

## Supplemental Online Content

Socal MP, Wang Y, Plummer E, Anderson GF, Bai G. Spending on Dual Over-The-Counter and Prescription Drugs in the Medicare Part D Program. *JAMA*. Published online December 14, 2023. doi:10.1001/jama.2023.23126

### eMethods

This supplemental material has been provided by the authors to give readers additional information about their work.

# Supplemental Methods

## Medicare Drugs and Prices

Drugs were defined as a combination of active ingredient, dosage form, and strength. Therefore, branded and generic products of multisource drugs were considered the same drug. The number of claims, number of units dispensed, and the total Medicare spending information were obtained from Medicare Part D pharmacy claims data from a 20% national random sample of Medicare Part D beneficiaries enrolled in traditional Medicare or Medicare Advantage, excluding Medicaid dual eligibles and low-income subsidy recipients. The data obtained from the 20% nationwide random sample was multiplied by a factor of 5 to approximate the total for the Medicare Part D Program.

## Over-the-counter Drug Prices

Because there are many pharmacies available nationwide, it is challenging to measure OTC price for regular stores. So, we chose to use Amazon, an online marketplace that is available to all patients across the nation. In addition, compared with other online retailers such as Walmart, Amazon offered the following advantages: 1) it clearly identified the specific products that were sold without a prescription; 2) it offered a consistent way of displaying results, allowing us to replicate the exact methodology to identify prices across all the products in our sample; 3) it had publicly available, consumer-focused, free historical price trackers with up to over 5 years of historical price data. Other online retailers such as Walmart have price trackers that are vendor-focused and require the purchase of a monthly membership to be accessed.

Amazon OTC cash prices were obtained from the Amazon price tracker site Keepa ([keepa.com](https://www.Keepa.com)) for December 31, 2020, except for azelastine and mometasone furoate, whose earliest available prices were from August 2022. Keepa.com has been a source of Amazon historical prices used in scholarly

research in the field of marketing research. The platform appears to be a widely used resource for consumers, businesses, and sellers as well, as there are numerous websites that discuss Keepa.com, what it is, and how to use it.

If multiple vendors were available for the same drug, the product with the highest number of reviews was chosen, under the assumption that that product had the highest historical sales. There is evidence that the number of reviews of a product is correlated with sales volume independently of the content of the reviews (<https://www.sciencedirect.com/science/article/abs/pii/S0167923608000754>).

The Amazon OTC cash price did not include shipping costs or sales taxes, which could vary across states. Amazon offers free shipping for purchases above \$25 without prime membership. For persons who do have a Prime membership, shipping is free. In 2020, Prime membership was \$119, which would add \$10 per month if a person's only purchase in a month was for the OTC drug in our study. There are also reduced-cost options to obtain a Prime membership, such as for students or for qualifying government assistance recipients. In 2023, there are over 145 million Americans with a Prime membership.

Cash prices for OTC products obtained from Amazon were transformed to a per-unit basis using the same units as recorded in the Medicare claims (for example, the Amazon OTC price of 30 tablets of fexofenadine HCL 180mg was divided by 30 to obtain the price per tablet).