

Table 1. Number and percentage of antibiotic prescriptions by type and year used to treat dogs with a sporadic urinary tract infection seen at primary care veterinary clinics in the United States (2010-2019)

Antimicrobial	N(%) prescribed by year									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Aminoglycosides	21 (0.0)	6 (0.0)	4 (0.0)	4 (0.0)	0 (0.0)	3 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)
Amikacin	6 (0.0)	1 (0.0)	1 (0.0)	2 (0.0)	0 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)
Gentamicin	15 (0.0)	5 (0.0)	3 (0.0)	2 (0.0)	0 (0.0)	2 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Cephalosporins (1st generation)	2,577 (0.7)	402 (1.3)	454 (1.3)	326 (0.8)	241 (0.6)	228 (0.6)	175 (0.4)	145 (0.3)	114 (0.3)	83 (0.2)
Cefadroxil	350 (0.1)	93 (0.3)	77 (0.2)	23 (0.1)	13 (0.0)	25 (0.1)	19 (0.0)	13 (0.0)	9 (0.0)	3 (0.0)
Cefazolin	2,198 (0.6)	309 (1.0)	379 (1.1)	303 (0.8)	228 (0.6)	203 (0.5)	156 (0.4)	132 (0.3)	95 (0.2)	61 (0.1)
Cephalexin	29 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	10 (0.0)	19 (0.0)
Cephalosporins (3rd generation)	102,392 (25.8)	5,927 (19.2)	7,294 (22.9)	11,109 (28.7)	11,332 (29.0)	11,716 (28.7)	11,923 (27.8)	11,903 (26.2)	11,162 (24.3)	10,543 (23.1)
Cefovecin	72,177 (18.2)	4,013 (13.0)	5,196 (16.3)	8,597 (22.2)	8,483 (21.7)	8,503 (20.8)	8,265 (19.3)	7,997 (17.6)	7,219 (15.7)	6,855 (15.0)
Cefpodoxime	30,215 (7.6)	1,914 (6.2)	2,098 (6.6)	2,512 (6.5)	2,849 (7.3)	3,213 (7.9)	3,658 (8.5)	3,906 (8.6)	3,943 (8.6)	3,688 (8.1)
Fluoroquinolones	34,718 (8.7)	2,620 (8.5)	2,826 (8.9)	3,783 (9.8)	3,817 (9.8)	3,648 (8.9)	3,681 (8.6)	3,698 (8.2)	3,655 (8.0)	3,566 (7.8)
Ciprofloxacin	54 (0.0)	15 (0.1)	14 (0.0)	6 (0.0)	3 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Enrofloxacin	3,910 (1.0)	1,552 (5.0)	600 (1.9)	312 (0.8)	283 (0.7)	210 (0.5)	161 (0.4)	109 (0.2)	78 (0.2)	93 (0.2)
Marbofloxacin	29,123 (7.3)	1,053 (3.4)	2,897 (8.0)	3,339 (8.6)	3,291 (8.4)	3,177 (7.8)	3,239 (7.6)	3,339 (7.4)	3,316 (7.2)	3,260 (7.1)
Orbifloxacin	1,631 (0.4)	0 (0.0)	0 (0.0)	126 (0.3)	240 (0.6)	260 (0.6)	281 (0.7)	250 (0.6)	261 (0.6)	213 (0.5)
Lincosamides	2,140 (0.5)	97 (0.3)	189 (0.6)	258 (0.7)	234 (0.6)	268 (0.7)	225 (0.5)	219 (0.5)	221 (0.5)	195 (0.4)
Clindamycin	2,140 (0.5)	97 (0.3)	189 (0.6)	258 (0.7)	234 (0.6)	268 (0.7)	225 (0.5)	219 (0.5)	221 (0.5)	195 (0.4)
Macrolides	51 (0.0)	3 (0.0)	2 (0.0)	8 (0.0)	5 (0.0)	4 (0.0)	6 (0.0)	4 (0.0)	2 (0.0)	10 (0.0)
Azithromycin	44 (0.0)	3 (0.0)	2 (0.0)	8 (0.0)	5 (0.0)	4 (0.0)	6 (0.0)	4 (0.0)	2 (0.0)	3 (0.0)
Tylosin	7 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	7 (0.0)
Nitroimidazole	5,641 (1.4)	403 (1.3)	458 (1.4)	522 (1.4)	591 (1.5)	582 (1.4)	634 (1.5)	668 (1.5)	689 (1.5)	574 (1.3)
Metronidazole	5,641 (1.4)	403 (1.3)	458 (1.4)	522 (1.4)	591 (1.5)	582 (1.4)	634 (1.5)	668 (1.5)	689 (1.5)	574 (1.3)
Nitrofurans	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Nitrofurantoin	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Penicillins	246,648 (62.1)	20,981 (68.0)	20,362 (63.8)	22,315 (57.7)	22,544 (57.8)	24,078 (59.0)	25,967 (60.5)	28,484 (62.8)	29,854 (64.9)	30,486 (66.7)
Amoxicillin	31,971 (8.0)	1,119 (3.6)	1,408 (4.4)	2,328 (6.0)	2,779 (7.1)	3,164 (7.8)	3,575 (8.3)	4,314 (9.5)	5,250 (11.4)	6,137 (13.4)
Amoxicillin/clavulanic acid	199,620 (50.2)	13,928 (45.1)	16,145 (50.6)	18,624 (48.2)	18,696 (47.9)	20,171 (49.4)	21,962 (51.2)	23,789 (52.4)	24,337 (52.9)	24,204 (53.0)
Ampicillin	15,057 (3.8)	5,934 (19.2)	2,809 (8.8)	1,363 (3.5)	1,069 (2.7)	743 (1.8)	430 (1.0)	381 (0.8)	267 (0.6)	145 (0.3)
Sulfonamides	2,041 (0.5)	314 (1.0)	246 (0.8)	245 (0.6)	216 (0.6)	201 (0.5)	170 (0.4)	123 (0.3)	149 (0.3)	104 (0.2)
Sulfamethoxine	151 (0.0)	10 (0.0)	9 (0.0)	17 (0.0)	18 (0.1)	16 (0.0)	16 (0.0)	16 (0.0)	25 (0.1)	13 (0.0)
Sulfamethoxine/Ormetoprim	1,517 (0.4)	289 (0.9)	208 (0.7)	185 (0.5)	152 (0.4)	144 (0.4)	111 (0.3)	70 (0.2)	87 (0.2)	59 (0.1)
Sulfamethoxine/Triamethoprim	373 (0.1)	15 (0.1)	29 (0.1)	43 (0.1)	46 (0.1)	41 (0.1)	43 (0.1)	37 (0.1)	37 (0.1)	32 (0.1)
Tetracyclines	1,206 (0.3)	113 (0.4)	134 (0.4)	99 (0.3)	51 (0.1)	98 (0.2)	139 (0.3)	123 (0.3)	144 (0.3)	145 (0.3)
Doxycycline	1,114 (0.3)	110 (0.4)	132 (0.4)	71 (0.2)	9 (0.0)	81 (0.2)	139 (0.3)	123 (0.3)	144 (0.3)	145 (0.3)
Minocycline	86 (0.0)	0 (0.0)	0 (0.0)	28 (0.1)	41 (0.1)	17 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Oxytetracycline	6 (0.0)	3 (0.0)	2 (0.0)	0 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	397,436	30,866	31,923	38,669	39,031	40,826	42,921	45,367	45,990	45,707
Proportion of visits resulting in no antibiotics	14.0%	17.4%	17.9%	18.3%	17.7%	17.5%	18.3%	18.1%	18.9%	19.7%