

### **Title: Statin Prescription and Guideline Adherence Rate for Intermediate-Risk ASCVD Prevention in People Living with HIV in Care at University Hospital, Newark NJ**

**Authors:** Jeanne Ho, MD, Peter Cangialosi, MS4, Mark Liotta, MS4, Diana Finkel, DO, Steven Keller, PhD

#### **Background:**

The American College of Cardiology (ACC) published updated guidelines for prevention of atherosclerotic cardiovascular disease (ASCVD) in 2019 using their 10-year ASCVD Risk Estimator Plus. The ACC identified HIV infection as an independent risk factor for ASCVD and considers it a risk-enhancing factor when initiating statin therapy. Other risk factors include history of CVD (stroke, myocardial infarction, peripheral arterial disease), diabetes mellitus, hypertension, and smoking. This quality assessment project examines rates of guideline adherence for ASCVD prevention in people living with HIV (PLWH) with intermediate-risk ASCVD score ( $\geq 7.5\%$  &  $< 20\%$ ).

#### **Methods:**

This project was reviewed and approved by Rutgers IRB. Patients from an HIV registry of University Hospital Infectious Disease Outpatient clinic in Newark, NJ were reviewed if their charts contained an automatic EPIC-calculated ASCVD risk score. For those without an automatic score, one was manually calculated by the authors if the required data was available. Adherence rate was defined as following 2019 ACC guidelines for appropriate statin therapy, while considering potential medication interactions. Guideline adherence rates were generated from both automatic and manual calculation groups with ASCVD risk  $\geq 7.5\%$  &  $< 20\%$ .

#### **Results:**

The overall guideline adherence rate was 33.6% (95% CI 27.9-39.8%, n=238). The guideline adherence rate for patients categorized by aforementioned risk factors were: history of CVD 66.7% (95% CI 50.3-79.8%, n=36), diabetes mellitus 55.8% (95% CI 42.3-68.4%, n=52), hypertension 40.2% (95% CI 33.5-47.3%, n=189), and smoking 27.6% (95% CI 20.0-36.9%, n=105).

#### **Conclusion:**

Statin initiation for the intermediate risk group (ASCVD  $\geq 7.5\%$  &  $< 20\%$ ) involves a discussion between provider and patient about ASCVD score and presence of risk factors. These guideline adherence rates highlight the need for provider education on calculation of ASCVD risk scores and increased awareness of the risk-enhancing nature of HIV infection in co-existence with traditional risk factors of CVD history, diabetes, hypertension, and smoking.