2015 Medicare Drug Spending Dashboard
Methodology
October 20, 2016

Background

The 2015 Medicare Drug Spending Dashboard is an online interactive tool that presents drug spending and utilization information on certain Medicare Part B drugs (drugs administered in doctors' offices and other outpatient settings) and Medicare Part D drugs (drugs patients generally administer themselves). To create this dashboard, CMS identified 80 drugs using 2015 data that met the criteria described below: 40 drugs provided through the Medicare Prescription Drug Program under Part D and 40 drugs administered by physicians and other professionals in the Medicare fee-for-service program under Part B. Products have been selected from each respective program area based on the following criteria:

1) 15 drugs with high total program spending;
2) 15 drugs with high annual per user spending (≥$10,000) and high total program spending;
3) 10 drugs with high unit cost increases.

For all drugs included in the tool, CMS displays relevant spending, utilization, and trend data and also includes consumer-friendly information on the product descriptions, manufacturer(s), and clinical indications. To evaluate individual yearly change trends, the percent change from prior year was calculated.

Drug Selection Criteria

High total program spending

Total spending reflects the aggregate drug spending for the Part B or Part D programs. The initial inclusion criterion required the drug to be utilized by at least 1,000 beneficiaries. Next, the drugs were sorted by total spending from highest to lowest and the top 15 Part B drugs and top 15 Part D drugs were selected.

High annual spending per user

Total annual spending per user reflects total Part B or Part D drug spending divided by the number of unique beneficiaries utilizing the drug during the benefit year. The initial selection criterion required the drug to be utilized by at least 1,000 beneficiaries. Next, all drugs with total annual spending per user of at least $10,000 were identified and then sorted by total program spending from highest to lowest. The top 15 Part B drugs and top 15 Part D drugs were selected.

Drugs already selected based on "high total program spending" were not eligible to be considered for selection by these criteria.

Annual Change in Average Cost per Unit

For Part B drugs, the annual change in average cost per unit reflects the percent change in average cost per unit from the prior year. The average cost per unit is calculated for each year at the HCPCS level by dividing the total payment by total units and then a percentage change in unit costs between the two years is calculated.

For Part D drugs, the annual change in average cost per unit reflects the weighted percent change in average cost per unit from the prior year. Since drugs are available in multiple strengths and dosage forms, the percentage change in unit cost was first calculated at the brand name, generic name, strength, dosage form, and route of administration level, and then a weighted average at the brand name and generic name level was calculated for these percent changes using the total number of claims as a weight. Note, manually calculating the percent change in unit cost using the overall "Average Cost per Unit" variables from each year may result in a difference between the weighted average percent change in unit cost since it does not account for differing strengths and dosage forms.

Although many drugs have cost increases, the focus was on identifying increases which had the largest impact to the Medicare program. Thus, the net effect of the cost increase on the contribution to total spending was determined by calculating what the total spending would have been at the prior year's unit cost and then subtracting this from the actual total spending. This reflects the amount that would have been saved if the cost did not increase. For Part B drugs, eligible drugs for unit cost increases were based on the following criteria: a net effect of the cost increase on total spending of at least $1 million ($80^{th}$ percentile of increases); a percent change in the average cost per unit of at least 10%; a percent change in average yearly Medicare Average Sales Price (ASP) of at least 10%; and the drug utilized by at least 5,000 beneficiaries. For Part D drugs, we selected eligible drugs for unit cost increases based on the following criteria: a net effect of the cost increase on total spending of at least $26 million ($95^{th}$ percentile of increases), and the drug utilized by at least 1,000 beneficiaries.

Finally, the drugs were sorted by percent unit cost increase from highest to lowest and the top 10 Part B drugs and top 10 Part D drugs were selected. Drugs that already had been selected based on "high total spending" or "high total annual spending per user" were not eligible to be considered for selection by these criteria.

Part B Drug Data

Medicare Part B claims (e.g. physician and other suppliers, durable medical equipment and other supplies, hospital outpatient data) contain information on drugs administered and billed directly by providers. Analyses of Part B drugs are possible for all Part B fee-for-service Medicare beneficiaries, but exclude any beneficiaries in the Medicare Advantage program (~30%). Drug spending metrics for Part B drugs are based on total spending, which is derived from summing the three revenue center payment fields on the claim referring to Medicare payment, deductible, and coinsurance. This represents the full value of the product, including the Medicare payment and beneficiary liability.

