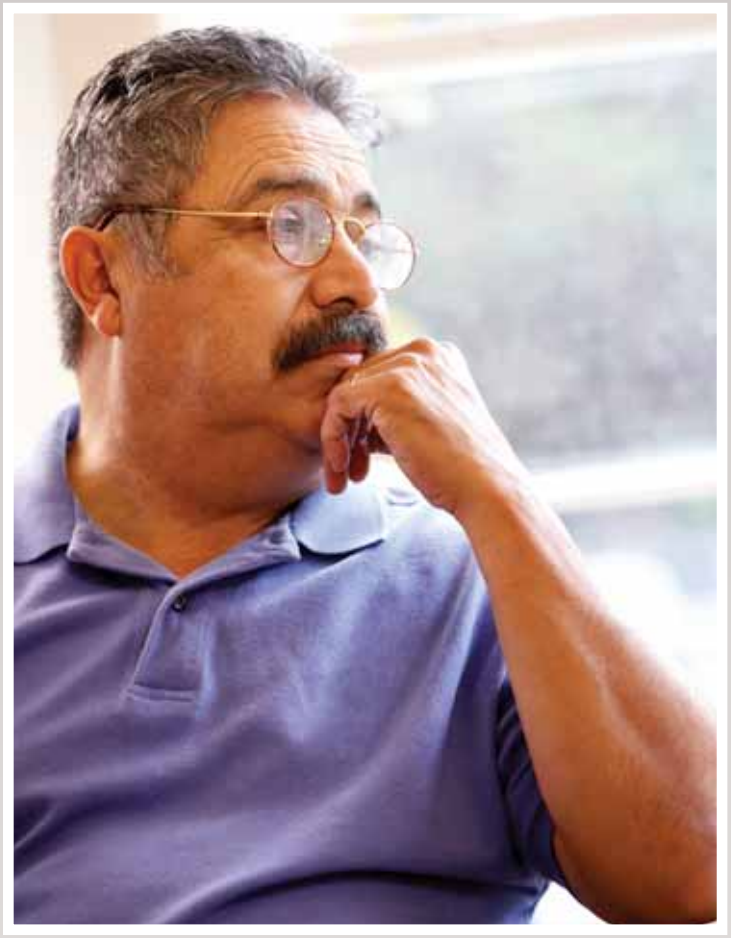
Hispanic Americans face diabetes challenges and complications



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Diabetes mellitus is a major challenge for Hispanic Americans, who face a higher prevalence of diabetes mellitus than any other ethnic group except Alaska Natives and African-Americans.[1,2] Moreover, access to effective "culturally competent" health care has not kept pace with the increasing incidence of diabetes mellitus among Hispanic Americans.

Hispanics are the largest and the fastest-growing minority group in the United States, accounting for about 15% of the country's population.[3] Projections indicate that by 2050, Hispanics will make up 30% of the U.S. population.[3]

The age-adjusted prevalence of type 2 diabetes mellitus in Hispanic Americans is twice that in non-Hispanic white Americans.[4] Currently, 10.4% of Hispanics in the United States are diagnosed as having diabetes mellitus.[1] By 2020, the percentage of Hispanics in the United States with diagnosed diabetes mellitus will have increased by an estimated 107%, compared with an estimated increase of 27% for non-Hispanic white Americans.[5]

Furthermore, Hispanic Americans tend to have greater rates of complications from diabetes mellitus compared with non-Hispanic white Americans. For example, glycosylated hemoglobin (HbA_{1c}) levels are consistently higher in Hispanic Americans, as are death rates from complications of diabetes mellitus.[6] Part of the reason for these higher rates may be that Hispanic Americans are less likely to receive preventive health care than are non-Hispanic white Americans—despite recent increases in preventive services received by Americans as a whole.[7]

Another factor contributing to high complication rates among Hispanic Americans is that they are generally at higher risk for renal failure than are non-Hispanic white Americans. Again, this elevated risk among Hispanics is likely related to barriers in obtaining adequate health care, including screenings for renal failure, which is a largely asymptomatic complication of diabetes mellitus.[8]

