

Medicaid Drug Spending Dashboard

Methodology

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Background

The Medicaid Drug Spending Dashboard is an interactive, web-based tool that presents spending information for Medicaid drugs - drugs paid through the Medicaid program. The Dashboard focuses on average spending per dosage unit and change in average spending per dosage unit over time. The tool also displays spending information for manufacturer(s) of the drugs as well as consumer-friendly information of drug uses and clinical indications.

Medicaid drug data represent national-level drug utilization data for covered outpatient drugs paid for by State Medicaid agencies.¹ These data include state and national-level reports listing the number of prescription fills and amounts paid by states by National Drug Code (NDC). Data were summarized by drug by linking NDCs to a commercially available database and aggregated to the drug brand name and generic name.

The following Medicaid drugs were excluded: over-the-counter drugs in the Medicaid State Drug Utilization data as well as NDCs with fewer than 50 claims in the current (2017) or previous year (2016). In addition, NDCs with large variations in reported units from year to year were reviewed on a case-by-case basis and data anomalies were excluded. Since 5-year trend information is presented, any drug information in years prior to 2016 with fewer than 11 claims have been redacted.

Drug Metrics

Drug spending metrics for Medicaid drugs represent the total amount reimbursed by both Medicaid and non-Medicaid entities to pharmacies for the drug.² Medicaid drug spending contains both the Federal and State Reimbursement and is inclusive of any applicable dispensing fees. In addition, this total is not reduced or affected by Medicaid rebates paid to the states. Individual beneficiary user counts are not available in these datasets, thus “per beneficiary” calculations are not possible.

The Medicaid Drug Spending Dashboard focuses on average spending per dosage unit and change in average spending per dosage unit over time. Units refer to the drug unit in the lowest dispensable amount. Multiple dosage units may exist for a particular drug, since different medical conditions can warrant different routes of administration.

¹ The Medicaid drug spending dashboard is based on non-public data, but the public Medicaid State Drug Utilization data are available at <https://www.medicaid.gov/medicaid/prescription-drugs/state-drug-utilization-data/index.html>

² Medicaid drug spending is based on the “Total Amount Reimbursed” field in the publicly available data.

Since drugs are available in multiple strengths and dosage forms, the average spending per dosage unit at the brand name and generic name level is weighted to account for variation in claims volume for specific brand name, generic name, strength, dosage form, routes of administration, and manufacturer levels. The overall brand name/generic name claim weighted spending per unit is calculated by first summarizing each drug to specific strength, form, route of administration, and manufacture levels. For each unique level, spending is divided by the number of units and multiplied by its proportion of total claims, so that claims volume becomes the weight. The claim-weighted average spending per dosage unit at the overall brand name/generic name level is then calculated by summarizing across the strength, form, route, and manufacturer levels. A similar approach was used to calculate average spending per unit for specific manufacturers³.

The following example demonstrates how the various forms, strengths and routes were aggregated and a weighted average cost per unit calculated for a sample drug. The intravenous route of the drug is ~\$90 per unit whereas the subcutaneous route of the drug is \$333 per unit. The final weighted average cost per unit for the sample drug is \$290.

Calculating Weighted Average Cost Per Unit

Form	Strength	Route	Claim Count	Unit Count	Total Drug Cost	Cost Per Unit	Weighted Cost Per Unit
VIAL (ML)	80 MG/4 ML	INTRAVENOUS	1,300	14,000	\$1,250,000	\$89.29	\$116,071
VIAL (ML)	200MG/10ML	INTRAVENOUS	1,000	15,000	\$1,350,000	\$90.00	\$90,000
VIAL (ML)	400MG/20ML	INTRAVENOUS	2,000	60,000	\$5,500,000	\$91.67	\$183,333
SYRINGE (ML)	162 MG/0.9	SUBCUTANEOUS	20,000	60,000	\$20,000,000	\$333.33	\$6,666,667
Overall			24,300	149,000	\$28,100,000		\$7,056,071
Final Drug Weighted Average Cost Per Unit							\$290.37

- Calculate the cost per unit for each form, strength, route by dividing total drug cost by unit count.
- Calculate a weighted cost per unit for each form, strength, route by multiplying the number of claims by the cost per unit to account for the variation in claim count.
- Summarize form, strength, route level data to arrive at overall drug level totals.
- Calculate the final weighted average cost per unit by dividing summarized weighted cost per unit by summarized claim count.

Drug Metric Definitions

- Average Spending per Dosage Unit: Medicaid drug spending divided by the number of dosage units, which is weighted by the proportion of total claims.
- Change in Average Spending per Dosage Unit: the percent change in spending per dosage unit from the prior year.

³ Although states are required to report NDC-level data to CMS using the “Unit Type” specified in drug products data file (available at <https://www.medicaid.gov/medicaid/prescription-drugs/medicaid-drug-rebateprogram/data/index.html>), there are some instances where multiple unit types (e.g., “Milliliter” and “EACH”) are reported for the same NDC. This may affect unit cost calculations.

- Annual Growth Rate in Average Spending per Dosage Unit: the constant average change in spending per dosage unit over the most recent five years of data availability, calculated using the compound annual growth rate (CAGR).
- Total Spending: aggregate drug spending for the Medicaid program during the benefit year.

Additional drug metrics, with their definitions, are available in the data tables that are available for [download](#).

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