Achievement of diabetes treatment goals in HIV-positive diabetic veterans compared to HIV-negative diabetic veterans

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**Background:** The development of highly active antiretroviral medications has transformed HIV from terminal illness to chronic disease. As HIV-positive patients live longer they are at increasing risk for diseases of aging including diabetes, hypertension, hyperlipidemia, and cardiovascular disease. Yet there is evidence that clinicians practicing in Infectious Diseases clinics (Infectious Disease or General Medicine trained) are less comfortable than their colleagues in General Medicine clinics in treating these comorbidities in HIV patients. Recent studies from the Veterans Aging Cohort Study (VACS) have demonstrated that the prevalence of comorbid conditions (diabetes, hypertension, peripheral vascular disease, renal, liver, and pulmonary disease) have increased in prevalence among HIV-positive patients when compared to age, sex, and race-matched HIV-negative controls. Little is known, however, about the management of these non-HIV chronic diseases in HIV patients. Diabetes represents an important opportunity to study non-HIV chronic disease management in HIV patients given that it is the seventh leading cause of death and costs the U.S. $174 billion annually. Moreover, much of the mortality and morbidity associated with diabetes can be prevented with strict glycemic control achieved with medications and lifestyle modifications.

**Specific Aim 1:** Compare the achievement of goal hemoglobin A1c (Hgb A1c) among HIV-positive patients with prevalent diabetes as compared with HIV-negative diabetic age, race matched controls in the VA.

**Hypothesis 1:** HIV-positive diabetics will achieve goal Hgb A1c of <7.0% less frequently than HIV-negative diabetics.

**Specific Aim 2:** Compare rates of retinal and diabetic foot exams completed among HIV-positive and HIV-negative diabetics receiving care within the VA Health System at one, two, and three years.

**Hypothesis 2:** Fewer processes of diabetes care will be executed in HIV-positive diabetics compared with HIV-negative controls.

**Methods:** This was a retrospective cohort analysis with one, two, and three year follow-up utilizing the VACS data. We conducted descriptive statistics in the full VACS cohort, bivariate analysis of HIV status with the outcomes of interest and separate multivariate analyses for each outcome adjusting for potential confounders. We used mixed models regression methods to examine the trajectory of variables such as Hgb A1c over the one, two, and three year follow-up periods. Data on cumulative measures (e.g., adherence scores, number of visits) will be modeled using linear and count regression methods as appropriate.

**Results:** Pending

**Conclusions:** Pending