The percentage of pediatric patients at risk for type 2 diabetes mellitus and cardiovascular disease is increasing in the United States, especially among minority groups. In 2008, 47% of children younger than 5 years in the United States were members of minority groups, with 25% of these children being Hispanic.[9] Hispanic American children have double the rate of obesity of non-Hispanic American children. Considering the large number of Hispanic American children younger than age 5 in the United States, a large increase in cases of type 2 diabetes mellitus cases is likely to occur in the not-so-distant future.[2] This will pose a great socioeconomic burden for patients and communities, as well as for health care professionals.

In the United States, prediabetes generally develops between the ages of 40 and 60. In the Hispanic American population, however, prediabetes often develops in individuals between the ages of 20 and 30.[4] As a whole, the Hispanic American population is younger than the general population of the United States. In 2008, the median age of the U.S. Hispanic population was 27.7 years, while the median age of the overall U.S. population was 36.8 years.[9] It is staggering to consider that one in two Hispanic Americans born in 2000 is likely to have diabetes mellitus during his or her lifetime.[2] Because the current younger population is believed to be disproportionately affected by prediabetes, the United States is likely to experience a serious strain on its health care system as this population ages, unless action is taken to prevent the transition from prediabetes to diabetes.

In 2007, diabetes mellitus was the sixth-leading cause of death in the United States, as well as the fifth-leading cause of death from disease for Americans.[10] More than $116 billion is spent annually on the direct medical costs of diabetes mellitus in the United States, with another $58 billion spent on indirect costs, including loss of work, disability, and loss of life.[10] The heavy burden of diabetes mellitus needs to be addressed—not only to keep the cost of health care down but also to improve the health of the American population.

Diabetes mellitus prevalence worldwide

Worldwide, more than 220 million people are being treated for diabetes mellitus. Without improved intervention, this number is projected to double by 2030.[11]

When compared with individuals in their countries of origin, Hispanics living in the United States are likely to have higher rates of diabetes mellitus.[12] The prevalence of diabetes mellitus in various groups of Hispanics in the United States is as follows: Cubans, 8.2%; Mexicans, 11.9%; and Puerto Ricans, 12.6%. These differences in the prevalence of diabetes are likely the result of Hispanic Americans adapting to a lifestyle in the United States that includes greater caloric intake and less physical activity.

Factors causing increased incidence of diabetes mellitus

Along with having a higher incidence of diabetes mellitus, Hispanic Americans generally have greater incidence rates of obesity and metabolic syndrome than do non-Hispanic white Americans.[5] A genetic predisposition to type 2 diabetes mellitus among Hispanic Americans is often compounded by poor nutrition and inadequate physical activity in the United States, leading to high rates of metabolic problems.[4] Hispanic Americans are more insulin-resistant than non-Hispanic white Americans, with insulin resistance developing at an earlier age in Hispanic American children than in non-Hispanic white American children.[4]

The primary risk factor for diabetes mellitus is obesity.[4] Almost 80% of the Hispanic population in the United States is obese or overweight.[5] Twenty-nine percent of Mexican American women older than 18 are obese. The rate of obesity among Hispanic American children is twice that of non-Hispanic white American children, and obesity is likely to manifest at a younger age in Hispanic children. Hispanic Americans are more likely than non-Hispanic white Americans to have upper body obesity, which has been linked to multiple health concerns, including insulin resistance and cardiovascular risk.[4]

As previously mentioned, the high rates of obesity among Hispanic Americans may be attributed partly to lifestyle factors, such as improper nutrition, high caloric intake and fat consumption, and inadequate exercise. Many Hispanic Americans have a diet high in carbohydrates and saturated fats. In addition, more than 60% of Hispanic Americans report engaging in little or no physical activity on a daily basis.[2]

Social factors, such as education level and socioeconomic status, have been associated with the development of diabetes mellitus. Higher rates of diabetes mellitus have been observed in patients of lower socioeconomic classes and in patients with lower education levels.[4]

Factors causing disparities in health care

Four main factors may explain the disparities in health care observed in the Hispanic population in the United States—language barriers, cultural barriers, lack of access to preventive care and lack of health insurance.

