Impact Analysis of Statin Discontinuation on Healthcare Resource Utilization and Cost of Care in Patients with Atherosclerotic Cardiovascular Disease (ASCVD) in the US

Khatavkar V, Paul A, Kukreja I, Verma V, Nayyar A, Sachdev A, Markan R, Brooks L, Goyal R, Seligman M

Background & Objective

- Statins are prescribed as first-line therapy for patients with ASCVD and are effective in both the primary and secondary prevention of cardiovascular disease.
- Our objective is to evaluate the impact of statin discontinuation on costs and healthcare resource utilization (HCRU) in patients with ASCVD.
- Understanding these effects can help inform clinical decisions and optimize healthcare strategies for better patient outcomes.

Methodology

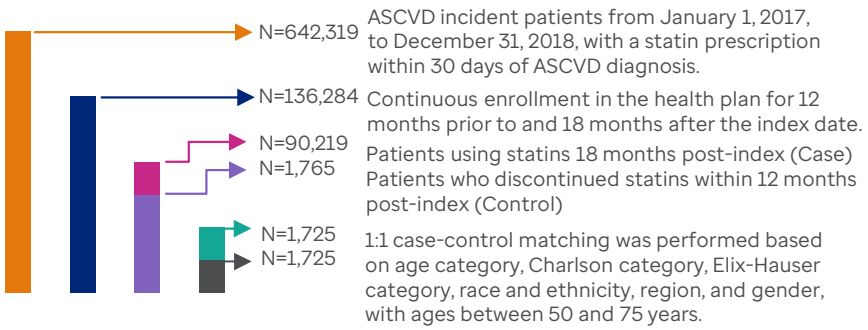


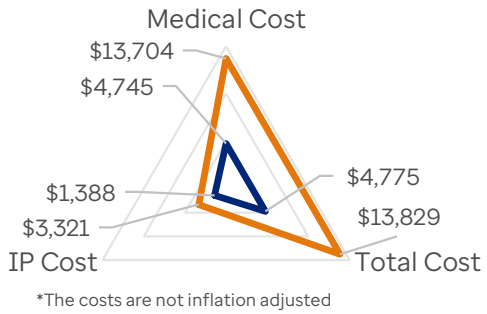
Figure 1. Patient Attrition

- Optum® de-identified Market Clarity Data was used for this study.
- Patients using statins for at least 12 months before their ASCVD diagnosis were included in the study.
- By considering these patients only, we allow for individuals in both continued and discontinued cohorts to have received statins for a considerable amount of time.
- An ASCVD-specific healthcare resource utilization (HCRU) analysis was performed on a final population of 3,450 patients (**Figure 1**).

Results

- A cost comparison (in USD) of medical costs, inpatient (IP) costs, and total costs was performed on a final population of 3,450 patients. There was a statistically significant cost difference between patients who were using statins 18 months post-index and those who discontinued statins 12 months post-index (**Figure 2**).
- Average IP counts were also significantly less for patients continuing statin use post 18 months (**Figure 3**).

Figure 2. Healthcare cost comparison between cohorts



*The costs are not inflation adjusted

Figure 3. Average inpatient visits per patient per month between cohorts

Conclusions

- Discontinuation of statin therapy within 12 months post-index was associated with statistically significant increases in medical, procedure, and medication costs compared to those who continued statin use for 18 months post-index.
- These findings highlight the critical role of sustained statin therapy in managing ASCVD and controlling healthcare expenditures.
- A limitation of this study is the reliance on administrative claims data, which may lack detailed clinical information and accurately capture medication adherence.

References: Chi, C. L., Wang, J., Yew, P. Y., Lenskaia, T., Loth, M., Pradhan, P. M., ... & Adam, T. J. (2022). Producing personalized statin treatment plans to optimize clinical outcomes using big data and machine learning. *Journal of biomedical informatics*, *128*, 10402

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