

Driving Factors of Medicaid Drug Reimbursement

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Agenda

- Medicaid Background and Prescription Reimbursement Trends
- Project Overview
- Driving Factors
- Recommendations
- Areas for Improvement
- Conclusion



Medicaid Background and Prescription Reimbursement Trends

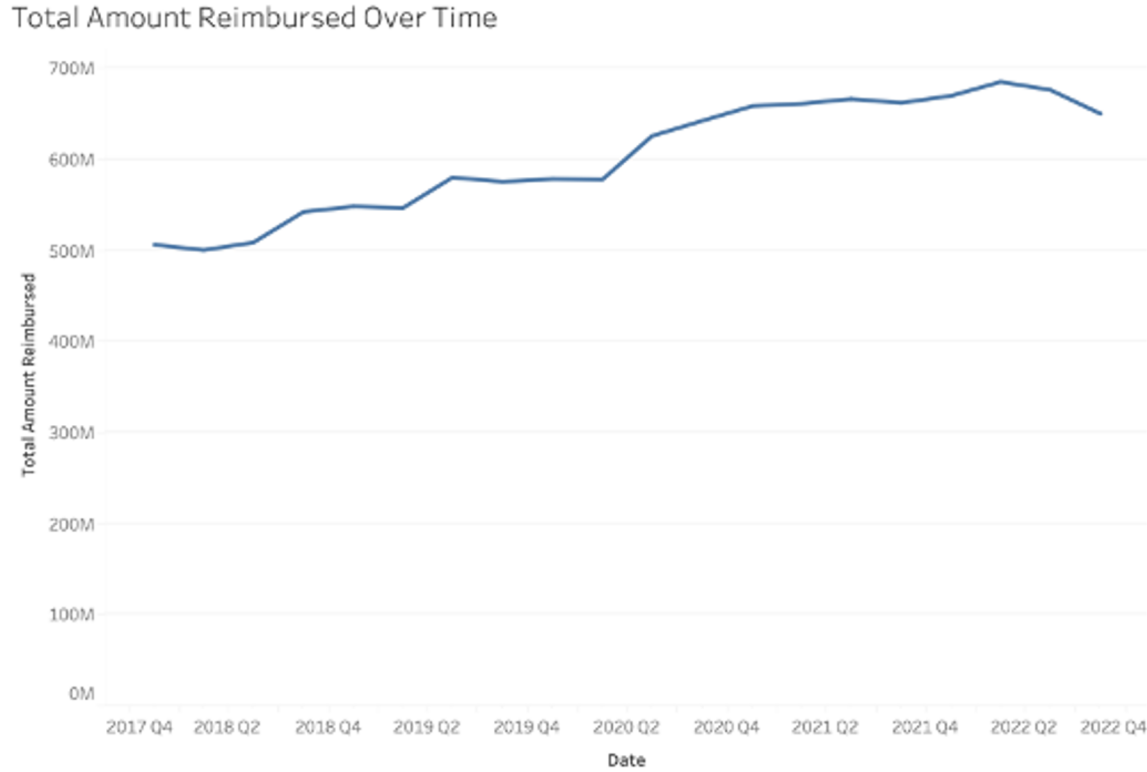


Medicaid Prescription Drugs

- Federally funded program managed by states
 - Eligibility based on income and assets
 - Federal government reimburses states
-
- Medicaid drug spending increased 47% from 2017 to 2022 (Smith, 2023).
 - Increase from 6% to 9% of total Medicaid spending between 2010 and 2015 (Dranove et al., 2021).



Total Amount Reimbursed Over Time



What is contributing to this increase?

- Identifying what is driving Medicaid drug reimbursement is crucial for identifying areas for cost reduction
- Potential factors:
 - Number of Medicaid beneficiaries
 - Number of prescriptions filled
 - Economic factors
 - Prescription drug related factors



Project Overview



Data Sources

- State Drug Utilization Datasets for years 2018–2022 (Center for Medicaid and Medicare Services, 2023).
- National Drug Code Directory (U.S. Food and Drug Administration, 2023)
- National Average Drug Acquisition Cost (Center for Medicaid and Medicare Services, 2024).
- Bureau of Labor Statistics Data Viewer (Bureau of Labor Statistics, 2024)
- Small Area Income Program Income and Poverty Estimates Program (United States Census Bureau, 2021).



