

†Table 1. Estimated non-azithromycin antibiotic prescriptions, IQVIA National Disease and Therapeutic Index (NDTI), 2017

Condition	Population	Guideline-recommended duration, days	Estimated no. antibiotic courses (95% Confidence Interval)	Median (Inter-quartile range)
Pharyngitis	Adult	10	2,116,517 (1,762,606-2,470,428)	10 (10-10)
	Pediatric	10	4,784,126 (4,272,393-5,295,859)	10 (10-10)
Sinusitis	Adult	5-7	5,739,038 (5,065,041-6,413,035)	10 (10-10)
	Pediatric	10-14	1,488,571 (1,190,070-1,787,072)	10 (10-10)
Acute otitis media	<2 years	10	1,840,967 (1,542,028-2,139,906)	10 (10-10)
	2-18 years	10, but shorter likely adequate	4,434,842 (3,963,880-4,905,804)	10 (10-10)
Community-acquired pneumonia	Adult	5 ^A	563,790 (394,691-732,889)	10 (7-10)
	Pediatric	No recommendation	323,798 (204,637-442,959)	10 (10-10)
Acute cystitis	Reproductive-aged females (12-64 years)	3-5 ^B	3,341,905 (2,879,353-3,804,457)	7 (5-7)
Pyelonephritis	Reproductive-aged females (12-64 years)	5-14 ^B	38,618 (0-83,361)	10 (7-10)
Skin and Soft Tissue Infections	Adult	5 ^A	2,537,196 (2,159,435-2,914,957)	10 (7-10)
	Pediatric	5 ^A	898,601 (708,032-1,089,170)	10 (10-10)

^A Minimum, with possible extension.

^B First-line; varies by agent.

pediatrics physicians. We excluded observations with antibiotic prescriptions for multiple conditions. We used NDTI projection weights and complex sample methods to estimate antibiotic prescription numbers and durations by condition and age group. **Results:** Table 1 shows antibiotic prescriptions by condition and population. The median antibiotic therapy duration for all conditions except acute cystitis was 10 days. The median duration for acute cystitis was 7 days. **Conclusions:** Clinicians prescribed 10-day antibiotic courses for the most common outpatient conditions, regardless of guideline-recommended duration. Antibiotic stewardship efforts targeting excessive durations of antibiotic therapy for common outpatient conditions, particularly sinusitis in adults, CAP, SSTI, and acute cystitis, are needed.

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Educational Intervention Improves Clinician Infection Prevention Knowledge and Behavior in a Pediatric Emergency Department

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Background: Children with contagious illness are frequently cared for in the pediatric emergency department. Incomplete infection prevention knowledge and incorrect practices create opportunities for transmission of pathogens. We implemented an educational intervention to improve clinician infection prevention knowledge and behavior. **Methods:** Clinicians providing care in an academic tertiary-care affiliated, pediatric ED were invited to participate in a 3-month educational intervention focusing on basic infection prevention principles such as hand hygiene and symptom-based isolation. Qstream, an educational platform that employs spaced-learning and game theory, was used to develop and electronically distribute 7 scenario-based questions. Questions were distributed 1 question per day 3 times per week. Questions were repeated until they were answered correctly twice. Round 1 of questions began in March 2019. After a ~4-week hiatus, the process was repeated in May 2019 (round 2). The Kirkpatrick model was used to measure the effectiveness of the educational intervention. Outcomes included clinician assessment of acceptability of the intervention, change in correct responses to knowledge-based questions over time, hand hygiene performance of clinicians and the number of infectious exposures in the emergency department. **Results:** Overall, 61 (73%) clinicians participated, of whom >90% liked the format, found it easy to use, and thought it required an appropriate amount of time. During round 1, average proficiency increased from 36% to 64%. During round 2, average proficiency increased from 62% to 78%. Starting in May 2019, physician hand hygiene gradually increased from a baseline of 78% to 100%. In the 10 months before and after March 2019, there were 2 exposure events involving 10 healthcare personnel versus 3 exposure events involving 4 healthcare personnel. **Conclusions:** Novel education strategies that utilize adult learning principles are user-friendly effective strategies that improve infection prevention knowledge and practice.

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