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Understanding the Hispanic/Latino Patient

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ABSTRACT

The Hispanic/Latino population is the largest minority group in the United States, representing approximately 16% of the population in 2010. The US Census Bureau defines Hispanic/Latino origin as ethnicity, which tends to be associated with culture and is distinct from race. Based on the US Census Bureau classifications, Hispanics/Latinos have at least 3 main racial backgrounds (white, black, and Native Indian), with the combination and proportion differing among Hispanic/Latino subgroups. The reflection of these racial differences in genetic ancestry partly explains why biological characteristics differ among Hispanic/Latino subgroups. Partly as a result of variations in biological characteristics, the risk of type 2 diabetes mellitus varies among Hispanic/Latino subgroups. According to data from the 1982 to 1984 Hispanic Health and Nutrition Examination Survey (HHANES), the prevalence of diagnosed and undiagnosed type 2 diabetes among adults aged 45 to 74 years was higher in Mexican Americans (23.9%) and Puerto Ricans (26.1%) compared with Cubans (15.8%). In addition to genetics, there are multiple social and cultural factors that affect the prevalence and course of type 2 diabetes in Hispanic/Latino individuals. Although certain aspects of Hispanic/Latino culture may become barriers in the management of type 2 diabetes in this population, these cultural characteristics may also represent an opportunity for prevention and/or improvement of care. It is important for healthcare providers to have an understanding and appreciation of Hispanic/Latino culture in order to provide their Hispanic/Latino patients with healthcare that is culturally and socially appropriate. Only by considering genetic, social, and cultural factors can type 2 diabetes be successfully prevented, treated, and managed in Hispanic/Latino patients.

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KEYWORDS: Culture; Hispanic; Latino; Treatment barriers; Type 2 diabetes mellitus

THE HISPANIC/LATINO POPULATION IN THE UNITED STATES

The Hispanic/Latino population is the largest minority group in the United States, representing 15.8% of the population in 2009.[1] According to 2006 data from the US Census Bureau, the largest Hispanic subgroup comprised persons of Mexican descent (65.5%), followed by those of Puerto Rican (8.6%), Central American (8.2%), South American (6.0%), Cuban (3.7%), and other Hispanic (8.0%) descent.[2] Although often used interchangeably, including by the US Census Bureau,[3] the terms "Hispanic" and "Latino" are not the same; "Hispanic" refers to people born in a country conquered by Spaniards and for whom Spanish is the primary language, whereas "Latino" is more inclusive, referring to people born in a country whose language evolved from Latin (the Romance languages).[4,5]

The US Census Bureau defines Hispanic/Latino origin as ethnicity, which is separate from race.[6,7] Ethnicity, which tends to be associated with culture, can be defined as the characterization of populations by common ancestry, language, and customs.[8] Although race is commonly associated with biology, it is not clearly distinct from ethnicity, particularly as classified by the US Census Bureau.[3,8] Based on the US Census Bureau classifications, Hispanics/Latinos have 3 main racial backgrounds (white, black, and Native American), with the combination and proportion differing among Hispanic/Latino subgroups.[9] The reflection of these racial differences in genetic ancestry partly explains why biological characteristics differ among Hispanic/Latino subgroups.

GENETIC DIFFERENCES AMONG HISPANIC/LATINO SUBGROUPS AND RELATION TO RISK FOR TYPE 2 DIABETES MELLITUS

A study investigating various genetic markers demonstrated that the genetic ancestry of Mexican Americans, Puerto Ricans, and Cubans is heterogeneous.[9] The proportion of the contemporary gene pool derived from Spanish, Native

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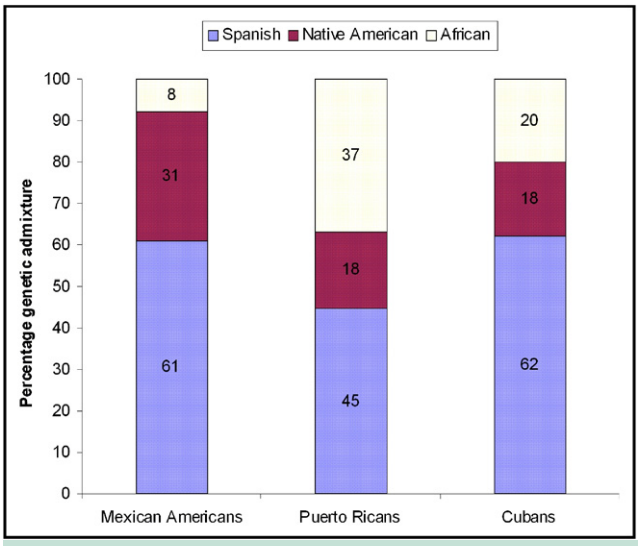

Figure 1 Genetic ancestry of Mexican Americans, Puerto Ricans, and Cubans. (Adapted with permission from Diabetes Care ©1991, the American Diabetes Association.[9]).