The language barrier is an ongoing problem across the United States. If Hispanic patients cannot fully communicate with their physicians, they are less likely to follow advice for treatment and lifestyle modifications. The inability to properly communicate may hinder the physician-patient relationship and lead to confusion about the treatment guidance provided by physicians. As a result, patients may be ultimately labeled as "noncompliant" when, in fact, they simply did not understand the original instructions.[13]

Cultural barriers play a large role in disparities in health care among Hispanic Americans. Many Hispanics are not willing to put their medical needs over the needs of their family members.[14] As a consequence, they may delay seeking necessary treatment.

In addition, a preference for more natural remedies or culturally traditional treatments has been observed among Hispanic patients, as has a belief that the disease process cannot be altered because of "destiny" or "fate." Some Hispanic patients are more likely to rely on family members and folk healers for health advice than they are to seek professional medical advice.[2]

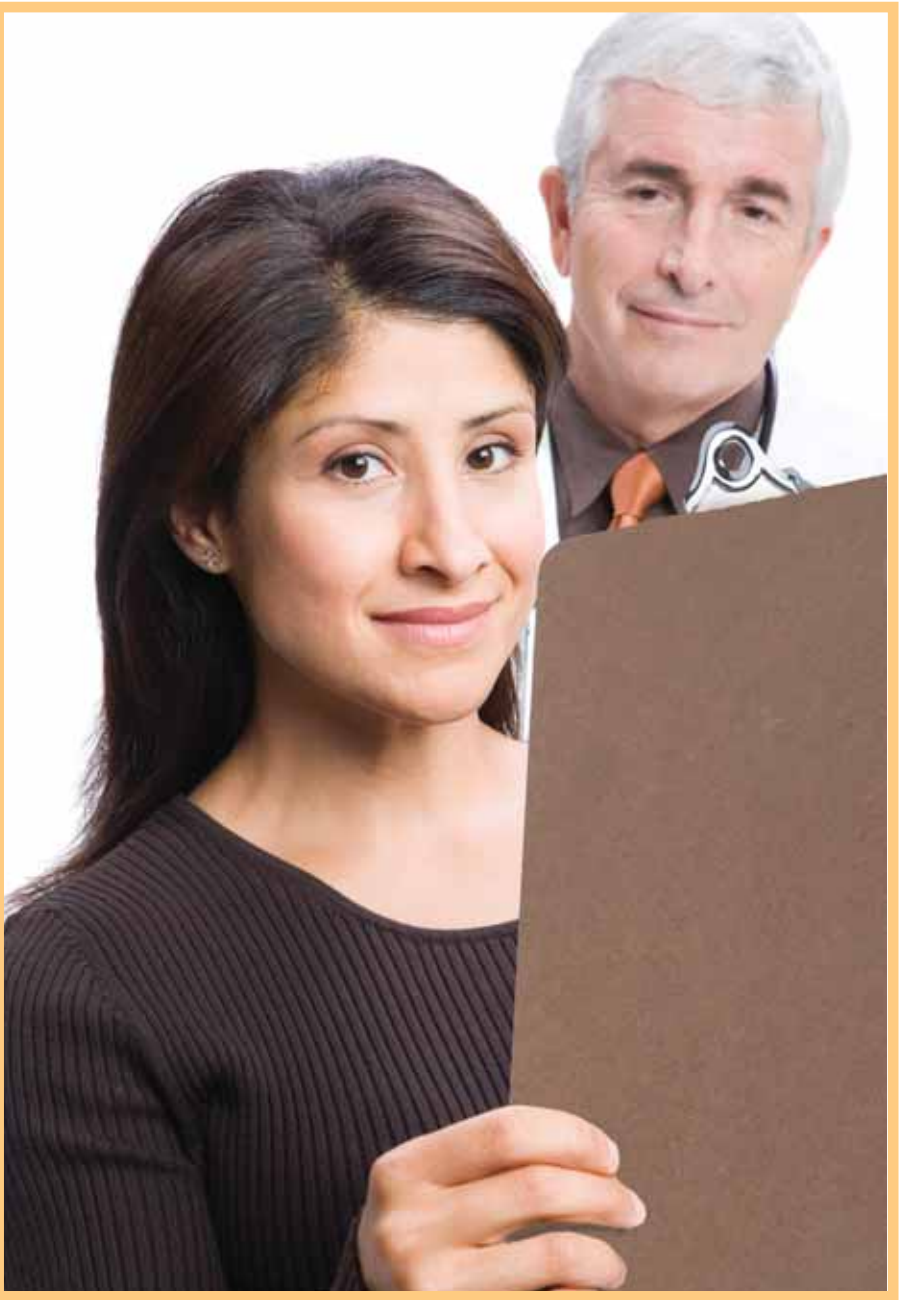
Overall, Hispanic Americans who receive professional care for diabetes mellitus are more likely to be treated with oral agents and less likely to receive insulin than are non-Hispanic Americans.[4] The reasons for this difference are likely to be multifactorial, with some reasons related to the relatively long time necessary to educate patients about insulin treatment. Cultural beliefs may also be responsible for some of this difference. One study found that

