Cultural Insights on Hispanic/Latino Patients With Diabetes

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US Census Bureau Definition and Statistics for the Hispanic/Latino Population

- The terms **Hispanic** and **Latino** refer to persons who trace their origin or descent to Mexico, Puerto Rico, Cuba, Spanish-speaking Central and South American countries, and other Spanish cultures\(^1\)

- Based on 2009 data, Hispanics/Latinos represent the largest minority group in the US, accounting for 15.8% of the total population\(^2\)

- It is projected that, by 2050, Hispanics/Latinos will account for nearly 25% of the total US population\(^3\)

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Geographic Distribution of the Hispanic/Latino Population in the US

Data based on 2006 US Census.
Diversity Within the Hispanic/Latino Population in the US

Total Hispanic/Latino population in the US = 44,252,278 individuals

Data based on 2006 US Census.
The Multiple Components of Cultural Identity

- Gender
- Sexual Orientation
- Marital Status
- Age
- Acculturation Level
- Race
- Language
- Ethnicity
- Religious/Spiritual Beliefs
- Socio-economic Status
- Education
- Country of Origin
- Migration History
- Country of Origin
- Acculturation Level
- Race
- Language
- Ethnicity
- Religious/Spiritual Beliefs
- Socio-economic Status
- Education
- Country of Origin
- Migration History

High Rate of Diabetes Among Hispanic/Latino Americans

Age-adjusted percentage of civilian, noninstitutionalized population with diagnosed diabetes, 2007.
Data from National Health Interview Survey.

Lifetime Risk Estimates for Developing Diabetes Among Hispanic Americans by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Non-Hispanic Whites</th>
<th>Hispanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>31.2</td>
<td>52.5</td>
</tr>
<tr>
<td>Male</td>
<td>26.7</td>
<td>45.4</td>
</tr>
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</table>

Rate of Diabetic Complications Among Hispanics in the US

**Treatment for ESRD, 2006**

<table>
<thead>
<tr>
<th></th>
<th>Incidence Rates of Initiation of ESRD Treatment per 100,000 Diabetic Population</th>
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</thead>
<tbody>
<tr>
<td>Whites</td>
<td>164.4</td>
</tr>
<tr>
<td>Hispanics</td>
<td>273.2</td>
</tr>
</tbody>
</table>

**Diabetes-Related Death, 2006**

<table>
<thead>
<tr>
<th></th>
<th>Age-Adjusted Percentage With Physician-Diagnosed Diabetes (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic Whites</td>
<td>20.4</td>
</tr>
<tr>
<td>Hispanics</td>
<td>29.9</td>
</tr>
</tbody>
</table>

*Incidence rates of initiation of treatment for ESRD related to diabetes per 100,000 diabetic population.
Age-adjusted percentage of civilian, noninstitutionalized population with diagnosed diabetes.
Data from National Health Interview Survey and National Vital Statistics Reports.

Disproportionately Higher Rate of Lower Extremity Amputations Among Hispanic Patients With Diabetes

Lower Extremity Amputations Among Patients With Diabetes per 100,000 Adult Patients Aged 18 and Older


Rates of Diabetic Retinopathy Highest Among Hispanic Americans

Percentage Change in the Number of People in the US With Diabetic Retinopathy, 2005-2050

Hispanics Less Likely to Receive Appropriate Diabetes Care and to Self-Monitor Their Disease

Reference is 1.0 for Non-Hispanic White Adults

- A1C Checked in Last Year: 0.74
- Feet Exam in Last Year: 0.71
- Eye Exam in Last Year: 0.99
- Class in Diabetes Management: 0.91
- Self-monitoring Blood Glucose: 0.81
- Self-monitoring Foot Ulcers: 0.74

*Corrected for age, gender, socioeconomic status, and access to care.