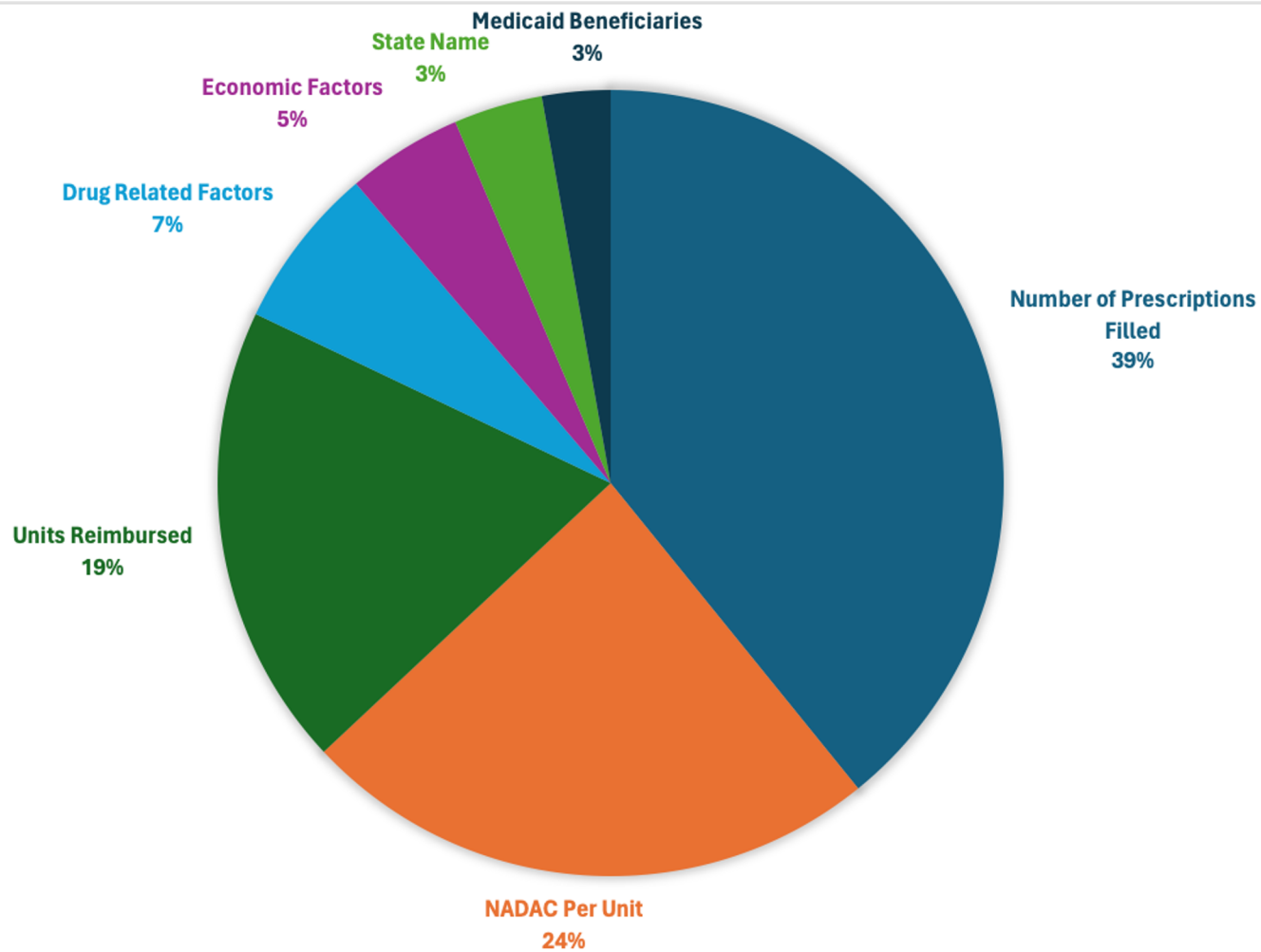
Methodology

- Dataset cleaned to removed any values that may impact model building
- Time-related variables evaluated for trends
- Statistical models built to assess influence of features
- Evaluated on
 - Accuracy
 - Mean squared error
 - Feature importance



