Appendix 1 (as supplied by the authors)

Table A1: Oral outpatient antibiotic drugs and classes included in the study

Antibiotic class	Antibiotic drug name	Most common indication for use
Penicillin without beta-lactamase inhibitors	Amoxicillin Ampicillin Cloxacillin Penicillin V potassium Pivmecillinam	Respiratory infections
Penicillin with beta-lactamase inhibitors	Amoxicillin-clavulanate	Respiratory infections
First generation cephalosporins	Cefadroxil Cephalexin	Skin infections
Second/third generation cephalosporins	Cefaclor Cefdinir Cefixime Cefpodoxime Cefprozil Ceftibuten Cefuroxime	Respiratory infections
Second generation fluoroquinolones	Gemifloxacin Ciprofloxacin Norfloxacin Ofloxacin	Urinary infections
Third generation fluoroquinolones	Levofloxacin Moxifloxacin	Respiratory infections
Macrolides	Azithromycin Clarithromycin Erythromycin Spiramycin Telithromycin	Respiratory infections
Trimethoprim and/or sulphonamides	Sulfamethoxazole Sulfamethoxazole-trimethoprim Sulfisoxazole Trimethoprim	Urinary infections
Tetracyclines	Doxycycline Minocycline Tetracycline	Other
Lincosomides	Clindamycin	Skin infections
Nitrofurantoin	Nitrofurantoin	Urinary infections
Metronidazole	Metronidazole	Other
Others	Rifabutin Rifampin Fidaxomicin Fosfomycin Linezolid Methenamine Tedizolid	Other

	Vancomycin	

Table A2: Crude and adjusted incidence rate ratios for antibiotic prescriptions per 1000 population per year using a multivariable Poisson model with Generalized Estimating Equation and 95% confidence intervals calculated with bootstrapped simulations.

Variable	Crude IRR (95% CI)	Adjusted IRR (95% CI)
Health Region		
Type III test (Chi-square; p-value)	11.72; 0.5507	21.73; 0.0597
Central	1.17 (0.96-1.43)	1.16 (0.95-1.42)
Central East	1.14 (0.93-1.41)	1.12 (0.94-1.33)
Central West	1.22 (0.95-1.56)	1.23 (0.96-1.57)
Champlain	Reference	Reference
Erie St. Clair	1.46 (1.07-1.98)	1.44 (1.1-1.89)
Hamilton Niagara Haldimand Brant	1.26 (1.03-1.55)	1.16 (0.99-1.36)
Mississauga	1.39 (1.03-1.87)	1.38 (1.08-1.75)
North East	1.14 (0.85-1.51)	1.15 (0.93-1.43)
North Simcoe	1.01 (0.67-1.51)	1.03 (0.81-1.3)
North West	1.23 (0.73-2.05)	1.16 (0.72-1.85)
South East	1.09 (0.77-1.55)	1.19 (0.99-1.43)
South West	1.1 (0.85-1.44)	1.13 (0.94-1.36)
Toronto Central	1.06 (0.82-1.36)	0.92 (0.75-1.13)
Waterloo Wellington	1.03 (0.8-1.32)	0.99 (0.83-1.19)
Rural area	0.44 (0.39-0.5)	0.45 (0.38-0.53)
Urban area	Reference	Reference
FSA physician characteristics		
Family physicians:specialists*	0.92 (0.89-0.94)	0.97 (0.95-1.00)
Male physicians*	1.05 (0.99-1.10)	1 (0.95-1.06)
Physician career stage		
Early career physicians*	0.99 (0.93-1.05)	1 (0.96-1.04)
Middle career physicians*	1.05 (1.01-1.10)	1.05 (1-1.1)
Late career physicians*	Reference	Reference
Physician density per 1000 population^	1.08 (1.07-1.1)	1.09 (1.07-1.11)
FSA population characteristics		
Indigenous population*	0.94 (0.84-1.04)	1.03 (0.88-1.21)
Immigrant population*	1.16 (1.05-1.28)	1.00 (0.94-1.06)
Low income population*	1.03 (0.99-1.06)	0.97 (0.85-1.10)
Male <18 years*	0.97 (0.88-1.08)	1.08 (0.98-1.20)
Females <18 years*	0.68 (0.51-0.92)	0.19 (0.03-1.17)
Males 18-64 years*	0.68 (0.50-0.93)	2.04 (0.38-11.07)
Females 18-64 years*	1.03 (0.80-1.31)	0.86 (0.49-1.49)
Males ≥65 years*	1.28 (0.87-1.86)	0.53 (0.23-1.24)
Females ≥65 years*	0.99 (0.75-1.32)	0.58 (0.16-2.14)

IRR = incidence rate ratio; CI = confidence interval; FSA=Forward Sortation Area; *per 10% increase; ^per 1% increase