Addressing Racial and Ethnic Disparities in Diabetes Care
Jennifer D. Smith, PharmD, CPP, BC-ADM, CDE
Associate Professor
College of Pharmacy and Health Sciences
Campbell University
Clinical Pharmacist Practitioner
Wilson Community Health Center
Wilson, North Carolina

Autumn L. Stewart, PharmD, BCACP
Assistant Professor of Pharmacy Practice
Mylan School of Pharmacy
Duquesne University
Volunteer Director of Clinical Pharmacy Services
Catholic Charities Free Health Care Center
Pittsburgh, Pennsylvania

Development and Support
This activity was developed by the American Pharmacists Association and supported by independent educational grants from AstraZeneca, Merck, and Novo Nordisk.

Accreditation Information
The American Pharmacists Association is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. This activity, Addressing Racial and Ethnic Disparities in Diabetes Care, is approved for 1.0 hour of continuing pharmacy education credit (0.1 CEUs). The ACPE Universal Activity Number assigned by the accredited provider is: 0202-0000-14-168-L04-P.

To obtain continuing pharmacy education credit for this activity, participants will be required to actively participate in the entire webinar and complete an assessment and evaluation located at www.pharmacist.com/live-activities by October 21, 2014.

Initial Release Date: October 7, 2014
Target Audience: Pharmacists
ACPE Activity Type: Knowledge-Based
Learning Level: 2
Fee: There is no fee for this activity
Disclosures

Jennifer D. Smith, Autumn L. Stewart, and APhA's editorial staff declare no conflicts of interest or financial interests in any product or service mentioned in this activity, including grants, employment, gifts, stock holdings, and honoraria. For complete staff disclosures, please see the Education and Accreditation Information section at www.pharmacist.com/education.

Learning Objectives

- Summarize existing disparities in health care including those related to racial and ethnic differences
- Describe existing disparities in diabetes care including those related to racial and ethnic differences
- Discuss myths and misconceptions related to diabetes among minority groups

Self-Assessment Question

Which minority group in the United States has the highest prevalence of diabetes?

a. African American
b. Hispanic/Latino
c. Native American
d. Mexican American
Self-Assessment Question

African Americans are more likely to experience which diabetes-related complication?

a. End-stage renal disease  
b. Neuropathy  
c. Coronary artery disease  
d. Peripheral vascular disease

Self-Assessment Question

The term “acculturation” describes:

a. Opposition to cultures unlike one’s own  
b. Developing respect for a patient’s unique culture  
c. Adopting the habits of another culture  
d. Maintaining traditions of one’s culture of origin

ETHNICITY

An association with or belonging to a particular race or group of people who have a culture that is different from the main culture of a country

Example:
Hispanic or Latino — OR — Not Hispanic or Latino

RACE

A category of humankind that shares certain distinctive physical traits

- American Indian or Alaska Native  
- Black  
- Asian  
- Native Hawaiian or Other Pacific Islander  
- White  
- Multiracial
Racial and Ethnic Minorities

- Asian American
- Black or African American
- Hispanic or Latino
- Native Hawaiian and Other Pacific Islander
- American Indian and Alaska Native

CDC website. www.cdc.gov/minorityhealth/populations/REMP/definitions.html

Health Disparities

“differences in health outcomes and their determinants between segments of the population, as defined by social, demographic, environmental, and geographic attributes”

CDC. MMWR. 2011;60(Suppl):1-14.

Prevalence of Diabetes

Diabetes Screening

Testing should be considered in all adults who are overweight (BMI ≥ 25 kg/m²) and have additional risk factors:

- Physical inactivity
- High-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 triglyceride level > 250 mg/dL (2.82 mmol/L)
- Women with polycystic ovarian syndrome
- A1C ≥ 5.7% (101), or HbA1c on previous testing
- Other clinical conditions associated with insulin resistance (e.g., severe obesity, acanthosis nigricans)
- History of CVD

Ethnic minorities are not more likely than non-Hispanic whites to be screened.

Complications of Diabetes

Kidney Disease
- ESRD: 2.6 times higher in African Americans and is more likely to be diabetes-related.
- Albuminuria higher in Hispanics, African Americans, and American Indians.
- Diabetes-related kidney failure is 3.5 times higher in American Indians and Alaska Natives.