American, and West African ancestry for Mexican Americans, Puerto Ricans, and Cubans is shown in **Figure 1**.[9]

Studies have shown that the risk of type 2 diabetes mellitus varies among Hispanic/Latino subgroups. According to data from the 1982 to 1984 Hispanic Health and Nutrition Examination Survey (HHANES), the prevalence of diagnosed and undiagnosed type 2 diabetes among adults aged 45 to 74 years was higher in Mexican Americans (23.9%) and Puerto Ricans (26.1%) compared with Cubans (15.8%).[10] More recent data from the National Health Interview Survey (NHIS), conducted from 1997 to 2005, indicated that the prevalence of self-reported type 2 diabetes was 11.0% in Puerto Ricans, 10.2% in Mexican Americans, 8.8% in Cubans, 6.2% in Mexicans, 5.2% in Dominicans, 4.0% in Central and South Americans, and 7.8% in other Hispanics.[11] This variation in risk appears to be related, at least partly, to differences in genetic ancestry. In an analysis of 14 different Native American and Mexican American populations, type 2 diabetes prevalence became greater with increasing percentage of Native American genetic admixture.[12,13] As such, the higher risk of type 2 diabetes observed in Mexican Americans relative to other Hispanic/Latino subgroups may be a function of their greater proportion of Native American ancestry. Interestingly, studies have shown that a genetic variant of the adenosine triphosphate–binding cassette transporter A1 derived from Native American ancestry influences the risk of type 2 diabetes,[14] and affects obesity and high-density lipoprotein cholesterol levels in Mexican Americans.[15]

European ancestry may also affect susceptibility to type 2 diabetes in Mexican American populations. When populations from Texas, Mexico, and Spain were analyzed, the age- and sex-adjusted prevalence of type 2 diabetes in Spain was higher than that of non-Hispanic whites from Texas but lower than populations of Mexican origin,[16] suggesting that Spanish ancestry may contribute to the higher type 2 diabetes susceptibility of Mexican Americans. Although a study of populations from Mexico and Colombia showed that a greater percentage of European ancestry was associated with a lower type 2 diabetes risk, this association was significantly attenuated in the Mexican population and eliminated in the Colombian population after adjustment for socioeconomic status.[17] Therefore, it appears that the prevalence of type 2 diabetes in Hispanics/Latinos is determined by genetic predisposition as well as social and cultural factors, such as socioeconomic and education levels. For example, the Cuban population in the United States has a higher level of income and education relative to other Hispanic subgroups, such as Mexican Americans and Puerto Ricans, which may account for the lower rate of type 2 diabetes reported in Cubans in the HHANES.[10]

CHALLENGES AND OPPORTUNITIES IN TREATING HISPANIC/LATINO PATIENTS WITH TYPE 2 DIABETES MELLITUS

Although genetics clearly contribute to the risk of type 2 diabetes in Hispanics/Latinos, a number of cultural factors may affect type 2 diabetes outcomes.[4,5,18] A list of key challenges in the treatment and prevention of type 2 diabetes among Hispanic/Latino patients is presented in **Table 1**. While these cultural factors may affect the prevention and treatment of type 2 diabetes, they may also offer opportunities to increase awareness of the disease and improve its treatment.

Effect of Hispanic/Latino Culture on Personal Relationships and Beliefs

For Hispanics/Latinos, loyalty to the extended family is more important than the needs of the individual, a concept known as *familismo*.[18-20] Hispanics/Latinos seek encouragement, direction, and advice from a large number of family members.[20,21] Although *familismo* is an important motivator for disease self-management,[21] it can also render

Table 1 Key challenges in the treatment and prevention of type 2 diabetes mellitus in Hispanic/Latino patients

- This population is rapidly increasing in the United States
- Strong genetic and lifestyle risk factors for type 2 diabetes
- Increased risk of complications
- Delayed diagnosis
- Unacceptable glycemic control and healthcare outcomes
- Multiple social, economic, and cultural factors influencing care
- General lack of cultural awareness among healthcare providers
- Insufficient culturally oriented programs and activities
- Limited interaction time in current clinical encounters

it difficult for patients to make independent decisions. For example, patients may feel they have to discuss treatment options, such as taking certain medications and/or making lifestyle modifications, with family members before making a decision.[20]