Hispanic Americans are more likely than non-Hispanic white Americans to believe that insulin treatment is linked to blindness or other complications.[6] Such misconceptions underscore the need for physicians to take the time to ensure that their patients accurately grasp the information presented.

Hispanic American patients are two to three times less likely than non-Hispanic white patients to receive HbA_{1c} evaluations during office visits.[15] Glucose self-monitoring is also less common in Hispanic American patients than in non-Hispanic white American patients. This lack of glucose monitoring may be to blame for the greater prevalence of lower limb amputations, retinopathy, blindness, stroke, and end-stage renal disease in Hispanic American patients with diabetes mellitus compared with non-Hispanic white patients.[4]

Access to adequate health care has long been a problem in the Hispanic American community. Limited access to preventive care might be attributed to a lower socioeconomic status, a lack of transportation to and from health care facilities, and isolation from mainstream American culture. In 2008, the median annual income for Hispanic American households was $37,913 compared with $52,029 for non-Hispanic households.[16] A survey conducted in 2007 found that 60%of undocumented Hispanic aliens in the United States lacked health insurance versus 28% of Hispanic citizens or permanent residents. This compares to 17% of the U.S. population that was uninsured for the same survey year.[17]

In addition, many Hispanic American families may not have the financial resources to purchase more than a single motor vehicle. As a result, a large family may need to share one car for work, shopping and all other obligations. A family member may be reluctant to cause problems for other family members by using the family car. Thus, health care visits may be neglected if there are no easy means of transportation.[14]



Guidelines for successful treatment plans

- L *Listen* with sympathy and understanding to the patient's perception of the problem
- E *Explain* your perceptions of the problem
- A *Acknowledge* and discuss the differences and similarities
- R *Recommend* treatment
- N *Negotiate* agreement

Source: LEARN guidelines for health care providers to aid in the development of successful treatment plans for multicultural patient populations. Source: Berlin EA, Fowkes WC Jr. A teaching framework for cross-cultural health care: application in family practice. *West J Med.* 1983;139(6):934-938.

Solutions

The most important aspect of developing treatment plans is working with patients to ensure that these plans have a chance of success. This is particularly important with Hispanic American patients because of the previously discussed barriers to treatment faced by these patients. The LEARN model,[18] shown on page 7, is a set of guidelines designed to help health care professionals develop successful treatment plans for multicultural patient populations.

By obtaining patients' views of their health problem, physicians will be better able to assess their patients' levels of self-understanding and to determine what, if any, preconceived notions or fears exist.

