

Los Desiertos Americanos: Food Deserts and Their Impact Upon Hispanic American Health



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Abstract

The Hispanic American population is at greater risk for several chronic health conditions, including obesity, diabetes, and hypertension, when compared to non-Hispanic whites. Food deserts, which can be broadly described as areas with lower availability of nutrient-dense food, are particularly prevalent within Hispanic American communities and may play a role in the development of these diseases. This essay describes the health disparities present within the Hispanic American population, associates these disparities with the food insecurity found inside food deserts, and finally reviews a number of intervention strategies that may be used by policy makers, public health researchers, and clinicians to address this important issue.

Keywords: Hispanic American health, food deserts, social determinants of health

The Chihuahuan and Sonoran deserts separate Mexico from four states within the United States, representing a physical and mental boundary for travelers who wish to make the journey between the two countries. This sojourn is not part of the narrative for many Hispanic Americans, or even many Mexican Americans, but it does play an important role in the tales of a few. Food deserts, on the other hand, represent a significant challenge for much of the Hispanic American population and may play a role in higher rates of chronic health conditions, such as diabetes, obesity, and uncontrolled hypertension. This essay will examine the overall disparities in Hispanic American health, discuss food deserts and their link to those health disparities, and explore possible interventions that seek to address this issue. Public health researchers, policy makers, and health care providers must be aware of these food deserts and the particular ways in which they impact the health of Hispanic American patients.

The United States has a long-established history of health care inequalities between patients of different ethnicities and socioeconomic statuses. These disparities are particularly pronounced when comparing those of Hispanic origin to other groups, especially to those who identify with the non-Hispanic white (NHW) population. These patients will be the focus of this discussion and will be identified throughout as Hispanic American, without a specific focus upon their country of origin or immigration status. This is an important distinction, as there can be marked differences in patient health statistics depending upon these and other demographic characteristics [1-2]. A number of studies have indicated that Hispanic American patients are more likely to suffer from several chronic

illnesses, yet they also are less likely to have access to health insurance coverage and health services needed to address them [3]. The National Center for Health Statistics (NCHS) reported higher rates of diabetes among Hispanic Americans when compared to their NHW counterparts (12.3% vs 7.4%) [4], while a separate study also found higher rates of obesity (44.8% vs 42.2%) [5]. Though faced with similar rates of hypertension (36.8% vs 36.7%) [6], Hispanic Americans were found to have higher rates of uncontrolled disease (55% vs 49.2%) [7-8], while also reporting higher rates of being uninsured (29.7% vs 10.5%) [9].

The reasoning behind these differences is multifactorial, varies widely based upon age, gender, and country of origin [5], and is mostly beyond the scope of this particular discussion; however, one proposed mechanism to account for these health disparities is a higher likelihood of living in food deserts, which refers to a relative lack of access to nutrient-dense foods. The concept of “food deserts” was first proposed in the 1990s, but it has yet to be consistently delineated [10], alternately being described according to the characteristics of the supermarkets in an area (“urban areas with 10 or fewer stores and no stores with more than 20 employees”) [11] or by the characteristics of the food itself (“poor urban areas where residents cannot buy affordable, healthy food”) [12]. By either definition, food deserts represent a lower prevalence of nutrient-rich foods that support a healthy lifestyle and a higher prevalence of energy-rich foods (i.e., fast food restaurants, sugary beverages, processed and shelf-stable foods) that lead more easily towards obesity [13]. These energy-rich foods are also implicated in poor glycemic and blood-pressure

control, as weight loss and a healthy diet are key components to the management of hypertension and Type II diabetes mellitus.

This lack of access to nutrient-rich foods, also known as food insecurity, becomes particularly important when discussing the Hispanic American population as a whole. One study showed Hispanic American neighborhoods have only 32% of the chain supermarkets available to primarily white neighborhoods [14]. Within food deserts in minority neighborhoods, Hispanic Americans and other minority shoppers at the available grocery stores can expect to pay higher prices [15] for lower quality foods [11] than the NHW residents of more affluent neighborhoods. Another study, conducted by the USDA, showed that Hispanic American households were nearly twice as likely to suffer from food insecurity than NHW households (18.5% vs 9.3%) [16], which can be attributed to their proximity to or location within food deserts. This food insecurity has been directly linked to higher rates of obesity in certain populations, especially so among Hispanic American women and less significantly so among Hispanic American men [17].

