<td>HDL Cholesterol</td>
<td>&gt; 40 mg/dl men</td>
</tr>
<tr>
<td></td>
<td>&gt; 50 mg/dl women</td>
</tr>
</tbody>
</table>

American Diabetes Association, 2012

POSTPRANDIAL HYPERGLYCEMIA

- Patients with “controlled” diabetes commonly have a normal FPG and elevated PPG
  - A FPG of 90 mg/dl can be associated with a 2 hour PPG of 200 mg/dl
- Elevated PPG levels are often the earliest sign of T2DM and may appear years before elevated FPG levels are observed

SUMMARY OF KEY BENEFITS AND RISKS OF MEDICATIONS

<table>
<thead>
<tr>
<th>BENEFACTORS</th>
<th>BENEFITS</th>
<th>RISKS</th>
<th>NOTES</th>
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<tbody>
<tr>
<td>Healthy eating, weight control, increased physical activity</td>
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<td>Initial drug monotherapy</td>
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<tr>
<td>Efficacy (HbA1c)</td>
<td>Efficacy (HbA1c)</td>
<td>Efficacy (HbA1c)</td>
<td>Efficacy (HbA1c)</td>
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<tr>
<td>Hypoglycemia</td>
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<td>Weight</td>
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<td>Weight</td>
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<tr>
<td>Side effects</td>
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<td>Side effects</td>
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<tr>
<td>Costs</td>
<td>Costs</td>
<td>Costs</td>
<td>Costs</td>
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</tbody>
</table>

Healthy eating, weight control, increased physical activity

- Initial drug monotherapy
  - Health benefits: Healthy eating, weight control, increased physical activity
  - Benefits: Efficacy (HbA1c), Hypoglycemia, Weight
  - Risks: Side effects, Costs

- Two-drug combinations
  - Health benefits: Healthy eating, weight control, increased physical activity
  - Benefits: Efficacy (HbA1c), Hypoglycemia, Weight
  - Risks: Side effects, Costs

- Three-drug combinations
  - Health benefits: Healthy eating, weight control, increased physical activity
  - Benefits: Efficacy (HbA1c), Hypoglycemia, Weight
  - Risks: Side effects, Costs

- Non-concordant insulin strategies
  - Health benefits: Healthy eating, weight control, increased physical activity
  - Benefits: Efficacy (HbA1c), Hypoglycemia, Weight
  - Risks: Side effects, Costs
**INCRETIN HORMONES (GLP-1)**

- Impaired incretin hormone action has also been associated with beta-cell dysfunction
- Incretins may be responsible for up to 70% of meal-induced insulin secretion
- Patients with T2DM have reduced incretin effect (< 50% normal)
  - GIP action abolished in T2DM
  - GLP-1 function may be preserved in T2DM, or pharmacologically augmented to near-normal levels

Campbell K. *JAPhA* 2009;49(suppl 1):S10-S15

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**INCRETIN-BASED THERAPIES**

- GLP-1 receptor agonists – exenatide, liraglutide
  - Resistant to DPP-4 degradation due to change in chemical structure
  - Given twice daily by SQ injection, for patients with T2DM not controlled on one or more oral agents
  - A1c reduction ranges from 0.4 to 0.9%
  - Reduces weight 0.9 to 3.1 kg; reduced BP
  - Shows marked reduction in PPG in clinical trials
  - Cases of pancreatitis reported

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**INCRETIN-BASED THERAPIES**

- DPP-4 inhibitors
  - Sitagliptin (Januvia)
  - Saxagliptin (Onglyza)
  - Linagliptin (Tradjenta)
- Advantages include:
  - Good safety profile, low risk hypoglycemia
  - Reduce A1c by 0.8% or greater
  - Approved as first line agents
  - Preliminary data suggests agents may lower BP, and improve triglyceride level
**US CENSUS 2010**

- Population: 308.7 million
  - Non-Hispanic Whites: 74.5%
  - Hispanics: 16%
  - Blacks: 13.6%
  - Asian/Pacific Islander: 5.6%
  - American Indian/Alaska Native: 1.7%
- Hispanic population increased 15.2% from 2000 to 2010
- Foreign-born are 10% of the population
- As of July 2002, Hispanics surpass non-Hispanic blacks to become the largest minority group
- 55.4 million speaks a language other than English at home

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**DEFINITION OF HISPANIC OR LATINO ORIGIN USED IN THE 2010 CENSUS**

- “Hispanic or Latino” refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race.

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**CULTURE, RACE, ETHNICITY**

- Patterns of behavior linked by thoughts, values, customs
- Genetic link
- Sense of group identity often bound by religion, language, history

**Culture**

**Race**

**Ethnicity**

- Huff RM, Kline MV. Promoting Health...1999

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**CULTURE DEFINITION**

- “a group learned and shared set of socially transmitted assumptions about the nature of the physical, social, and supernatural world, the goals of life and the permissible means that one can take to achieve them”
### Stereotype / Generalization

- Stereotype
  - Make assumptions based on experience or hearsay

- Generalizations
  - Draw on common behaviors / traits to guide decision-making

- Similarities may exist among people from the same racial, ethnic, cultural background

- Each individual has a unique
  - personal history
  - belief system
  - communication style
  - health status