Eye Disease
- Rates of diabetes-related blindness are doubled in non-white populations.
- Subpopulations of American Indians have higher rates of retinopathy.

Diabetes Management

- Eye exams
  - Blacks were 13%–20% less likely than whites to have an eye exam performed.
- A1C testing
  - No difference between black Americans and white Americans.
- Foot exams
  - No difference between black Americans and white Americans.
- Cholesterol
  - Blacks were less likely than whites to have LDL measured (72% vs 80%, P<0.05).
How do we achieve health equity, eliminate disparities, and improve the health of all groups?

Cultural Competence
- Socioeconomic status
- Geographic barriers
- Health literacy and numeracy
- Cultural norms and acculturation
- Myths
- Language barriers

SOCIOECONOMIC STATUS
Lower Socioeconomic Status

- Poverty
- Lack of access to nutritious foods
- Unsafe neighborhoods or communities
- Affordability of medications and health care

People in Poverty, 2012

- African American
- Hispanic
- Asian American
- Non-Hispanic White

Federal Poverty Limits

<table>
<thead>
<tr>
<th>Family Size</th>
<th>100%</th>
<th>150%</th>
<th>180%</th>
<th>200%</th>
<th>250%</th>
<th>300%</th>
<th>400%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$12,770</td>
<td>$19,155</td>
<td>$23,306</td>
<td>$20,226</td>
<td>$25,283</td>
<td>$30,340</td>
<td>$35,400</td>
</tr>
<tr>
<td>2</td>
<td>$15,750</td>
<td>$23,625</td>
<td>$28,491</td>
<td>$35,314</td>
<td>$42,138</td>
<td>$48,962</td>
<td>$55,786</td>
</tr>
<tr>
<td>3</td>
<td>$19,730</td>
<td>$29,605</td>
<td>$34,471</td>
<td>$41,295</td>
<td>$48,119</td>
<td>$54,943</td>
<td>$61,767</td>
</tr>
<tr>
<td>4</td>
<td>$23,710</td>
<td>$33,580</td>
<td>$38,446</td>
<td>$45,270</td>
<td>$52,094</td>
<td>$58,918</td>
<td>$65,742</td>
</tr>
<tr>
<td>5</td>
<td>$27,690</td>
<td>$37,555</td>
<td>$42,421</td>
<td>$49,244</td>
<td>$56,068</td>
<td>$61,892</td>
<td>$68,716</td>
</tr>
<tr>
<td>6</td>
<td>$31,670</td>
<td>$41,530</td>
<td>$46,395</td>
<td>$53,219</td>
<td>$59,943</td>
<td>$65,767</td>
<td>$72,591</td>
</tr>
<tr>
<td>7</td>
<td>$35,650</td>
<td>$45,505</td>
<td>$50,360</td>
<td>$57,184</td>
<td>$63,909</td>
<td>$70,733</td>
<td>$77,557</td>
</tr>
<tr>
<td>8</td>
<td>$39,630</td>
<td>$49,480</td>
<td>$54,335</td>
<td>$61,209</td>
<td>$68,074</td>
<td>$74,940</td>
<td>$81,778</td>
</tr>
</tbody>
</table>

Maslow’s Hierarchy of Needs

Addressing Socioeconomic Status

- Transportation needs, as able
- Medication Assistance Program
- Interchangeable medications with lower associated cost
- Look for “stretched out” medications
- Community gardens
- Local agencies and charities

GEOGRAPHIC BARRIERS
Geographic Barriers

Barriers in Rural America

- High poverty rates
  - Minority household incomes 40%–50% less than rural white households; 50%–60% less than suburban white households
- Limited insurance options
- Limited access to specialty medical care and emergency services

Diabetes in Rural America

- 17% higher diabetes prevalence in rural vs urban America
- Rural residence is associated with an increased risk for retinopathy (OR = 1.20, 95% CI = 1.02–1.42)
- Rural residents are less likely to receive diabetes education (57% vs 51%, P < 0.001)
- Daily blood glucose monitoring is more frequent among rural individuals, although other studies suggest barriers to access to testing supplies

References:
Addressing Geographic Barriers

- Telemedicine
- Web-based models
- Telephone help lines
- Community health advisors

