Trends in Statin and Ezetimibe Utilization Among U.S. Adults With Hyperlipidemia: A National MEPS Analysis, 2018–2023

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BACKGROUND & SIGNIFICANCE

- Hyperlipidemia affects roughly 94 million U.S. adults and remains the principal modifiable driver of atherosclerotic cardiovascular disease.
- Statins are first-line therapy under 2018 ACC/AHA guidance, with ezetimibe and combination regimens reserved for high-risk or statin-intolerant patients.
- Despite clear guideline direction, real-world prescribing varies meaningfully by drug intensity, payer mix, and patient demographics.
- Most national utilization studies pre-date 2018, leaving a gap in evidence on how lipid-lowering practice has evolved through and after the COVID-19 disruption.
- Updated MEPS estimates are needed to inform policy, payer, and clinical decisions in current real-world use.

OBJECTIVE

Primary Objective
- To evaluate national trends in statin and ezetimibe utilization among U.S. adults with hyperlipidemia from 2018 to 2023.

Secondary Objectives
- To assess concurrent changes in cardiovascular comorbidity burden and the Charlson Comorbidity Index (CCI).
- To describe sociodemographic and insurance-related patterns in lipid-lowering therapy use across the study period.

Hypothesis
- Use of high-intensity statins and combination therapy increased between 2018 and 2023, with parallel reductions in cardiovascular comorbidity burden.

METHODS

Methods
- **Design:** Retrospective repeated cross-sectional analysis
- **Data:** MEPS 2018–2023 (FYC, PMED, MC linked via DUPERSID)
- **Population:** Adults ≥18 with hyperlipidemia (ICD-10 E78) using statins/ezetimibe
- **Sample:** 25,407 unweighted (~282.5M weighted U.S. adults)

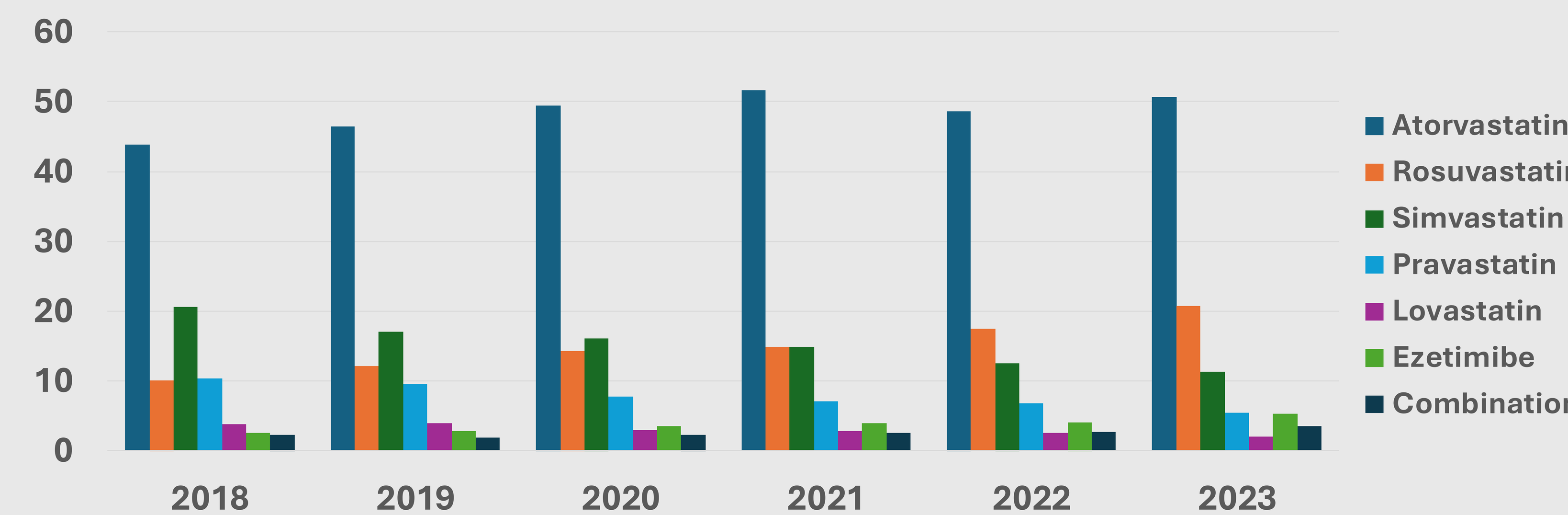
Outcomes
- Statin utilization (atorvastatin, rosuvastatin, simvastatin, pravastatin, lovastatin)
- Ezetimibe and combination therapy use
- High-intensity statin adoption
- Cardiovascular comorbidities (MI, CHF, diabetes, renal disease) and CCI