Self-management education is vital to improve outcomes related to diabetes.[19] The goals of self-management programs are to educate patients about their diseases; to help them modify their behavior, preconceived notions, and attitudes; and to improve their clinical outcomes and overall health. To be effective, these programs must take into account many factors unique to each patient, including cultural values and beliefs, religious beliefs, personal fears, level of family integration and support, education level, health literacy, language, nutritional and activity preferences, views on alternative medicine, and socioeconomic status.[6] Education programs should be culturally appropriate and available in Spanish at a low literacy level. Programs that address some of these factors have been implemented across the United States.

According to a 2007 review of published studies on culturally oriented diabetes mellitus self-management programs for the Latino community, successful programs consistently cover disease education, nutrition, physical activity, hypertension, glucose self-monitoring, kidney-related complications, eye care and foot care.[19] Successful programs are usually available in both English and Spanish, and they are oriented toward patients with lower education levels. In addition, the cultural characteristics of the targeted patient population must be taken into account in program development. For example, in one diabetes mellitus self-management program included in the 2007 review, participants were shown educational videos in the format of telenuovos—Hispanic soap operas—to make learning easier.[19]

Results of most self-management programs covered in the review included decreases in levels of HbA_{1c} and total cholesterol.[19] In the average program, participants met for two hours each week, for a total program length ranging from six weeks to six months. Overall, the more education time provided to patients, the better the outcome.

In a few programs, patients were encouraged to bring their primary support person with them to meetings.[19] This individual might be a family member or a close friend who was willing to participate in the education program with the patient. This option provided further encouragement for patients at home, and it took advantage of the close family ties that are typical for Hispanic Americans.

Often in a Hispanic American community, individuals may make important decisions about health care only after discussing their health problems with others in the community.[14] Thus, good role models in the community can reinforce the need for patients to properly manage diabetes mellitus and other illnesses. Physicians should remember to consider the importance of family and community leaders in encouraging and supporting patients in the Hispanic population.

Lifestyle modification in treatment plans for Hispanic Americans with diabetes mellitus should include moderate weight loss through dietary changes and increased physical activity. Successful dietary programs must have a culturally sensitive and individualized approach. Each patient's lifestyle, eating habits and weight loss goals need to be taken into account for a dietary plan to be effective.

However, some patients may not be able to afford the dietary changes recommended by physicians. So physicians need to pay attention to the socioeconomic status of patients and recommend programs like Meals on Wheels, to patients who qualify for them. Physicians may also aid patients by referring them to dietitians who are familiar with traditional food preparation

and who can work with patients to create healthy, inexpensive food plans. If a treatment program is not economically feasible for a patient, it will have little chance of success.

Physical activity as part of treatment plans for Hispanic Americans with diabetes mellitus should be moderate at first. The amount of physical activity should be based on what each patient can tolerate and is actually willing to do. The ultimate goal should be to reach 150 minutes or more of physical activity per week.[4] Exercise and other physical activity have been shown to improve insulin sensitivity, regardless of the amount of weight loss achieved.[4] Although some patients may claim to get enough physical activity at work, it is important for physicians to explain the difference between a labor-intensive job and exercise that is most beneficial to health.

To promote family involvement and support, physicians should encourage patients to play outdoors with their children and to take walks with other relatives—activities that do not require paying fees or gym memberships. In addition, by stressing the stark reality that half of a Hispanic patient's children are likely to eventually develop diabetes mellitus too, physicians can make use of their patients' strong sense of family to improve glycemic control in adult patients and to prevent diabetes mellitus in children.[2,6]

Final notes

The increasing number of patients—especially Hispanic Americans—diagnosed as having diabetes mellitus needs to be addressed. Health care professionals must become familiar with the culture and beliefs of their Hispanic patients.

Patient education should be provided during every physician visit. Physicians should try to ensure that families of Hispanic patients with diabetes mellitus are involved in treatment programs whenever possible. Such family involvement has been shown to improve patient outcomes. HW

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