

THE ASSOCIATION OF DEPRESSION WITH DIABETES MANAGEMENT AMONG URBAN AMERICAN INDIANS/ALASKA NATIVES IN THE UNITED STATES, 2011

Objective: To determine the relationship between depression and diabetes management among urban American Indians/Alaska Natives (AI/ANs).

Design: Retrospective, cross-sectional analysis of medical records.

Setting: 33 Urban Indian Health Organizations that participated in the Indian Health Service Diabetes Care and Outcomes Audit.

Patients: 3,741 AI/AN patient records.

Main Outcome Measures: Diabetes management outcomes, including HbA1c, smoking, BMI, systolic blood pressure, creatinine, total cholesterol, and receipt of preventive services.

Results: Individuals with depression and diabetes were 1.5 times more likely to smoke than individuals with diabetes but without depression (OR=1.51; 95% CI: 1.23, 1.86), controlling for age, sex, and facility. After adjustment, the geometric mean BMI in diabetes patients with depression was 3% higher than in patients without depression (β =.034; 95% CI: .011, .057).

Conclusions: Urban AI/ANs with diabetes and depression are more likely to smoke and have higher BMI than those with diabetes but without depression. These findings inform programmatic efforts to address the care of patients with both depression and diabetes. (*Ethn Dis.* 2015;25[1]:83–89)

Key Words: Diabetes Mellitus, Depression, North American Indians

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INTRODUCTION

Type 2 diabetes is a leading cause of morbidity and mortality among American Indians/Alaska Natives (AI/ANs).^{1,2} AI/ANs are more than twice as likely to have diabetes than non-Hispanic Whites of similar age.³ In 2009, the age-adjusted prevalence of diabetes was 16.1% among AI/ANs and 7.1% among non-Hispanic Whites in the United States.² Depression is common among individuals with diabetes, but particularly among AI/ANs with diabetes. The age-adjusted prevalence of major and minor depression among individuals with diabetes is 33.2% among AI/ANs and 15.3% among non-Hispanic Whites.⁴

Over the past half-century, AI/ANs have relocated from reservations into urban centers, both by choice and as a result of federal policy.⁵ Currently, 71% of AI/ANs reside in urban areas.⁶ These individuals left reservation lands for educational, employment, or housing opportunities, as well as through forced relocation and termination policies.^{5,7,8} Although urban AI/AN health data are limited, what information does exist indicates substantial health disparities between urban AI/ANs and comparison urban populations. Urban AI/ANs carry a disproportionate burden of disease, including higher mortality from diabetes, unintentional injury, and chronic liver disease compared with the general population living in the same urban areas.⁷ A downward trend from 1990 to 1999 seen in mortality rates for the general population is absent for urban AI/ANs, where rates have remained steady or increased over the same period.⁷ Additionally, urban AI/ANs are nearly twice as likely as the general population to be poor, unemployed,

and not have a college degree,⁷ which likely exacerbate health disparities.

Although urban AI/ANs are a heterogeneous group that includes members or descendants of a variety of tribes, they share a common historical experience of population decimation, loss of lands, and destruction of language, religion, and culture.⁹ The poor health and socioeconomic status of urban AI/ANs are shaped by the experience of historical trauma and the transfer of unresolved grief across generations.¹⁰ Research among several reservations/reserves indicate that persistent thoughts of historical loss are associated with emotional responses including depression and anger.^{11,12}

Access to culturally appropriate, comprehensive health care, including diabetes care, is critical to reducing rates of disease and death in this population. Yet after migrating into urban areas, AI/ANs often lose access to health care benefits that are available on reservation lands. While some urban AI/ANs travel back to their home reservations, others lack strong ties with tribal communities or are unable to travel long distances for health care. Urban Indian Health Organizations (UIHOs) are private, non-profit corporations that serve AI/ANs in select cities by providing a range of health and social services, from referral services to full ambulatory care. Thirty-three UIHOs, funded in part under Title V of the Indian Health Care Improvement Act, receive limited grants and contracts from the Indian Health Service (IHS) to provide services to AI/ANs living in urban areas. Although the scope and delivery of health care services vary across UIHOs, almost all receive Special Diabetes Program for Indians (SDPI) funding from the IHS to support comprehensive diabetes care.

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