**P<0.05 versus non-Hispanic whites based on 95% CI.

Many Factors to Consider Within Different Cultures and Approaches to Diabetes Care

- Education and Health Literacy
- Nutritional Preferences
- Language
- Body Image
- Socioeconomic Status
- Folklore
- Family Integration and Support
- Judgment, Beliefs, Religion, Fears

Socioeconomic Demographics of US Hispanics/Latinos and Non-Hispanic Whites

Educational Attainment

Less than high school

<table>
<thead>
<tr>
<th>Population</th>
<th>Less than high school</th>
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<tbody>
<tr>
<td>Total</td>
<td>16.1</td>
</tr>
<tr>
<td>White alone, not Hispanic</td>
<td>11.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>40.4</td>
</tr>
<tr>
<td>Mexican</td>
<td>47.6</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>28.6</td>
</tr>
<tr>
<td>Cuban</td>
<td>25.8</td>
</tr>
<tr>
<td>Dominican</td>
<td>38.4</td>
</tr>
</tbody>
</table>

Median Household Income

<table>
<thead>
<tr>
<th>Population</th>
<th>Median Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$44,684</td>
</tr>
<tr>
<td>White alone, not Hispanic</td>
<td>$48,784</td>
</tr>
<tr>
<td>Hispanic</td>
<td>$35,929</td>
</tr>
<tr>
<td>Mexican</td>
<td>$35,185</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>$34,092</td>
</tr>
<tr>
<td>Cuban</td>
<td>$38,256</td>
</tr>
<tr>
<td>Dominican</td>
<td>$29,624</td>
</tr>
</tbody>
</table>

Data based on 2004 US Census.

Percent of Hispanic/Latino Americans Living Below Poverty Level, 2006

Non-Hispanic/non-Latino Whites
Hispanics/Latinos

Population Living Below Poverty Level (%)

Percent of Poverty Level

<100% 100% - <200%

8.2 14.7 20.6 30.3

Health Insurance Status by Race/Ethnicity: Total Nonelderly Population, 2008

- **White (non-Hispanic):** 166.4 million
  - Private: 74%
  - Medicaid/Others: 26%
  - Uninsured: 0%

- **Hispanic (non-Hispanic):** 44.7 million
  - Private: 42%
  - Medicaid/Others: 30%
  - Uninsured: 18%

- **Black (non-Hispanic):** 33.3 million
  - Private: 50%
  - Medicaid/Others: 30%
  - Uninsured: 18%

- **Asian/Pacific Islander:** 12.4 million
  - Private: 68%
  - Medicaid/Others: 28%
  - Uninsured: 13%

- **American Indian/Alaska Native:** 1.7 million
  - Private: 44%
  - Medicaid/Others: 30%
  - Uninsured: 26%

- **Two or More Races:** 4.3 million
  - Private: 59%
  - Medicaid/Others: 27%
  - Uninsured: 14%

Note: “Other Public” includes Medicare and military-related coverage.

Health Literacy by Race/Ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Below Basic (%)</th>
<th>Basic (%)</th>
<th>Intermediate (%)</th>
<th>Proficient (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>-9</td>
<td>19</td>
<td>58</td>
<td>14</td>
</tr>
<tr>
<td>Black</td>
<td>-24</td>
<td>34</td>
<td>41</td>
<td>2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-41</td>
<td>25</td>
<td>31</td>
<td>4</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>-13</td>
<td>18</td>
<td>52</td>
<td>18</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>-25</td>
<td>23</td>
<td>45</td>
<td>7</td>
</tr>
<tr>
<td>Multiracial</td>
<td>-9</td>
<td>28</td>
<td>59</td>
<td>3</td>
</tr>
</tbody>
</table>


Language Spoken at Home and English-Speaking Ability

Data based on 2004 US Census.

Language Barriers May Prevent Delivery of Adequate Care by...

- Limiting exchange of communications, contributing to a loss of important cultural information
- Misunderstanding physicians' instructions
- Poor shared decision making
- Ethical compromises (eg, difficulty obtaining informed consent)
- Poor adherence to treatment
- Missed appointments
- Poor patient satisfaction

Prevalence of Overweight and Obesity* Among Hispanic Americans


- Non-Hispanic Whites: 23.7%
- Hispanics/Latinos: 28.7%

Prevalence of Overweight or Obesity,* US, 2006

- Non-Hispanic Whites: 64.8%
- Mexican Americans: 74%

*Overweight defined as BMI ≥25 kg/m²; Obesity defined as BMI ≥30 kg/m²; BMI calculated from self-reported weight and height.