Driving Factors

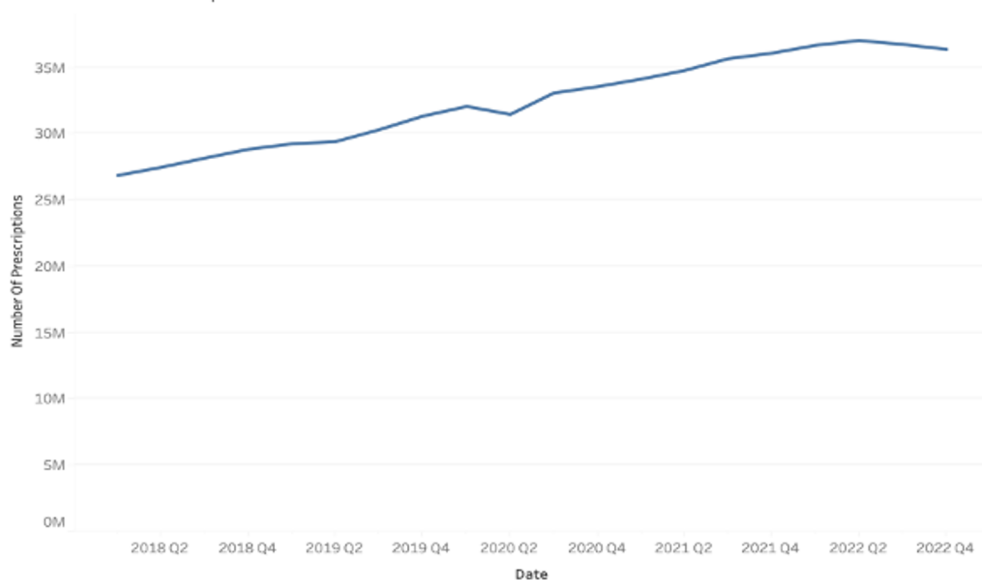




Number of Prescriptions Filled

- 39%
- Direct relationship with total amount of Medicaid drugs reimbursed
- Rises over time
- Indicative of the impact of high use drugs on cost

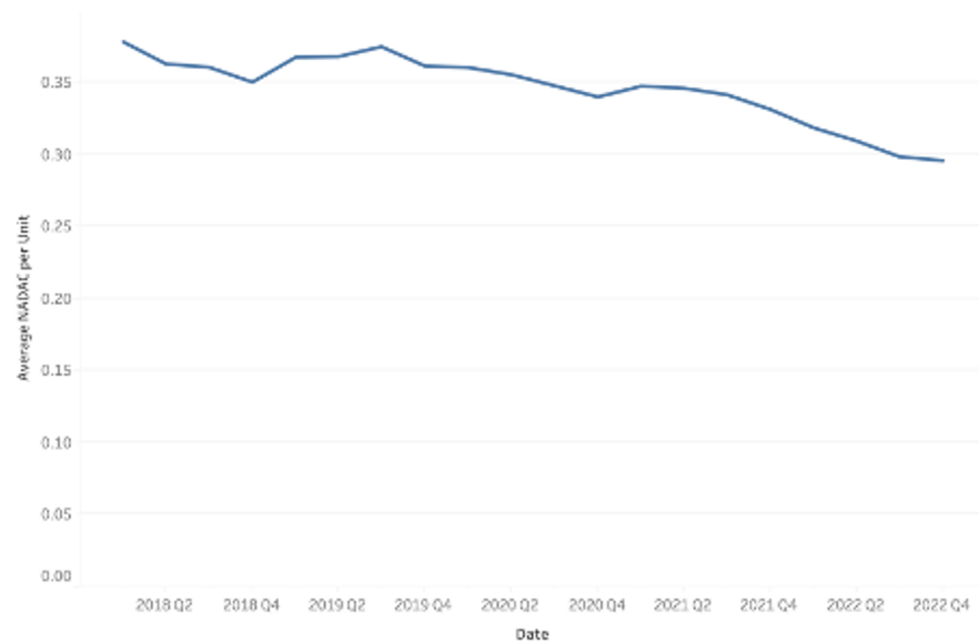
Number of Prescriptions Over Time



National Average Drug Acquisition Cost (NADAC) per Unit

- 24%
- Indirect relationship with total amount reimbursed
- Average cost of drugs has been decreasing over time