Analysis
- Survey-weighted estimates (Stata 19, svy)
- Trend analysis (2018–2023)
- Group comparisons by race/ethnicity, income, insurance
- Significance: $p < 0.05$

RESULTS

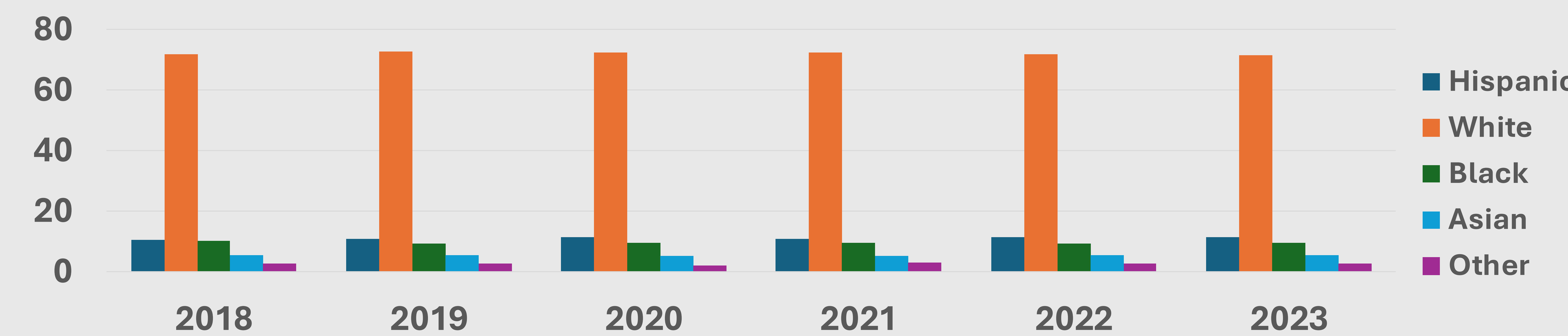
- Atorvastatin remained the most utilized statin, increasing from 44% to 51% ($p < 0.001$).
- Rosuvastatin use more than doubled from 10% to 21%, reflecting expanded high-intensity therapy adoption ($p < 0.001$).
- Utilization of older statins (e.g., simvastatin 21% → 11%, pravastatin 10% → 5%) declined steadily.
- Ezetimibe use increased modestly (3% → 5%) but remained comparatively low.
- Combination therapy doubled from 2% to 4% across the study period.

Trends in Utilization of LLT Among U.S. Adults With Hyperlipidemia (%)

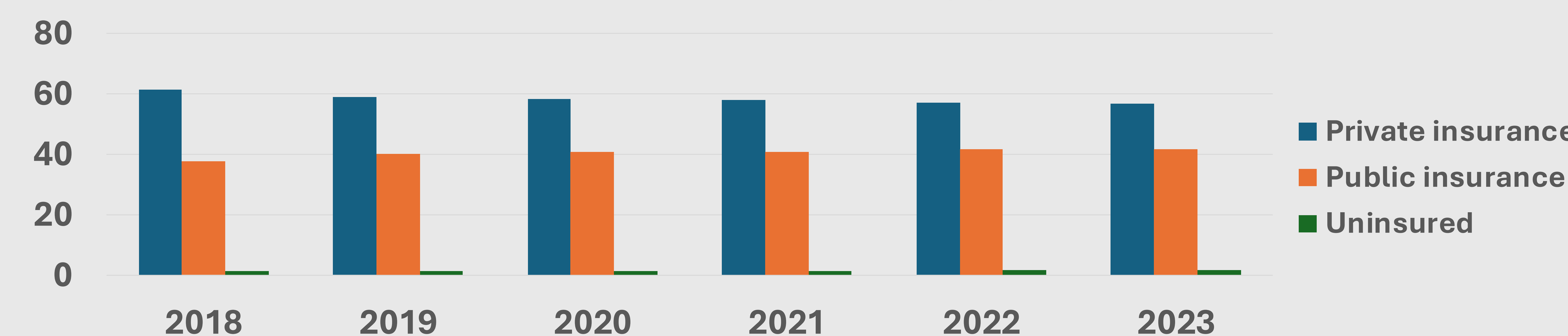


- Black and Hispanic adults were less likely to receive lipid-lowering therapy compared to White adults.
- Low-income individuals demonstrated lower uptake of lipid-lowering therapy .
- Uninsured adults had the lowest overall lipid-lowering therapy utilization rates.
- Disparities persisted consistently across study years.

