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

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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 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

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)

Source: US Census, 2010

Introduction

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

Research Aim

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

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

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

• 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

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

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

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

Limitations

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

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

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