## Socioeconomic and Demographic Drivers of Ambulatory Surgery Usage **HCUP National Ambulatory Surgery Sample - 2020**

Scalable, Multi-Platform, Open-access, Reproducible Data Pipeline 7.8 million patients, 2899 hospitals, 35 states, 1 nation

Odds Ratio (log scale)

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LLMs Utilized: Claude Sonnet 4 | Opus 4.1; ChatGPT 40, 04, 5, 5-mini; Deepseek 3.1; Gemini 2.5 Pro; Grok 5





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Interactive Analysis: github.com/SeenaKhosravi/NASS | Data: HCUP NASS 2020 | Methods: Python + R + Machine Learning | Open in Colab via QR code

Relative Importance (%) ML Algorithm Random Forest LASSO Regression XGBoost