These findings regarding food insecurity and chronic illness are even more troubling when combined with a typical Hispanic American diet that is heavy in rice, beans, tortillas, and other traditional Latin fare. By living in or near food deserts, this patient population comes under an even greater risk of developing chronic health conditions, such as diabetes, obesity, and hypertension, as well as suffering from poor overall control once these diseases develop. This risk appears to become even higher as these patients age, as food deserts in general have been shown to have differing impacts upon various age groups. This is not specific to Hispanic Americans, but it has been studied with similar results across a multitude of ethnicities and geographical locations. Food insecurity has been shown to have a lesser impact upon children [18] and adolescents, who appear to have no greater risks for obesity when impacted by food insecurity [19]. The parents of these children, on the other hand, are far more likely to develop obesity when exposed to food insecurity, with one study finding that food insecure parents are 2.5 times as likely to become obese compared to those who are food secure [20]. Elderly adults appear to be especially prone towards developing obesity when also suffering from food insecurity, as a study by Kim et al. [21] demonstrated. Elderly adults who were food insecure were found to have higher BMIs than those who were not, while those who became food insecure demonstrated a correlated rise in

their BMI. These studies are especially concerning for Hispanic Americans in early and later adulthood as they face an increase in the negative effects of food insecurity.

As previously discussed, food deserts have been identified since the early 1990s and have more recently become a topic of focus for public health research and intervention. Literature detailing interventions appears to be limited to the policy and academic levels, rather than from the standpoint of clinical best practices. These data describing interventions so far are mixed, though some reports detail encouraging patterns and creative intervention strategies. One study, focusing on healthy corner store initiatives that bring fresh food options to an existing infrastructure of convenience stores, showed that food desert residents in North Carolina were willing to purchase fruits and vegetables from these establishments, indicating a possible site of public health intervention [23]. In another, a group of researchers describes a particularly innovative approach [24] in which a mobile farmer's market is used to bring healthy produce to a primarily Latino population in rural California. Ghosh-Dastidar et al. [22] found that placing a supermarket within a food desert in Pittsburgh led to improved geographical access for surrounding residents and a decrease in staple food prices, though they did not find significant overall improvement in the availability of healthy foods. A related study by Cantor et al. [25] found a positive impact upon diet and food security for patients who were provided with benefits of the Supplemental Nutrition Assistance Program (SNAP) while shopping at that particular grocery store.

The overall tone of these reports is that of mixed results; however, these studies indicate that interventions addressing unequal access to nutritious foods are plausible, and that public health researchers and policy makers should consider a multitude of approaches when intervening in food deserts. For clinicians, it is important to be aware that the aggregate group of patients defined as Hispanic American has different risk and mortality profiles than the NHW population. These differences may be linked to their limited access to healthy foods, which indicates that their care must be tailored accordingly. Providers can use tools like the USDA's food access research atlas to identify patients who are at risk and to connect them with national assistance programs like SNAP or with the local resources available in their area.

The focus of this essay has been upon the food deserts with which Hispanic Americans must contend, and which may play a significant role in their development of several chronic diseases. It is important to note that these food

deserts do not impact all age groups similarly but have a particular impact upon Hispanic Americans in early and later adulthood. There have been several attempts at intervention with mixed results so far, but encouraging progress towards the future, nonetheless. It is imperative for policy makers and public health researchers to continue in their efforts to identify and help alleviate the impact of food insecurity on this particular patient population. Health care providers must consider the challenges these patients face in terms of food insecurity, educating them on the importance of nutrient-rich food and connecting them to available community resources, like the interventions mentioned here, whenever possible. The deserts separating Mexico from the United States will remain in perpetuity, but health policy makers, public health researchers, and clinicians can help these patients when contending with the American food deserts with which our minority populations are currently plagued.

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