**Title**: Impact of Pharmacist Targeted Hyperlipidemia Interventions in Prevention of Atherosclerotic Cardiovascular Disease in Patients with Diabetes Mellitus

**Authors**: Madison Yates, PharmD, Mary Taylor, PharmD, CPP, CDCES, Peter Koval, PharmD, BCPS, CPP

**Practice Site**: Moses H. Cone Memorial Hospital, Greensboro, NC

**Background**: Atherosclerotic cardiovascular disease (ASCVD) is the leading cause of morbidity and mortality in diabetes. The American Diabetes Association recommends specific groups of patients receive statin therapy; a moderate-intensity statin is recommended in patients 40-75 years old without ASCVD, and a high-intensity statin or addition of ezetimibe to reduce LDL by ≥50% is recommended in patients at high ASCVD risk. The American Association of Clinical Endocrinology recommends a low-density lipoprotein cholesterol (LDL-C) goal <100 mg/dL in patients with diabetes.

**Objective**: To evaluate the impact of clinical pharmacist interventions on lipid treatment outcomes in patients with diabetes for primary prevention of ASCVD.

**Methods**: This was a single-center, prospective cohort, pre-post analysis. Patients 40-75 years old with diabetes with upcoming primary care provider (PCP) visits were identified via a daily report. Key exclusion criteria included ASCVD and pregnancy. Pharmacists recommended a lipid panel if results were not obtained in the previous 12 months. Updated lipid panels were used to optimize lipid-lowering therapy based on guideline recommendations and patient-specific factors. These recommendations were communicated to the patient’s PCP via message in the electronic medical record between January 1, 2021 and February 28, 2022. The primary outcome was the pre-post comparison of patients achieving an LDL-C goal <100 mg/dL, assessed via Chi square test.

**Results**: A total of 325 patients were included in the final analysis. The proportion of patients with an LDL-C that was current and at goal improved from a baseline of 39.6% to 48% (p=0.03). Patients on a moderate- or high-intensity statin improved from 84.3% to 88.3%, and those on statin plus ezetimibe therapy increased from 2.1% to 5.5%. Pharmacists sent 576 recommendations with a 42% acceptance rate.

**Conclusions**: Clinical pharmacist intervention significantly improved the proportion of patients with LDL-C that was both current and at goal in patients with diabetes and without ASCVD.