Hispanic/Latino Cultural Beliefs Regarding Weight

- Excess weight in Latino culture may be tolerated and even celebrated
- In children, overweight may indicate that they are well cared for
  - Thin may be viewed as unhealthy
- Common terms of endearment include *gorda* and *gordito* (translated as “Fat One” and “Little Fat One”)
- Mealtime is an especially social activity and serves as a link with the homeland
Traditional Hispanic/Latino Diet

- Traditional Latino diet is rich in legumes, rice, and fresh fruit\(^1\)
- A high acculturation level can be associated with higher rates of diabetes due to a diet richer in carbohydrates and fat and a more sedentary lifestyle\(^2\)
- Convenient, high-fat foods may be preferred because they are easy to prepare and generally affordable\(^1\)

How Many Total Carbohydrates Are in One 10-inch Flour Tortilla*?

(For comparison, a 12-oz can of Coke has 39 g)

A. 12 grams
B. 24 grams
C. 36 grams
D. 40 grams
E. 48 grams

*Based on Mission Foodservice 10 inch Heat Pressed Flour Tortilla (71 g).
“Coke” and “Coca-Cola” are registered trademarks of The Coca-Cola Company.
“Mission” is a registered trademark of Mission Foods Food Service.

How Many Total Carbohydrates Are in One Serving of White Rice*?

(For comparison, a 12-oz can of Coke has 39 g)

A. 18 grams
B. 24 grams
C. 27 grams
D. 33 grams
E. 39 grams

*Based on Goya Foods Regular Enriched White Rice. One serving = 3/4 cup.
“Coke” and “Coca-Cola” are registered trademarks of The Coca-Cola Company.
“Goya” is a registered trademark of Goya Foods, Inc.

Myths About Diabetes and Hispanic Patients

- This is “God’s will” and nothing can be done about it
- Eating sweets caused this
- Insulin will make me blind
- I’m being punished with insulin for not following doctor’s orders
- Insulin therapy is too difficult

- He wants me to make all the decisions for him
- He doesn’t think that diet affects him
- He and I are on the same page

Hispanics/Latinos and Spiritual Healing

- Religion and spiritual values play an important role in disease perception and management in Hispanic culture\(^1\)
- Feelings about the medical encounter (confused or frustrated) have been associated with spiritual healing among Latinos in the US\(^2\)

*Data from the Pew Hispanic Center/Robert Wood Johnson Foundation Latino Health Survey.

Hispanic Cultural Values That Can Impact the Patient-Provider Relationship

Adapted with permission from Campos C. Addressing cultural barriers to the successful use of insulin in Hispanics with type 2 diabetes. *South Med J.* 2007;100(8):812-820.
Culturally Competent Approaches to Diabetes Care in Hispanic/Latino Americans
Culturally Competent Approaches to the Hispanic/Latino Patient Population

- Establish trust through specific approaches\(^1\)
  - Give a warm greeting; put patient at ease\(^2\)
- Improve communications\(^1,2\)
  - Overcome language barrier
- Provide nutritional management\(^1\)
- Be sensitive to financial concerns\(^2\)
- Consider family dynamics\(^1\)
- Modify office environment\(^2\)

Ways to Positively Affect Physician/Patient Relationships

1. Listen with sympathy and understanding to patients’ perspective of the problem and explain your own.
2. Shake hands with patients, or place a hand on their shoulder when speaking.
3. Start the visit with a brief conversation about patients’ families, work, or school.
4. Address patients by proper name rather than first name only.

Emphasize courtesy, a positive attitude, and social amenities.
Decrease physical distance and increase contact with patients.
Show interest in patients’ lives.
Use appropriate titles and greetings.

Ways to Positively Affect Physician/Patient Relationships¹ (cont’d)

- Educate patients about the natural progression of diabetes¹
- Maintain a shame-free environment in which patients can ask questions¹

- Patients with limited health literacy may feel more comfortable with a family member or friend present²
- Accept that older, more traditional wives may defer to husbands in decision making, both for their own health and that of their children³
- Recognize that patients rely heavily on family/friends for information⁴

Ways to Positively Affect Physician/Patient Relationships¹ (cont’d)

- Explain how dietary recommendations are healthier for the whole family, not just the diabetic patient²
- Recognize that patients may mistakenly believe that insulin causes blindness or other complications³
- Ask patients if they use any herbal remedies. Most are effective or neutral, but some may be dangerous⁴
- Address patients with usted, the polite form of “you” instead of the informal tu¹

