

Enhancing appropriate statin therapy in Type 2 Diabetic patients aged between 40-75 years at GME (Graduate Medical Education) Internal Medicine clinic.

Adriana Betancourth, MDA, Ans Albustamy, MDA, Ayesha Khan, MDA, Steffi Sathiyaraj MDA, Nghia Nguyen MDA, Martha Solis MDA, Rodolfo Garza MDA, Oscar Lopez MDA, Yilen K. Ng-Wong MDA, Hector Arredondo MDA, Andres Suarez MD.

Affiliations:

a UTRGV DHR Health, Internal Medicine Residency, Edinburg, TX

b UTRGV DHR Health Assistant Professor of Internal Medicine, Edinburg TX

Background: The prevalence of type 2 diabetes mellitus (T2DM) is significantly higher in Rio Grande Valley than the rest of the United States. T2DM patients have an elevated risk of Atherosclerotic cardiovascular disease (ASCVD), and clinical trials have demonstrated the beneficial effects of statin therapy on ASCVD. A quality-improvement project was implemented in the GME Internal Medicine (IM) Clinic at Doctors Hospital at Renaissance to improve statin therapy appropriateness.

Methods: T2DM patients aged 40-75 were selected from the GME IM Clinic visits from July 2021 to October 2021 for baseline data and from January 2022 to April 2022 after implementing our interventions, which included education of the new practice guidelines of statin therapy in T2DM to the internal medicine residents, as well as development of a clinical decision support tool designed to assess the indication and intensity of statin therapy. Exclusion criteria included patients without T2DM, ages above 75/below 40 years of age, and missing information for ASCVD risk stratification. Statin appropriateness was determined according to the American Diabetes Association standards in diabetes management.

Results: The number of patients in the four months after the exclusions pre-intervention and post-intervention were 153 and 207, respectively. Overall, 71.9% (n=110) of the patients pre-intervention were receiving an appropriate statin therapy; the number increased to 80% (n=166) post-intervention (p = 0.003), considered statistically significant using t-test analysis. Of the total patients (N=43) with inappropriate statin therapy, 37% (n=16) had inadequate dose, and 63% (n=27) were not receiving any statin in the pre-intervention cohort. This percentage of inadequate statin dose and no statin therapy decreased to 65% (n=27) and 35% (n=14), respectively post-intervention.

Conclusion: Appropriate statin therapy has been shown to reduce all-cause mortality by 19% in T2DM. Appropriateness of statin therapy was increased by 10%, and more than 50% reduction of patients without receiving any statin therapy, after our intervention. Effective implementation of new guidelines regarding risk stratification and prevention of ASCVD in T2DM age 40-75 years of age may be challenging. Barriers such as physicians' adoption and knowledge regarding new guidelines can be overcome with appropriate tools and education, such as those implemented in our project.