Guide to Using Outpatient Antibiotic Prescription Data for Peer Comparison Audit & Feedback

DATA FOR ACTION

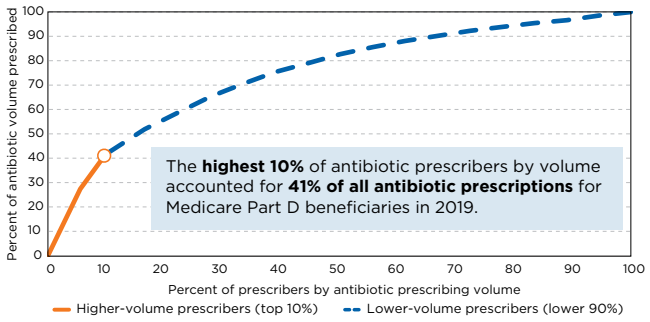
Audit and feedback for clinicians on individual antibiotic prescribing practices, especially when including comparison with peers, has been shown to be effective at improving antibiotic prescribing.[1,2]

Centers for Medicare & Medicaid Services (CMS) provides publicly available Part D prescription data files with counts of drug claims aggregated at different levels. The Prescribers by Provider data file can be used by public health organizations and health systems to assess antibiotic prescribing among adults ≥65 years of age and identify prescribers for peer comparison audit and feedback interventions.[2,3,4]

CMS PART D PRESCRIBER FILES*	DATA ELEMENTS
NATIONAL, BY GEOGRAPHY AND DRUG	antibiotic class and agent
STATE, BY GEOGRAPHY AND DRUG	antibiotic class and agent, state and geographic region[5]
BY PROVIDER	antibiotic total count, prescriber characteristics (National Provider Identifier, specialty, ZIP code)
BY PROVIDER AND DRUG	antibiotic class and agent, prescriber characteristics

**Limitations: Counts of drug claims <11 are suppressed in the CMS Part D Prescriber Public Use Files, which has a larger impact at the prescriber level compared to the national level. Indication is not available; therefore, appropriateness cannot be assessed.*

Cumulative percent of antibiotic volume in CMS Part D Prescribers by Provider dataset, 2019



Guide to Analyzing CMS Part D Prescriber Data

1. Prepare the Dataset

Click View Data to view the Medicare Part D Prescribers - by Provider dataset. Download the dataset as a CSV file.

Tip: Apply filters and manage columns in the dataset to reduce the file size. Consider using database or statistical software due to the large size of the data file.

2. Define the Prescriber Population

Identify antibiotic prescribers by geographic region, provider specialty, or minimum number of antibiotic prescriptions. Reference the Part D Prescriber Public Use Files Methodology and Data Dictionary.

Tip: The analysis may be limited to providers located within a specific jurisdiction, using variables such as "*Prscrbr_City*" or "*Prscrbr_State_Abrvtn*".

3. Identify the Higher-Volume Antibiotic Prescribers

Calculate the antibiotic volume of the top 10% of prescribers by using "*antbtc_tot_clms*" (total number of prescriptions filled by beneficiaries and attributed to the prescriber). Drugs included in the antibiotic category can be reviewed in the Medicare Part D Specific Drug Lists.

Tip: Data analysis may be conducted using the PROC UNIVARIATE function in SAS, PERCENTILE function in Excel, or QUANTILE function in R.

4. Implement the Peer Comparison Audit and Feedback Stewardship Intervention

Focus interventions on higher-volume prescribers identified in the dataset.

Tip: Visit CDC's Implementation Resources for Outpatient Facilities for additional resources, including a sample prescriber letter.

References:

1. King LM, Fleming-Dutra KE, Hicks LA. BMJ 2018;363.
2. Schwartz KL, Ivers N, Langford BJ, et al. JAMA Intern Med 2021;181.
3. Gouin KA, Fleming-Dutra KE, Tsay S, et al. MMWR Morb Mortal Wkly Rep. 2022;71(6).
4. Staub MB, Ouedraogo Y, Evans CD, et al. Infect Control Hosp Epidemiol 2020;41.
5. Arizpe A, Reveles KR, Aitken SL. BMC Infect Dis. 2016;16(1).

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