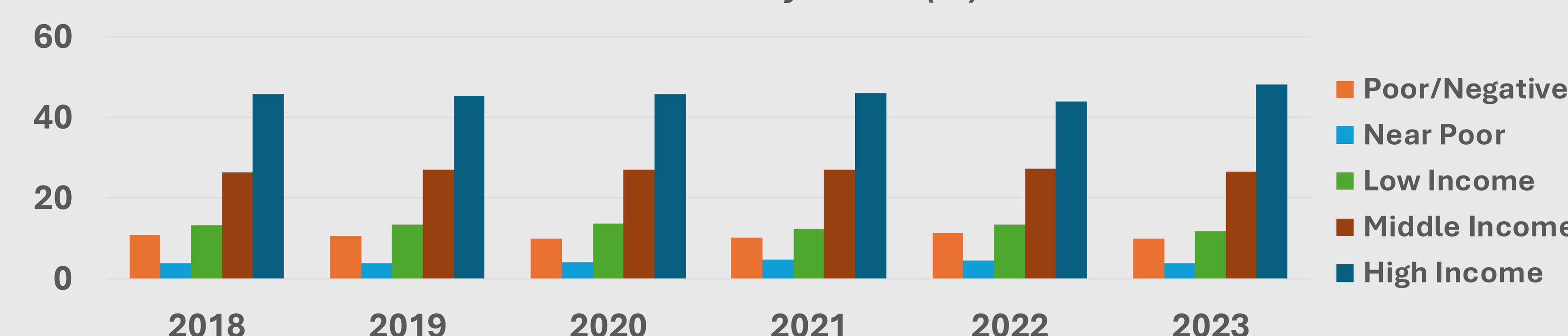
A. Race/Ethnicity (%)