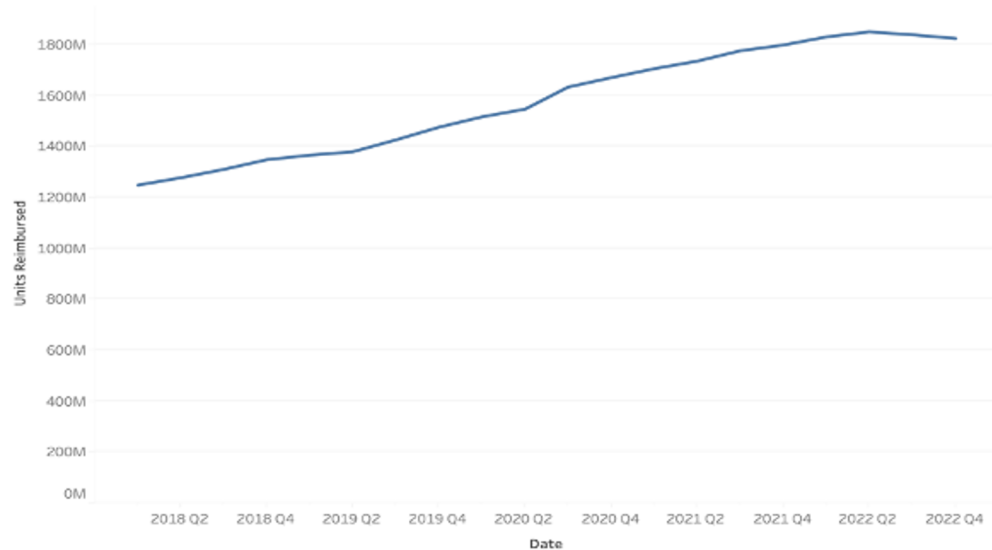
Average NADAC Over Time



Units Reimbursed

- 19%
- Provides context around high use drugs
- Not all prescriptions filled are reimbursed
- Increasing over time

Units Reimbursed Over Time



Drug Related Features

NDC Package Code
Proprietary Name
Dosage Forms

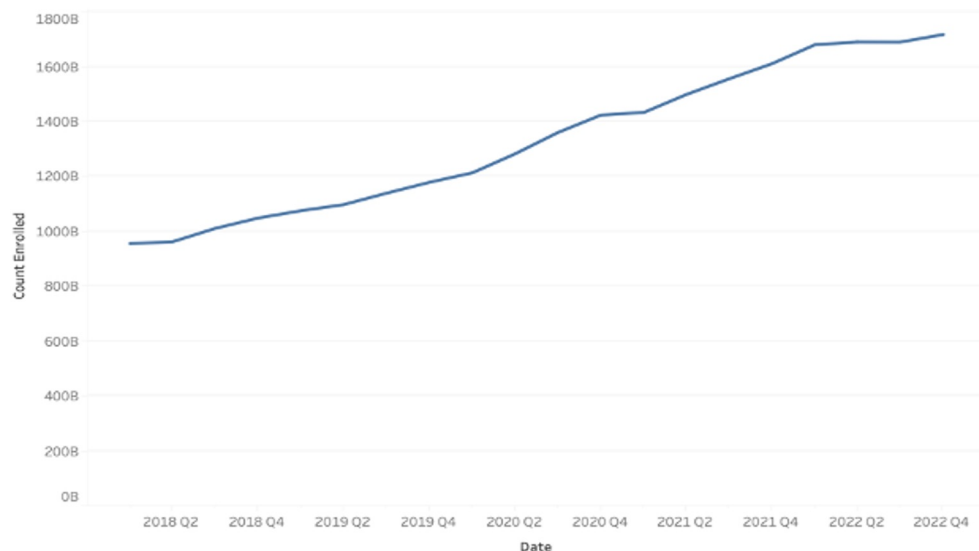
- 7%
- Drug related features not as important as hypothesized but still have a role
- NDC Package Code represents information about:
 - Drugs composition
 - Manufacturer
 - Package Size
- Proprietary name is the brand name
- Dosage form is how the drug is taken
 - Tablet
 - Capsule
 - Powder
 - Injection



State and Medicaid Beneficiaries

- 6%
- Medicaid program can vary between states
 - States determine eligibility
 - Can set their own rates
- Medicaid beneficiaries increasing over time
 - More beneficiaries, more prescriptions to fill and reimburse

Medicaid Beneficiary Months Over Time



Economic Factors

Gross domestic product in billions (national)

Consumer price index (national)

Unemployment rate (state)

Poverty percent (state)

Median household income (state)

- 5%
- Minimal impact on reimbursement rates
- Possible not enough years worth of data is included to see valuable trends.



Recommendations



Recommendations

- Reduce number of prescriptions filled
 - Incentivize providers to promote lifestyle change before medication and address to diseases before they become chronic
- Drive down number of Medicaid beneficiaries
- Negotiate drug prices to reduce price per unit of Medicaid drugs
- Care should be taken to ensure people are still getting the medications they need



Areas for Improvement



Areas for Improvement

- Flagging for use of common and/or chronic diseases
 - Requires pharmacist input
- Identifying chronic disease prevalence among the Medicaid population
- Improved data submission by the states will lead to more complete data



Conclusion

- Top driving factors of Medicaid drug cost are:
 - Number of units filled
 - NADAC per unit
 - Units reimbursed
- Looking at ways to drive down utilization and cost will reduce spending per beneficiary
- Future assessments should explore chronic disease and characteristics of the Medicaid population



Thank you!

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