HEALTH LITERACY AND NUMERACY

Health Literacy and Numeracy

- Individuals at highest risk for low health literacy:
  - Elderly
  - Uninsured or insured through government
  - Members of racial or ethnic minority groups
- Numeracy is vital to diabetes self-care
  - Reading and interpreting blood glucose values
  - Understanding A1C levels and goals
  - Injecting insulin doses
  - Counting carbohydrates
**Addressing Numeracy**
- Set amount of insulin for certain meals or food items
- Provide ALL numbers on a correction insulin scale
- “Sharpie” pens and syringes for doses

**Addressing Lower Literacy**
- Return demonstration
- “Picturific” material
- Teaching models
- Provide written instructions
- Use nonclinical language

**CULTURAL NORMS AND ACCULTURATION**
Cultural Norms

- Lack of basic knowledge about diabetes
- Fatalistic acceptance of progression of diabetes
- Family and family influence is important for support and management
- Preference for familiar traditional remedies
- Cultural beliefs about vaccines
- A “fluffy” body habitus is preferred
- Fasting may be an important religious practice

Acculturation

Adapting to traits or habits of another culture

- Low acculturation: more likely to have no insurance, low levels of education, and without routine health care
- High acculturation: may be more likely to develop diabetes

Minorities in the U.S. have a higher prevalence of diabetes compared with inhabitants of their country of origin

MYTHS

LANGUAGE BARRIERS

Language Barriers

Language barriers can prevent appropriate exchange of information and may lead to poorer health outcomes

- Use translation services or professional interpreters
  - www.medibabble.com
- “Teach back” method
- Provide educational materials and programs in native language when possible
  - www.learningaboutdiabetes.org
  - www.ndep.nih.gov
TOOLS TO REDUCE HEALTH DISPARITIES

Project IMPACT: Diabetes

Objective: To improve key indicators of diabetes care by expanding a proven community-based model of care throughout high-risk areas in the United States.

- A1C ↓ 0.8%
- LDL ↓ 7.1 mg/dL
- TG ↓ 23.7 mg/dL
- TC ↓ 8.8 mg/dL

Culturally Tailored Interventions

Incorporate core factors into the intervention:

- Cultural beliefs
- Family participation
- Values
- Customs
- Food patterns
- Language
- Low literacy
- Culturally specific educational materials


**Improve Cross-Cultural Communication**

- Listen to the patient’s perspective
- Explain your perception of problem
- Acknowledge and discuss differences and similarities
- Recommend treatment
- Negotiate

**Diabetes Conversation Maps**

Implement algorithm-based care to avoid unintended health care discrepancies.
Key Points

- Health disparities exist among ethnic minorities; available data are lacking for the “why”
- Understand beliefs, values, and practices of different cultures in your area and tailor patient interventions accordingly
- Recognize unique needs of each patient
- Provide uniform access to care and consider implementing algorithm-based care

Self-Assessment Question

Which minority group in the United States has the highest prevalence of diabetes?

a. African American
b. Hispanic/Latino
c. Native American
d. Mexican American

Self-Assessment Question

African Americans are more likely to experience which diabetes-related complication?

a. End-stage renal disease
b. Neuropathy
c. Coronary artery disease
d. Peripheral vascular disease
Self-Assessment Question

The term “acculturation” describes:
   a. Opposition to cultures unlike one’s own
   b. Developing respect for a patient’s unique culture
   c. Adopting the habits of another culture
   d. Maintaining traditions of one’s culture of origin

How To Obtain CPE Credit

- Record Attendance Code: PROVIDED DURING WEBINAR
- Please visit: [http://www.pharmacist.com/live-activities](http://www.pharmacist.com/live-activities) and select the Claim Credit link for this activity
- You will need a pharmacist.com username and password
- Select Enroll Now or Add to Cart from the left navigation and successfully complete the Assessment (select correct attendance code), and evaluation to claim credit.
- You will need to provide your NABP e-profile ID number to access your statement of credit.
- You must claim credit by October 21, 2014. No credit will be awarded after that date.

Addressing Racial and Ethnic Disparities in Diabetes Care

Jennifer D. Smith, PharmD, CPP, BC-ADM, CDE
Associate Professor
College of Pharmacy and Health Sciences
Campbell University
Clinical Pharmacist Practitioner
Wilson Community Health Center
Wilson, North Carolina

Autumn L. Stewart, PharmD, BCACP
Assistant Professor of Pharmacy Practice
Mylan School of Pharmacy
Duquesne University
Pittsburgh, Pennsylvania