

OUTPATIENT ANTIBIOTIC PRESCRIPTIONS — United States, 2014

Healthcare providers prescribed **266.1 million** antibiotic prescriptions—equivalent to **835 antibiotic prescriptions per 1000 persons**.

Citation: Centers for Disease Control and Prevention. Outpatient antibiotic prescriptions — United States, 2014. Available via the internet: http://www.cdc.gov/getsmart/community/pdfs/annual-reportsummary_2014.pdf

Data Sources:

Systemic oral antibiotics were extracted from the IMS Health (now called QuintilesIMS) Xponent database. IMS Health captures >70% of outpatient prescriptions nationally, reconciles them to wholesale deliveries, and projects to 100% coverage. These data represent all outpatient antibiotic prescriptions from community pharmacies and non-governmental mail order pharmacies from all payers, but exclude federal facilities. Provider specialties are taken from the American Medical Association (AMA) self-designated practice specialties and categorized into one of 17 groups. Population data were obtained from the U.S. Census bridging files.

References

1. Hicks, L.A., et al., *US Outpatient Antibiotic Prescribing Variation According to Geography, Patient Population, and Provider Specialty in 2011*. Clin Infect Dis, 2015. **60**(9): p. 1308-16.
2. IMS. *The Uniform System of Classification (USC)*. [cited 2015 September 22]; Available from: http://www.imshealth.com/deployedfiles/ims/Global/Content/Insights/Health%20Services%20Research%20Network/USC_Classification_Process_2011.pdf.

Table 1. Oral antibiotic prescriptions by age, sex and region—United States, 2014

CHARACTERISTICS	NUMBER OF ANTIBIOTIC PRESCRIPTIONS (MILLIONS)	ANTIBIOTIC PRESCRIPTIONS PER 1,000 PERSONS, RATE
Age group^a		
<20 years	63.9	778
≥20 years	198.3	838
Sex^a		
Female	161.7	999
Male	103.4	659
Region^b		
Northeast	48.6	866
Midwest	60.8	897
South	110.5	923
West	46.3	615

^aTotals may not add to all oral prescriptions (266.1 million) due to missing data.

^bTotals may not add to all oral prescriptions (266.1 million) due to rounding.

Table 2. Top oral antibiotic classes and agents prescribed—United States, 2014

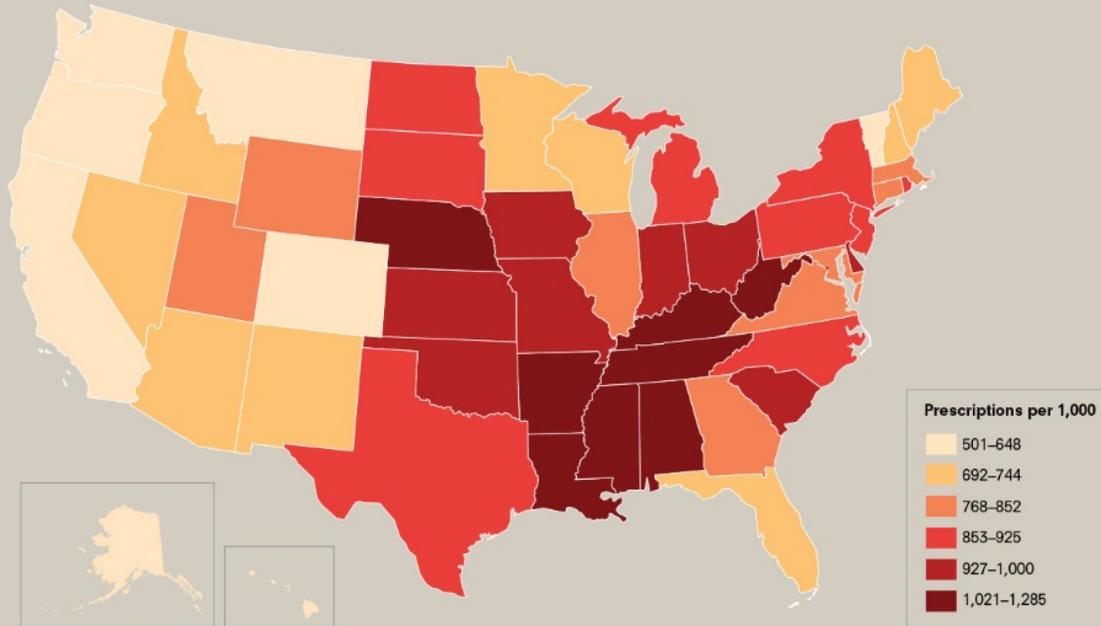
CHARACTERISTICS	NUMBER OF ANTIBIOTIC PRESCRIPTIONS (MILLIONS)	ANTIBIOTIC PRESCRIPTIONS PER 1,000 PERSONS, RATE
Antibiotic class		
Penicillins	60.7	191
Macrolides	49.0	154
Cephalosporins	35.7	112
Fluoroquinolones	32.8	103
Beta-lactams, increased activity	23.5	74
Antibiotic agent		
Amoxicillin	53.6	168
Azithromycin	45.7	143
Amoxicillin/clavulanic acid	23.5	74
Cephalexin	21.3	67
Ciprofloxacin	20.8	65

Table 3. Oral antibiotic prescribing by provider specialty — United States, 2014

PROVIDER SPECIALTY	NUMBER OF ANTIBIOTIC PRESCRIPTIONS (MILLIONS)	ANTIBIOTIC PRESCRIPTIONS PER PROVIDER, RATE
Primary Care Physicians	114.7	483
Physician Assistants and Nurse Practitioners	54.4	314
Surgical Specialties	19.9	223
Dentistry	24.9	203
Emergency Medicine	14.2	440
Dermatology	7.6	669
Obstetrics/Gynecology	6.6	175
Other	23.8	114
All Providers	266.1	292

Community Antibiotic Prescriptions per 1,000 Population by State — 2014

At least 30% of antibiotics prescribed in doctors' offices, emergency departments and hospital clinics are unnecessary.*



Data source: IMS Health Xponent 2014.

*Fleming-Dutra, K., et al. (2016). "Prevalence of Inappropriate Antibiotic Prescriptions Among US Ambulatory Care Visits, 2010-2011." JAMA: the Journal of the American Medical Association 315(17): 1864-1873.



Figure 1. Antibiotic prescriptions per 1000 persons by state (sextiles) for all ages — United States, 2014.



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