In many Hispanic/Latino families, women are the primary caretakers, and being a wife and mother are considered the most important roles for women.[19,22] Within the family, women usually possess the most knowledge about healthcare.[22] Thus, despite the prevalence of *machismo*, Hispanic/Latino men often speak to their wives first for advice about their health concerns.[22,23] (*Machismo* is a cultural term for a set of identities and attitudes associated with the Hispanic concept of masculinity.) Men are expected to behave in ways that are considered masculine, or *macho.*[24] *Machismo* can refer to positive qualities expected of Hispanic/Latino men, such as having a strong work ethic, being a good provider, and protecting their families, as well as behaviors thought to "prove" manhood, such as heavy drinking and risk-taking.[19] Because of *machismo,* Hispanic/Latino men often believe that enduring pain is necessary and that visiting a physician is a sign of weakness.[22,23,25] Therefore, they may avoid seeing a physician for as long as possible, and their wives often have to encourage them to schedule an appointment.[23] However, *machismo* can also have positive effects on men's health. Because of the cultural expectations that men must work and earn a living, they will likely seek help if illness affects their ability to fulfill these obligations.[22] In addition to encouraging men to seek medical assistance, wives and other female family members often accompany men to their healthcare visits.[22] Consequently, providing education about type 2 diabetes to the wives of Hispanic/Latino men could be an effective strategy to increase their adherence to treatment, as well as improve their self-management behaviors. It might also be beneficial to remind men that their health is connected to their ability to provide for their family.[23]

Other cultural concepts that influence health behavior in Hispanics/Latinos are *fatalismo* and *personalismo*. *Fatalismo* refers to the belief that individuals cannot alter their disease process because it is part of their destiny.[5,18,23] Thus, *fatalismo* may result in Hispanic/Latino patients being less likely to adhere to their recommended treatment plan.[26] *Personalismo* refers to the expectation that a Hispanic/Latino individual will develop a personal relationship with their healthcare provider.[4,5,18,19] Thus, some Hispanic/Latino patients may prefer a healthcare provider who engages in close physical contact (e.g., handshakes and hugging) and shows a genuine interest in their life.[4,20] A perceived lack of *personalismo* on the part of the healthcare provider could lead to the patient being dissatisfied with their care and, therefore, not returning for subsequent visits.[4,19]

Religious beliefs also play an important role in healthcare among Hispanics/Latinos.[27] In a survey of 104 Hispanic patients with diabetes, 78% believed they had the disease because it was God's will, and 81% thought that only God could control their disease.[28] Such a fatalistic view could mean that Hispanic/Latino patients have less motivation to actively manage their type 2 diabetes. Conversely, strong religious beliefs can have a positive effect on type 2 diabetes management. For example, in surveys of Hispanic/Latino patients with type 2 diabetes, religion was frequently mentioned as a support system, providing strength to cope with their disease, the ability to face their fears and remain positive, and hope that a cure would be provided by God.[25,29,30]

Effect of Hispanic/Latino Culture on Lifestyle and Body Image

An unhealthy diet and lack of leisure-time physical activity/exercise are factors associated with an increased risk of developing type 2 diabetes,[31-35] and may contribute to the high prevalence of type 2 diabetes in Hispanics/Latinos living in the United States. The commonality of these lifestyle risk factors in the United States may help explain why the prevalence of type 2 diabetes in Hispanics/Latinos in the United States is usually higher than that in the countries of origin. For example, an analysis of the San Antonio Heart Study and the Mexico City Diabetes Study showed that the age- and sex-adjusted incidence of type 2 diabetes was significantly higher among Mexican Americans living in San Antonio, Texas, than Mexicans living in Mexico City, Mexico.[36]

Correct nutrition is important for the management of type 2 diabetes, but some aspects of Hispanic/Latino culture can make it difficult for Hispanics/Latinos to maintain a healthy diet. First, traditional Hispanic/Latino foods can be high in fat and calories.[37] A dietary analysis conducted as part of the San Antonio Heart Study reported that Mexican Americans consumed significantly more carbohydrates and saturated fats than non-Hispanic whites.[38] In addition, Hispanic/Latino family celebrations may involve social pressure to overeat.[37] The cultural value *simpatia,* a deferent compliance with others' wishes in order to maintain interpersonal relationships, means that declining food at a social occasion is impolite and socially unacceptable.[21,37] Another important characteristic of Hispanic/Latino culture is that families often eat meals together at home. As such, it can be difficult to modify the meal plan for an individual with type 2 diabetes because the entire family will be affected.[20] However, eating together can provide an opportunity to improve the eating patterns of the entire family, which may be especially beneficial for Hispanic/Latino children, an increasing number of whom are overweight/obese and exhibit metabolic and vascular abnormalities.[39] Therefore, the family environment, including shared meals, may represent an opportunity to improve glycemic control among those with type 2 diabetes as well as prevent or delay the development of the disease in those at risk.