Encourage family support of the patient’s treatment efforts

Emphasize efficacy of medications

Refer to patients’ beliefs and values

Use Spanish terms of respect

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Recommendations for Overcoming Language Barriers

- Use Spanish-speaking staff and diabetes educators whenever possible\(^1\)
- Utilize resources from the ADA and AADE for information on bilingual diabetes programs, educational materials, and educators\(^1\)
  - ADA Web sites “Información en Español,”\(^2\) “Por tu familia”\(^3\)

## Common Mexican Meals

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Refried beans with chorizo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-3 corn tortillas</td>
</tr>
<tr>
<td></td>
<td>Coffee with milk</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lunch</th>
<th>Chicken soup with assorted vegetables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-4 corn tortillas</td>
</tr>
<tr>
<td></td>
<td>Mexican rice or pasta fried in oil</td>
</tr>
<tr>
<td></td>
<td>Sweetened carbonated or uncarbonated drink</td>
</tr>
</tbody>
</table>
Traditional Mexican American meals can be made healthier for diabetic patients by:

- Reducing carbohydrates
- Increasing fruit/vegetable intake
- Eliminating fried preparations
- Exchanging regular soda for water or noncaloric beverages


Culture-Specific Intervention in Mexican American Patients With Type 2 Diabetes: The Starr County Border Initiative

Patients in Starr County, TX, with diabetes (n=256)

Cultural Intervention (n=128)
- Weekly education sessions (nutrition, self blood glucose monitoring, exercise, medications, etc)
- Bilingual Mexican American nurses, dietitians, and community workers
- Biweekly support group sessions

Control (n=128)

Outcomes measures included diabetes knowledge, diabetes-related health beliefs, and indicators of metabolic control (HbA1C and FBG) measured at 3, 6, and 12 months

Culture-Specific Care Improves Diabetes Outcomes in Mexican Americans

- HbA1c
- Fasting Blood Glucose
- Diabetes Knowledge

**Controls**
- Mean HbA1c (%): 11.8
- Mean FBG (mg/dL): 207
- Mean score: 37.3

**Participants**
- Mean HbA1c (%): 11.6
- Mean FBG (mg/dL): 211
- Mean score: 40.9

*P=0.011 for effect size based on baseline mean value.
†P=0.019 for effect size based on baseline mean value.
‡P<0.001 for effect size based on baseline mean value.

Low-Cost Diabetes Education Programs Can Improve Glycemic Control in Patients With Type 2 Diabetes

Reductions in A1C in the CoDE Program

![Graph showing mean A1C levels over time for total and compliant participants]

- **Total (n=55)**:
  - Baseline: 8.2%
  - 6 months: 7.6%
  - 1 year: 7.1%

- **Compliant (n=36)**:
  - Baseline: 8.1%
  - 6 months: 7.4%
  - 1 year: 7%

Program cost was $461 per patient per year

*P<0.01 vs baseline.

A total of 162 patients were enrolled, including 78% Mexican Americans. Of the 162 patients enrolled, 92 participated for at least 12 consecutive months; of these, 55 patients had a 12-month HbA1c value available, and they were further characterized as compliant (n = 36) if they attended all CoDE visits.

<table>
<thead>
<tr>
<th>Hispanic/Latino Resources on the Web</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADA Información en Español</td>
</tr>
<tr>
<td><a href="http://www.diabetes.org/espanol">www.diabetes.org/espanol</a></td>
</tr>
<tr>
<td>ADA Latino Subcommittee</td>
</tr>
<tr>
<td>CDC en Español: Diabetes</td>
</tr>
<tr>
<td><a href="http://www.cdc.gov/spanish">www.cdc.gov/spanish</a></td>
</tr>
<tr>
<td>EthnoMed</td>
</tr>
<tr>
<td><a href="http://www.ethnomed.org">www.ethnomed.org</a></td>
</tr>
<tr>
<td>National Allianve for Hispanic Health</td>
</tr>
<tr>
<td><a href="http://www.hispanichealth.org">www.hispanichealth.org</a></td>
</tr>
<tr>
<td>National Council of La Raza</td>
</tr>
<tr>
<td><a href="http://www.nclr.org">www.nclr.org</a></td>
</tr>
<tr>
<td>National Diabetes Education Program</td>
</tr>
<tr>
<td>National Hispanic/Latino Diabetes Initiative for Action</td>
</tr>
<tr>
<td>US DHHS Office of Minority Health</td>
</tr>
<tr>
<td><a href="http://minorityhealth.hhs.gov">http://minorityhealth.hhs.gov</a></td>
</tr>
</tbody>
</table>
Key Points