### Cultural Issues in Illness

- Religious beliefs
- Healing practices
- Use of home remedies and folk medicines
- Acceptance of diagnosis and prognosis
- Role of the family in treatment and healing
- Faith in western medicine

### Cultural Issues: Drug Therapy

- Metabolism of drugs
- Receptor variability
- Compliance
- Expectation
- Drug Interactions- Home remedies
- Therapeutic response to drugs

### Cultural Competence

- Set of skills, knowledge and attitudes that enhance a clinician’s:
  - Understanding of and respect for patient’s values, beliefs and expectations
  - Awareness of one’s own assumptions and value system, in addition to those of the U.S. medical system
  - Ability to adapt care to be congruent with the patient’s expectations and preferences
**FOLK MEDICINE**

- Mal de ojo (evil eye)
  - Looking at a child or another person with admiration or envy
  - Child often cries, is listless and weak, and has a poor appetite
  - Common therapy: sweepings across the body using herbs and prayer

- Empacho
  - Intestinal disorder that can cause bloating and stomach distress
  - External therapy: an abdominal massage with olive oil
  - Internal therapy: chamomile tea (té de manzanilla)

- Susto (fear / soul loss)
  - Sudden event or a series of events causing fear or guilt; listless and depressed
  - Claims to be related to diabetes, high blood pressure, and other chronic diseases
  - External therapy: Limpias (cleansing)
  - Internal therapy: Teas

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**HISPANIC HEALTH DISPARITIES**

- Diabetes – 11.8% diagnosed
  - 13.8% Puerto Ricans
  - 13.3% Mexican Americans
  - 7.6% Cuban Americans
  - 7.1% non-Hispanic whites
  - Mortality is twice as high

- Strong Genetic Component

- Socioeconomic factors

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**CULTURAL BELIEFS**

- Illness caused by evil spirits or as a punishment
- Some illnesses are not curable/fatalism
- Health is a result of “luck”
- “Empacho”, “Envidia”, “Mal de ojo” (evil’s eye)
- Use of religious medals or candles

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**HISPANIC CULTURE CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Decisions</th>
<th>Family, Patriarchal, Fate</th>
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</thead>
<tbody>
<tr>
<td>Civic Ideals</td>
<td>Community, Responsibility, Idealism, Hard work, Pride</td>
</tr>
<tr>
<td>Social Interaction</td>
<td>Family, Respect, Avoid conflict, Hospitality</td>
</tr>
<tr>
<td>Time</td>
<td>When it happens, Personal interaction, Present-oriented, Time is life</td>
</tr>
<tr>
<td>Communication</td>
<td>Personal, Close proximity, Direct, Formal to elders, Being nice</td>
</tr>
</tbody>
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RISKS FOR NOT PRACTICING MULTICULTURAL PATIENT CARE

- Services to the target population are compromised
- Incongruent beliefs and expectations between the provider and the patient can lead to “drug misadventures”
- Failure to understand the influences of ethnicity on biological variations in drug metabolism, response, and sensitivity may lead to suboptimal responses to drug therapy.

PATIENT CASE

- MR is a 54 yo Hispanic woman for follow-up of her diabetes (2 years duration)
- CC: “I want to quit smoking”
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- BMI: 38 kg/m²  BP: 145/90 mm Hg  HbA1c-8%
- Problem/Medication List
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  – Dyslipidemia: Simvastatin 20 mg  one at bedtime
  – Hypertension: Hydrochlorothiazide 25 mg one a day

CULTURAL ASSESSMENT DIAGNOSIS MEANING AND BEHAVIOR

- Does the patient understand the diagnosis?
- How does the patient interpret the illness?
- How can she/he adapt to the illness?
- How does he/she think others view/feel about illness?
- What motivates the patient to recover?
**Cultural Assessment Treatment**

- Assess patient’s feelings and beliefs about the treatment
- Assess the effect of the treatment in patients religious and/or cultural beliefs
- Assess the role of the family in the treatment

**Guidelines for Better Communication with Culturally Diverse Patients**

- Understand that respect for the patient and communicated needs is central to the therapeutic relationship
- Communicate in a non-threatening manner
- Be aware of non-verbal communication
- Assess patient’s understanding of the information provided-validation
- Use interpreters to improve communication

**Approaches When the Patient Speaks a Different Language**

- Use a caring tone of voice and facial expression
- Speak slowly and clear, but not loudly
- Use gestures, pictures, and play acting to help the client understand
- Repeat the message in different ways if necessary
- Keep messages simple and repeat them frequently if necessary
- Avoid using medical terms and abbreviation that the patient may not understand

**Interpreters**

**Recommendations**

- Talk in small phrases
- Use simple terminology
- Look at the patient
- Use open-ended questions at the end to assess understanding

**Challenges**

- Bilingual speaking ≠ bicultural understanding
- Certified interpreters ≠ quality interpretation
- Use of family/friend for interpreting conflicts with HIPAA guidelines for confidentiality
- Regional differences in speaking
CONCLUSIONS

• Need to understand impact of cultural issues in health, diabetes care and education
• Effective patient-provider/educator relationship is essential in the delivery of diabetes care
• Acknowledge the richness and benefits of Cultural Diversity/Competence
• Provide services with respect for the uniqueness, dignity and autonomy of each individual
• There is a need to incorporate cultural competence in diabetes care - increase clinical evidence

NOTES