Hispanics/Latinos in the United States are less likely to exercise than non-Hispanic whites. Data from the 2004 to 2006 NHIS revealed that a higher proportion of Hispanics/

Latinos are physically inactive compared with non-Hispanic whites (53.6% and 34.8%, respectively).[40] In a cross-sectional analysis of the 1992 Health and Retirement Study, the proportion of Hispanics/Latinos who never engaged in light or vigorous leisure-time physical activity was higher than the proportion of non-Hispanic whites.[41] Perception of health and body image is also influenced by the Hispanic/Latino culture. Physical robustness may be equated with physical health, especially among older Hispanics/Latinos.[5,18] As a result, Hispanics/Latinos may be less likely to perceive themselves as overweight.[42] Together, these factors may influence the prevalence of type 2 diabetes in the Hispanic/Latino population.

Effect of Hispanic/Latino Culture on Attitudes Regarding Type 2 Diabetes Mellitus

Fears about type 2 diabetes and its treatment are common among Hispanics/Latinos.[20,43] For example, in a treatment program for Hispanic/Latino patients with type 2 diabetes, 43% thought insulin caused blindness.[20,44] Similarly, in a survey of Mexican Americans with type 2 diabetes, 43% believed that insulin could cause serious health problems, including blindness (mentioned by 25% of those surveyed).[43] These patients were also afraid that being prescribed insulin indicated that their disease had become very serious.[43] Fears regarding type 2 diabetes, which may be caused by a lack of healthcare knowledge, can negatively affect treatment adherence.[20] For example, studies have shown that adherence to treatment[45] and type 2 diabetes self-management[46] are better in patients with higher education levels, whereas patients with less education are more likely to switch treatment regimens.[46] Consequently, patients with higher income and education levels are more likely to be in self-reported excellent or good health,[45,46] whereas patients with lower education levels are more likely to experience deteriorating health over time.[46] These results suggest that fears regarding type 2 diabetes and its treatment may be more common in patients with a lower socioeconomic status.

Hispanics/Latinos have several beliefs regarding the cause of type 2 diabetes. The most common of these include heredity, eating a diet high in fat or sugar, engaging in minimal exercise, being overweight, being too thin, bad behaviors such as drinking and smoking, and *susto*.[27] (*Susto*, or "fright of surprise," is a cultural belief that an emotional response to a specific startling event makes a person susceptible to disease.) A number of studies have reported that Hispanics/Latinos believe that type 2 diabetes is a very serious illness that would shorten their lives, and that they live in fear of its consequences.[27] Hispanic/Latino patients have also reported that the disease affects how they feel about themselves, how they feel others perceive them, and their role in society (i.e., they felt the disease had become their identity).[21,27]

All of the above are common factors that may be present in Hispanic/Latino patients with type 2 diabetes. However, it is important to not create a stereotype and expect all factors to be present in all individuals. Ultimately, the healthcare provider must evaluate the medical, social, and cultural factors for each individual in order to create an integrated and appropriate treatment plan.

SUMMARY

The risk of type 2 diabetes is particularly high in Hispanics/Latinos in the United States and varies among subgroups. Although this increased risk is partly caused by genetic influences, a number of socioeconomic and cultural factors, including *familismo*, *fatalismo*, *machismo*, *personalismo*, and *simpatia*, may also affect healthcare outcomes in Hispanic/Latino patients. While these factors are not necessarily present in all individuals, an awareness of Hispanic/Latino culture is important in order to provide patients with healthcare that is more culturally and socially appropriate. Some aspects of Hispanic/Latino culture may represent an opportunity for the improvement of type 2 diabetes care and prevention. For example, knowing that family members are often directly involved in helping Hispanic/Latino patients manage their disease should encourage clinicians to devise treatment plans that actively engage family members to improve their chance of success. Furthermore, because Hispanics/Latinos usually eat together as a family, a change in meal plan for the patient with type 2 diabetes translates into an improvement in the eating habits of the entire family, possibly helping to delay or prevent the disease in other family members. However, other aspects of Hispanic/Latino culture may be seen as challenges in the prevention and treatment of type 2 diabetes because patients may have difficulty making decisions and communicating with healthcare providers, may believe that their disease is beyond their control, and may be less likely to exercise and/or perceive themselves as overweight. Finally, Hispanic/Latino patients often have unfounded fears about type 2 diabetes and its treatment, which may be owing to a lack of knowledge and can make patients less likely to adhere to treatment. Importantly, healthcare providers must become more aware of these cultural factors in order to improve the management of type 2 diabetes in this high-risk population. Only by considering all of these factors can type 2 diabetes be successfully prevented, treated, and managed in Hispanic/Latino patients.

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A. Enrique Caballero, MD, reports no relationships to disclose with any manufacturer of a product or device discussed in this supplement.

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