HMG-CoA reductase inhibitors, commonly known as statins, lower cholesterol levels, thereby preventing cardiovascular events among high-risk patients. There is some evidence in the literature indicating that statin therapy is associated with an increased risk of type 2 diabetes (OR: 1.09; 95% Confidence Interval [CI]: 1.02–1.17). In 2012, the Food and Drug Administration (FDA) issued labeling changes for this class of medications indicating that statins may potentially increase the risk of developing type 2 diabetes.

1. To investigate the impact of statin therapy on the risk of type 2 diabetes in elderly patients enrolled in Medicare; and
2. To evaluate whether this relationship is related to treatment intensity.

**METHODOLOGY**

**Data Source:** A cohort of Medicare beneficiaries in 2006 was identified using the following inclusion criteria:
- Age 65 years or older;
- No Medicare enrollment in any of the months in the study period;
- No claim for statin medications in 2006 (statin-naive);
- No diagnosis of type 2 diabetes (indicated by absence of ICD-9-CM diagnosis code 250.x0 or 250.x2) in 2006.

Of these, patients who developed type 2 diabetes (ICD-9-CM diagnosis code 250.x0 or 250.x2 along with at least one claim for an oral hypoglycemic agent within 90 days of the date of diagnosis) in 2007 or 2008 were identified as cases. The first date of their diabetes diagnosis was set as the index date. Patients who did not develop diabetes in this period were identified as controls.

Each case was matched with a control on age and gender; controls were assigned the index date of corresponding cases.

**RESULTS**

Conclusions and Implications

- Statin use is associated with a significant increase in the risk of type 2 diabetes in elderly Medicare beneficiaries.
- The risk of type 2 diabetes increases with an increase in the intensity of statin therapy.
- This study has significant implications for the management of millions of individuals receiving statin therapy worldwide.
- Prescribers should weigh the pros and cons before prescribing statins to elderly patients with borderline dyslipidemia.

**REFERENCES**

4. The authors have no actual or potential conflict of interest in relation to this educational activity or presentation.

This study was conducted as part of a project titled “Using Medicare/Medicaid Claims Data to Support Medication Outcomes and Pharmacoeconomics Research,” which was supported by grant award A300255672 from the Office of Research, Development and Information, CMS. The authors have no actual or potential conflict of interest in relation to this educational activity or presentation.