

Outpatient Antibiotic Prescriptions — United States, 2019

Citation: Centers for Disease Control and Prevention. Outpatient antibiotic prescriptions — United States, 2019.

Data Sources:

Systemic oral antibiotics were extracted from the IQVIA Xponent database. IQVIA captured an estimated 92% of outpatient prescriptions dispensed* from retail pharmacies for any medication nationally, reconciled them to wholesale deliveries to these pharmacies, and projected to 100% coverage. These data represent all outpatient antibiotic prescriptions from community pharmacies from all payers but exclude federal facilities. Provider specialties are taken from the American Medical Association (AMA) self-designated practice specialties, DEA and NPI sources and categorized into one of 17 groups. Population data were obtained from the U.S. Census bridging files.

*Note: In 2017, IQVIA revised and enhanced their methodology to account for prescriptions not picked up, returned, or re-stocked. These situations may have led to overstated prescriptions and makes the revised methodology data more accurate. Previous methodology data should not be directly compared to revised methodology. Data using both revised and previous methodology data are available in the 2017 and 2018 Annual Reports, however only revised data is available for 2019 onward.

Total outpatient oral antibiotic prescriptions in 2019

Healthcare providers prescribed **251.1 million antibiotic prescriptions**—equivalent to **765 antibiotic prescriptions per 1000 persons**.

Table 1. Oral antibiotic prescriptions by age, sex and region—United States, 2019

Characteristics: Age group^a	Number of Antibiotic Prescriptions (Millions)	Antibiotic Prescriptions Per 1,000 Persons, Rate
<20	55.8	650
>=20	194.8	804
Characteristics: Sex^a	Number of Antibiotic Prescriptions (Millions)	Antibiotic Prescriptions Per 1,000 Persons, Rate
Male	97.9	606
Female	152.8	917
Characteristics: Region^a	Number of Antibiotic Prescriptions (Millions)	Antibiotic Prescriptions Per 1,000 Persons, Rate
Northeast	45.1	806
Midwest	53.8	788
South	108.9	867
West	43	549

^aTotals may not add to all oral prescriptions (251.1 million) due to missing data

Table 2. Top oral antibiotic classes and agents—United States, 2019

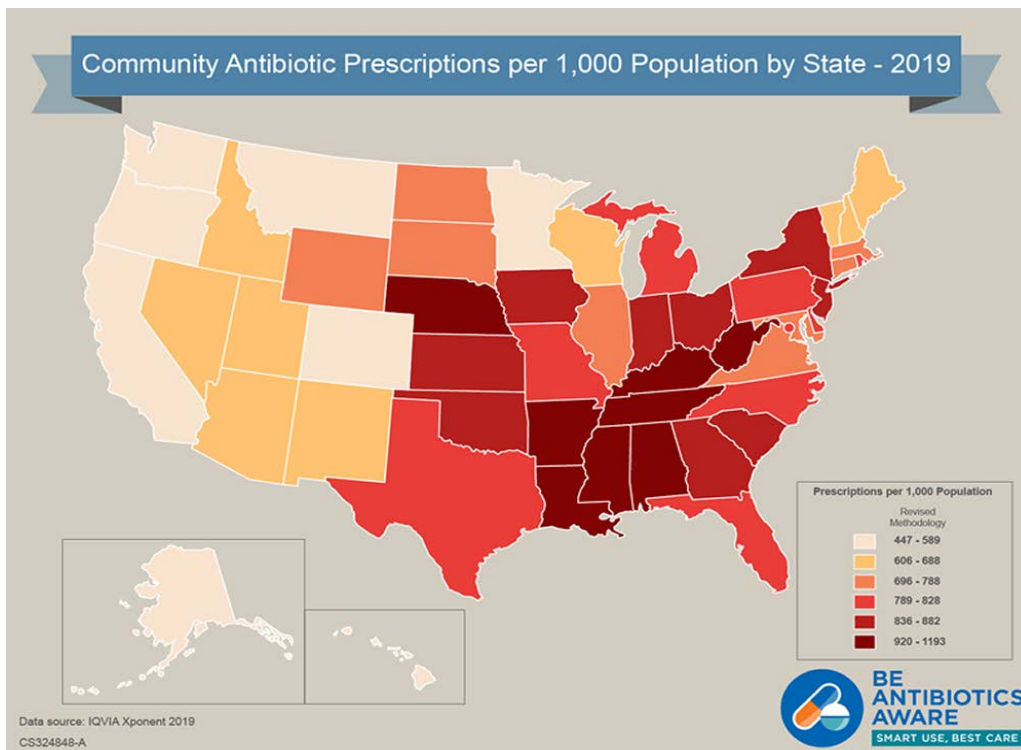
Characteristics: Antibiotic class	Number of Antibiotic Prescriptions (Millions)	Antibiotic Prescriptions Per 1,000 Persons, Rate
Penicillins	58.8	179
Macrolides	39.8	121
Cephalosporins	37.1	113
B-lactams, increased activity	28.4	87
Tetracycline	24.9	76
Characteristics: Antibiotic agent	Number of Antibiotic Prescriptions (Millions)	Antibiotic Prescriptions Per 1,000 Persons, Rate
Amoxicillin	54.1	165
Azithromycin	37.9	115
Amoxicillin/clavulanic acid	28.4	87
Cephalexin	21.7	66
Doxycycline	21.3	65

Table 3. Oral antibiotic prescribing by provider specialty — United States, 2019

Provider Specialty	Number of Antibiotic Prescriptions (Millions)	Antibiotic Prescriptions Per Provider, Rate
Primary Care Physicians	85.9	362
Physician Assistants & Nurse Practitioners	80.8	466
Surgical Specialties	17.2	192
Dentistry	24.7	201
Emergency Medicine	12.5	386
Dermatology	5.8	514
Obstetrics/Gynecology	4.9	130
Other	19.2	92
All Providers ^a	251.0	275

^a Total may not add to all oral prescriptions (251.1 million) due to rounding.

Figure 1. Antibiotic prescriptions per 1000 persons by state (sextiles) for all ages — United States, 2019.



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State	Number of prescriptions per 1,000 persons, Rate
Alabama	1108
Alaska	447
Arizona	670
Arkansas	1028
California	519
Colorado	513
Connecticut	788
Delaware	794
District of Columbia	798
Florida	795
Georgia	836
Hawaii	569
Idaho	625
Illinois	754
Indiana	855
Iowa	861
Kansas	882
Kentucky	1143
Louisiana	1110
Maine	679
Maryland	710
Massachusetts	696
Michigan	816
Minnesota	581
Mississippi	1130
Missouri	798
Montana	589
Nebraska	920
Nevada	654
New Hampshire	688
New Jersey	844
New Mexico	640
New York	853
North Carolina	789
North Dakota	696
Ohio	882
Oklahoma	843
Oregon	491
Pennsylvania	806
Rhode Island	828
South Carolina	874
South Dakota	773
Tennessee	1046
Texas	805
Utah	663
Vermont	606
Virginia	751
Washington	507
West Virginia	1193
Wisconsin	621
Wyoming	738