

The Association of Depression with Diabetes Management among Urban American Indians/Alaska Natives in the United States, 2011

Elizabeth Knaster, MPH
ElizabethK@uihi.org

Amanda Fretts, PhD
 Leslie Phillips, PhD

Urban Indian Health Institute, a division of the Seattle Indian Health Board



About the Urban Indian Health Institute (UIHI)

To support the health and well being of Urban Indian communities through information, scientific inquiry, and technology.



Urban Indian Health Institute, a division of the Seattle Indian Health Board



Urban AI/ANs

Urban AI/ANs are American citizens of American Indian or Alaska Native heritage who are:

- tribal members and their descendants
- descendants of adoptees and those no longer affiliated with a given tribe
- Indians by heritage who may no longer be affiliated with an Indian tribe (i.e. relocation)
- Indians who no longer meet tribal membership eligibility

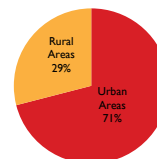
Urban Indian Health Institute, a division of the Seattle Indian Health Board



Geography

- 5.2 million individuals identified as AI/AN
 - 1.7% of the total U.S. population
 - 71% live in urban areas (3.7 million)

AI/AN Population in the United States



Source: US Census, 2010

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Urban Indian Health Organization Service Levels



Urban Indian Health Institute, a division of the Seattle Indian Health Board



Introduction

- Diabetes is a leading cause of morbidity and mortality among AI/ANs
- SDPI to prevent and treat diabetes at I/T/U facilities

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Introduction

- Diabetes is associated with a higher risk of depression
- Depression associated with poor diabetes control (A1c)
- Little is known about other diabetes outcomes
- Diabetes and mental health

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Research Aim

- Assess the cross-sectional relationship of depression and diabetes management among urban AI/ANs who receive care at Urban Indian Health Organizations

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Methods

- Data Source
 - IHS 2011 Diabetes Care and Outcomes Audit
 - Submit data from their registry of diabetic AI/AN patients to the IHS DDTP annually
 - Patients have received diabetes health care services and had at least one primary care visit in the past year
 - Manual or electronic audit

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Methods

- 33 UIHOs participated in the 2011 Audit (patient records n=3,741)
- Only included records with complete data (patient records n=3,390)

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Methods

- Exposure:
 - Depression as active medical problem (yes/no)
- Outcomes:
 - HbA1c, BMI, systolic BP, serum creatinine, total cholesterol
 - Diet, exercise or diabetes instruction in past year
 - Smoking
 - Foot, eye or dental exam in past year

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Methods

- Linear and logistic regression
- Weighting procedure
- Adjusted for age, sex, facility, diabetes duration

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Results

- BMI
 - Mean log BMI is 0.034 higher among depressed patients than patients without depression ($\beta=0.034$; 95%CI: 0.011, 0.057)

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Results

- Smoking
 - Individuals with depression were 1.5 times more likely to smoke than individuals without depression (OR=1.51; 95%CI: 1.23-1.86)

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Discussion

- Diabetic patients with depression are more likely to smoke and have higher BMI than diabetic patients without depression
- Depression not associated with glycemic control or other markers of diabetes management

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Limitations

- Crude measurement of depression
- Cross-sectional data
- Missing data
- Limited variables in dataset
- Clinical population

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Strengths

- Only known study of diabetes and depression management among urban AI/ANs
- Availability of a range of variables
- Contribute to literature on effect of mental health issues on health conditions

Urban Indian Health Institute, a division of the Seattle Indian Health Board



Conclusion

- AI/ANs with diabetes and depression more likely to smoke and have higher BMI
- Incorporation of depression management into existing weight loss and smoking interventions
- Awareness of experience of urban AI/ANs must be integrated into diabetes care

Urban Indian Health Institute, a division of the Seattle Indian Health Board

