Factors Associated with Time to Discontinuation of Statin Therapy post Myocardial Infarction

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Objectives: There is considerable evidence in the literature of non-adherence to secondary prevention therapies post a hospitalization episode due to myocardial infarction (MI). The objective of this study was to observe the pattern of discontinuation of statin therapy among post (MI) patients enrolled in Part-D benefits of Medicare, and identify the factors associated with discontinuation.

Study Design: This is a retrospective cohort study utilizing the Medicare 5% national sample medical and pharmacy claims data for 2006-2007. Medicare Part-D beneficiaries hospitalized for an acute MI episode before July 2006 were identified using a validated algorithm, which requires a hospitalization episode of ≥3 days and ≤180 days with an ICD-9-CM of 410.x1 as principal or secondary diagnosis. Post-MI patients with a statin prescription within 90 days of discharge were then followed to study patterns of discontinuation till the end of the study period. Time to discontinuation of therapy was defined as the days from initiation of therapy to a gap of >90 days in therapy. Survival curves were modeled using the Kaplan-Meier technique, and potential predictors of therapy discontinuation, including demographic characteristics, comorbid conditions and concomitant medications were estimated using Cox proportional hazards regression.


Principal Findings: Of the 1,781 subjects that met our inclusion criteria, 33.44% were males and 83.66% were whites with a mean age of 77.75 (±7.85) years. Approximately, 16% of the patients discontinued therapy within 6 months and around 40% discontinued statin therapy within a year. The socio-demographic factors were not significantly associated with discontinuation of therapy. Amongst the comorbid conditions, patients with a diagnosis of dyslipidemia (HR=0.626; [0.492-0.797]; p=0.0001) were less likely to discontinue statin therapy and those with a co-diagnosis of congestive heart failure (CHF) were more likely to discontinue therapy (HR=1.236; [1.025-1.491]; p=0.0266).

Conclusion: The results suggest that many patients that initiate statin therapy post MI fail to consistently remain on treatment as is evident from the high rates of discontinuation. Although, sociodemographics factors like age, gender and race do not significantly predict time to discontinuation of therapy, CHF patients are significantly more likely to discontinue therapy.

Implications for Policy, Practice, or Delivery: Our finding of the extremely high rates of discontinuation of statin therapy within a year deserves greater attention. Medication therapy management programs that improve adherence to secondary prevention therapies post MI are required. The patients need to be made aware of the high risks of a recurrent MI in the event of treatment discontinuation. Further, patients diagnosed with CHF are more likely to discontinue therapy and therefore require better management. There are mixed views on the benefits of statins in the treatment of CHF, with research also linking lower serum cholesterol levels with poor prognosis in CHF. Thus, this subject deserves further exploration.