• Hispanic/Latino Americans are the largest minority group in the US
  - The rate of diabetes and diabetic complications are disproportionately high in Hispanic/Latino Americans

• Unique cultural aspects relevant to Hispanic/Latino patients include
  - Language barriers
  - Myths about diabetes and insulin
  - Strong loyalty to extended family

• Culturally competent approaches to caring for Hispanic/Latino patients with diabetes include
  overcoming language barriers, nutrition management, and understanding financial concerns and family dynamics
Summary

*Attitude*  *Communication*  *Tailored Care*

*Effective and Compassionate Care for All*
Case Study

Cultural Insights on Hispanic/Latino Patients With Diabetes
Mrs Hernandez

- 45-year-old Mexican American
- Married with 4 children
- Works full-time in housekeeping at a hotel
- Spanish is primary language spoken in home
  - Has limited ability to read and write English
Initial Presentation

- Mrs Hernandez presents to her HCP with chronic fatigue and weakness
- Her HCP conducts a physical exam and orders a lab workup

Mrs Hernandez’s Clinical Profile
- Age: 45 yr
- Height: 5 ft 1 in
- Weight: 168 lb
- BMI: 32 kg/m²
- A1C: 9.0%
- FPG: 135 mg/dL
- Creatinine: 1.1 mg/dL
- eGFR: 60 mL/min
- TSH: 1.56 mIU/L
- Family history: Father with hypertension, mother with diabetes

A1C = glycosylated hemoglobin; BMI = body mass index; eGFR = estimated glomerular filtration rate; FPG = fasting plasma glucose; HCP = healthcare professional; TSH = thyroid-stimulating hormone.
Diagnosis and Treatment

• Diagnosis: Type 2 diabetes
  – Increased risk of developing renal insufficiency

• The HCP prescribes medication for Mrs Hernandez and recommends that she get more exercise

• A certified diabetes educator counsels her on
  – Dietary changes to reduce carbohydrate consumption
  – Regular blood glucose monitoring
3-Month Follow-up

• By her 3-month follow-up visit, it is clear that Mrs Hernandez is not managing her diabetes
  – BMI 33 kg/m²
  – FPG 162 mg/dL
  – A1C 9.7%
  – Creatinine 1.2 mg/dL
  – eGFR 55 mL/min

• The HCP asks Mrs Hernandez how she is doing with her treatment
Problems With Diabetes Management

• Mrs Hernandez has not been taking her medication as prescribed, stating:
  – The instructions are “too hard” to follow
  – Instead she has been using herbal supplements

• She has made little change in her diet beyond giving up sweets

• She prays nightly for a cure for her illness and encourages her family to pray for her as well
Question

- What are your recommendations for Mrs Hernandez?
New Therapy Directions

• The HCP calls a Spanish-speaking nurse into the room
• The HCP offers Mrs Hernandez 3 recommendations, which the nurse translates into Spanish
Recommendation #1: Dietary Changes

- Corn tortillas instead of flour tortillas
- Noncaloric diet soda and water instead of sugary carbonated beverages
- Low-fat instead of whole milk
- Less rice, more fruits and vegetables
Recommendation #2: Overcoming Language Barriers

- Having better English skills, Mrs Hernandez's daughter can help her understand the HCP's instructions.
- Talking to Mrs Hernandez's daughter will also help the HCP assess the potential needs of the rest of the family.

Asks Mrs Hernandez to bring her teenaged daughter with her to her next appointment.
Recommendation #3: Incorporating the Patient’s World View

Sensitive to her cultural beliefs and practices, he supports Mrs Hernandez’s faith-based approach to her disease—in conjunction with her prescribed treatment.

- Suggests she continue to use traditional approaches to healing that will not interfere with her treatment.
- Encourages her to continue to pray for help in managing her illness.
Cultural Insights on Hispanic/Latino Patients With Diabetes

QUESTIONS & ANSWERS