

**Title: Role of EMR Calculators in Guideline Adherence Rate for High-Risk ASCVD Prevention in People Living with HIV in Care at University Hospital, Newark NJ****Authors:** Peter Cangialosi, MS4, Mark Liotta, MS4, Jeanne Ho, MD, Diana Finkel, DO, Steven Keller, PhD**Background**

The American College of Cardiology (ACC) recognizes HIV as an independent risk factor for atherosclerotic cardiovascular disease (ASCVD). However, their 2019 guidelines do not specifically address people living with HIV (PLWH), aside from stating that the Risk Estimator Plus, which calculates a patient's 10-year risk for ASCVD to guide use of statin therapy, likely underestimates CVD risk in HIV-infected individuals. This quality assessment project examines rates of guideline adherence for ASCVD prevention, specifically for PLWH who have a calculated risk score in the high-risk range ( $\geq 20\%$ ).

**Methods**

This project was reviewed and approved by the Rutgers IRB. Patients from an HIV registry of University Hospital Infectious Disease Outpatient clinic in Newark, NJ were divided based on the presence of an automatic EPIC-calculated ASCVD risk score. For those without an automatic score, one was manually calculated by the authors when the required data was available. Guideline adherence rate was compared for the automatically and manually calculated groups with an ASCVD risk  $\geq 20\%$ . Adherence rate was defined as following 2019 ACC guidelines for appropriate statin therapy, while considering potential medication interactions.

**Results**

Automatically calculated ASCVD risk scores were in 479 patient charts, and 292 ASCVD scores were calculated manually. Non calculatable scores were due to lipid values outside the calculator range (229 patients) or having no documented lipid results (154 patients). Guideline adherence rates for treatment of the automatically calculated group (77 patients) were significantly lower than those from the manually calculated group (51 patients), at 41.6% and 68.6%, respectively ( $p < 0.05$ ).

**Conclusion**

Numerous PLWH lack the necessary lipid values for ASCVD risk calculation to guide management. For those calculated, a lower automatic group adherence rate indicates a need for provider education on how to access, assess, and apply ASCVD risk scores in the management of this uniquely high-risk population.