B. Insurance Status (%)

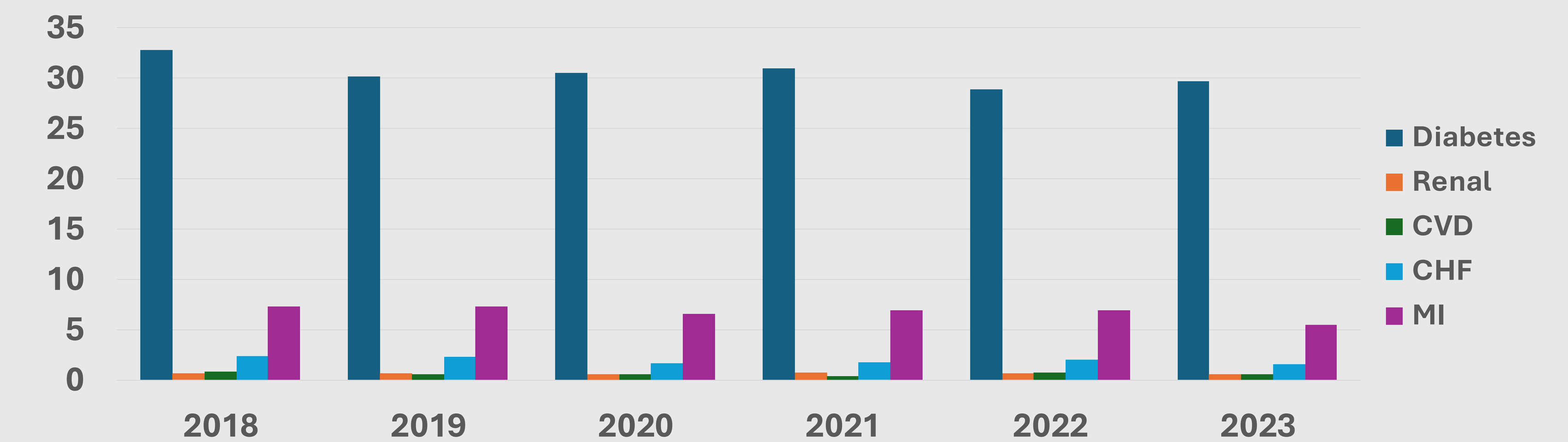


C. Poverty Status (%)

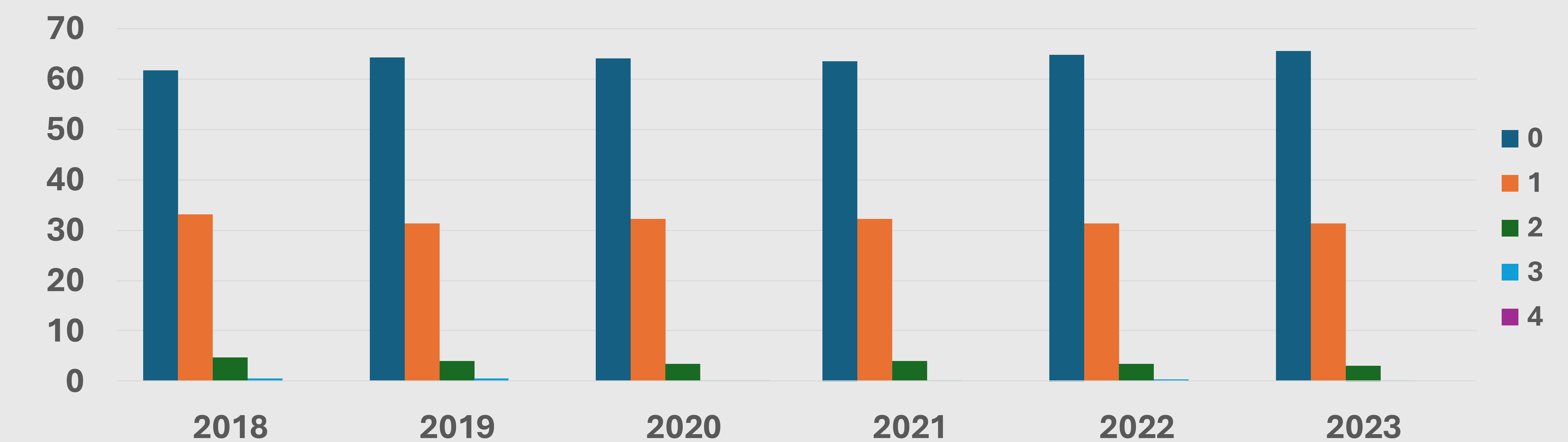


- Myocardial infarction declined from 7.30% to 5.50% ($p = 0.033$).
- Congestive heart failure declined from 2.42% to 1.58% ($p = 0.045$).
- Diabetes prevalence declined from 32.8% to 29.7% ($p = 0.019$).
- Charlson Comorbidity Index improved overall ($p = 0.008$); CCI = 0 group expanded from 61.7% to 65.5%, while CCI = 2 contracted from 5.2% to 3.3%.

Medical conditions (%)



Comorbidity score (%)



CONCLUSIONS

- U.S. lipid-lowering therapy has shifted decisively toward high-intensity statins between 2018 and 2023, led by atorvastatin and rosuvastatin.
- Modest but meaningful growth in ezetimibe and combination therapy reflects expanding use of adjunctive non-statin options.
- Treatment intensification was paralleled by significant declines in MI, CHF, and overall comorbidity burden.
- Findings reinforce that real-world utilization is increasingly aligned with current cardiovascular prevention guidelines.
- Continued surveillance is warranted to monitor equitable access as payer composition evolves.

Future Directions
- Subsequent analyses should examine medication adherence, persistence, and treatment intensification patterns at the patient level to complement these aggregate utilization trends.
- Cost-effectiveness and budget-impact evaluations of the observed shift toward high-intensity and combination therapy will help quantify return on investment for payers and policymakers.
- Future work should also evaluate the integration of newer non-statin agents — including PCSK9 inhibitors, inclisiran, and bempedoic acid — into real-world treatment pathways for high-risk and statin-intolerant patients.

Between 2018 and 2023, U.S. lipid-lowering therapy shifted toward high-intensity statins and combination regimens, paralleled by measurable improvements in cardiovascular comorbidity burden — evidence that guideline-aligned prescribing is delivering real-world impact.