Part B claims were summarized by Healthcare Common Procedure Coding System (HCPCS) codes and limited to HCPCS codes listed in in the publicly available Medicare Average Sales Price (ASP) quarterly files at any point in the prior 5 years. In addition to the HCPCS listed in the ASP drug lists, oral anti-cancer drugs identified by HCPCS beginning with 'WW' were included.

Part B claims that were excluded were those with drugs billed using "Not Otherwise Classified" (NOC) codes (e.g. J3490, J3590, or J9999), since identification of NOC drugs are not specified on the claim, and Part B claims where Medicare was not the primary payer. Additional exclusion criteria applied to Part B institutional claims were to exclude claims submitted by critical access hospitals (CAHs) and Maryland hospitals as well as claims with total spending amounts of zero associated with the drug, which is due to bundling in Ambulatory Payment Classification groups.

Claims data were averaged across any applicable modifiers or place of service indicators associated with a single HCPCS. Drugs with multiple strengths (e.g. 20mg, 40mg, 80mg) were not combined when individual HCPCS codes exist for different strengths (e.g., methylprednisolone has different HCPCS codes for 20mg, 40mg, and 80mg).

Part D Drug Data

Part D drug information is available from the Part D Prescription Drug Event (PDE) data and are available for a subset (~70%) of Medicare beneficiaries. For Part D drugs, spending is based on the gross drug cost, which represents total spending for the prescription claim, including Medicare, plan, and beneficiary payments.

PDE records were summarized by drug by linking National Drug Codes (NDCs), which are available in the PDE data, to the First Databank MedKnowledge™ and aggregating by brand name and generic name. Data were aggregated across all strengths, dosage forms, and routes of administration, except as described in the unit cost change methodology above. Any over-the-counter drugs in the PDE data were excluded from the analysis. Data from all Part D organization and plan types were included in the analysis.

CMS is prohibited from publicly disclosing drug-specific information on manufacturer rebates, thus the data used to select Part D drugs do not reflect any manufacturers' rebates or other price concessions. However, including rebate information in the drug selection process did not substantially change the composition of the drugs selected. High-level rebate summary information for the drugs selected for the dashboard is available for CY2014 data and will be released for CY2015 when available.

Drug Metrics

- Total Spending: aggregate drug spending for the Part B or Part D programs.
- Beneficiary Count: number of Medicare Part B fee-for-service or Medicare Part D beneficiaries utilizing the drug.
- Total Annual Spending per User: total Part B or Part D drug costs divided by the number of unique beneficiaries utilizing the drug during the benefit year.
- Average Annual Beneficiary Cost Share: the average amount that beneficiaries using the drug paid out of pocket during the year; for Part D drugs shown on the main dashboard page, the beneficiary cost share refers to Part D beneficiaries without a Low Income subsidy (LIS), a program available under the Part D program to provide extra help to pay for prescription drug costs. Information on average beneficiary cost sharing for Part D LIS beneficiaries is available in the detailed drug pop up window.
- Annual Change in Average Cost per Unit: calculated as the percent change in average cost per unit (see detailed methodology above for additional details).
- Claim Count: number of Medicare Part B or Part D claims. Includes original prescriptions and refills.
- Unit Count: the dosage units of medication dispensed across the calendar year (e.g. number of tablets, grams, milliliters or other units).
- Average Cost per Unit: total Part B or Part D drug spending divided by the number of dosage units. For drugs with multiple strengths, dosage forms and routes of administration, this is a claim-weighted average unit cost.
- Beneficiary Count, No LIS: number of Medicare Part D beneficiaries utilizing the drug who do not qualify for a Low Income Subsidy (LIS),), a program available under the Part D program to provide extra help to pay for prescription drug costs.
- Beneficiary Count, LIS: number of Medicare Part D beneficiaries utilizing the drug who qualify for a Low Income Subsidy (LIS), a program available under the Part D program to provide extra help to pay for prescription drug costs.
- Beneficiary Cost Share: the total dollar amount that beneficiaries using the drug paid that was not reimbursed by a third party.
- Average Beneficiary Cost Share, No LIS: for Part D drugs, the average amount that beneficiaries without a Low Income subsidy (LIS) using the drug paid out of pocket during the year; LIS is a program available under the Part D program to provide extra help to pay for prescription drugs.
- Average Beneficiary Cost Share, LIS: for Part D drugs, the average amount that beneficiaries with a Low Income subsidy (LIS) using the drug paid out of pocket during the year; LIS is a program available under the Part D program to provide extra help to pay for prescription drug costs.
- Overall Average Beneficiary Cost Share: the average amount that all beneficiaries using the drug paid out of pocket during the year. Shown for Part B drugs only.