Racial Disparities in Antibiotic Prescribing for Children

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Antibiotic use in children

- Antibiotics = most common medications prescribed to children
- Acute respiratory tract infections account for >70%
 - sometimes warrant antibiotics
 - ear, sinus, throat infections
 - never warrant antibiotics
 - colds, bronchiolitis, acute bronchitis
- About half are inappropriate
 - no drug, wrong drug, too many days



ARTI Diagnoses receiving Antibiotic Prescriptions, by Site



Provider

Racial Differences in Antibiotic Prescribing by Primary Care Pediatricians

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- > 200,000 patients
- > 60,000 Black patients
- > 600,000 visits
- > 200 clinicians



TABLE 2 Within-Clinician Antibiotic Prescribing Rate by Patient Race

Antibiotic Prescribing ^a (<i>n</i>) ^b	OR, Black versus Nonblack (95% Cl)°	P Value	Standardized Probability % (95% Cl) ^d	
			Black	Nonblack
Overall (363049)	0.75 (0.72-0.77)	<.001	23.5 (22.5-24.5)	29.0 (28.1-30.0)
Broad-spectrum (81 056)	0.88 (0.82-0.93)	<.001	34.0 (31.5-36.5)	36.9 (34.8-39.0)
Broad-spectrum, AOM (37701)	0.75 (0.68-0.83)	<.001	31.7 (28.6-34.8)	37.8 (35.6-40.0)
Broad-spectrum, GAS (7964)	0.89 (0.61-1.32)	.567	7.5 (4.6-10.4)	8.3 (6.7-10.0)
Broad-spectrum, sinusitis (9863)	0.97 (0.84-1.11)	.661	44.0 (38.5-49.4)	44.7 (40.6-48.8)
Broad-spectrum, pneumonia (3038)	1.00 (0.71–1.40)	.953	17.2 (12.3–22.1)	17.1 (13.7–20.4)

TABLE 3 Within-Clinician Diagnosis Rate of Common Pediatric Conditions, by Patient Race

Diagnosis ^a	OR, Black versus Nonblack (95% Cl) ^b	<i>P</i> Value	Standardized Probability, % (95% CI)°	
	1 1		Black	Nonblack
AOM	0.79 (0.75-0.82)	<.001	8.7 (8.2–9.2)	10.7 (10.3–11.2)
Sinusitis	0.79 (0.73-0.86)	<.001	3.6 (3.1-4.0)	4.4 (4.1-4.8)
GAS pharyngitis	0.60 (0.55-0.66)	<.001	2.3 (2.1-2.5)	3.7 (3.5-3.8)
Pneumonia	1.0 (0.89-1.1)	.808	1.3 (1.1-1.4)	1.3 (1.1-1.4)
UTI	1.0 (0.93–1.1)	.725	1.7 (1.7-1.8)	1.7 (1.6-1.8)

Racial and Ethnic Differences in Antibiotic Use for Viral Illness in Emergency Departments

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Telemedicine

Virtual care should achieve:

- safety and effectiveness that is comparable to traditional care
- improve efficiency without increasing costs
- respect patient preferences and values without exacerbating health care disparities
- accessing virtual care requires internet access, a smartphone or computer, digital literacy, and health insurance

Association Between Antibiotic Prescribing for Respiratory Tract Infections and Patient Satisfaction in Direct-to-Consumer Telemedicine

> Figure. Association Between Antibiotic Prescribing for Respiratory Tract Infections and Satisfaction Scores, by Physician



Antibiotic Prescribing During Pediatric Direct-to-Consumer Telemedicine Visits

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Original Investigation | Health Informatics

Patient Characteristics Associated With Telemedicine Access for Primary and Specialty Ambulatory Care During the COVID-19 Pandemic

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Characteristic	Adjusted odds ratio (95% CI)	Video use Video use less likely more likely
Aged 55-64 y vs <55 y	0.79 (0.76-0.82)	=
Aged 65-74 y vs <55 y	0.78 (0.74-0.83)	-
Aged >75 y vs <55 y	0.49 (0.46-0.53)	♣-
Female	0.92 (0.90-0.95)	-
Black vs White	0.65 (0.62-0.68)	-
Latinx vs White	0.90 (0.83-0.97)	-8-
Asian vs White	0.99 (0.91-1.08)	- -
Other race/ethnicity vs White	0.95 (0.87-1.04)	
Unknown race/ethnicity vs White	1.00 (0.93-1.08)	- + -
Non-English language	0.85 (0.76-0.95)	
Medicaid vs commercial insurance	0.68 (0.64-0.72)	-
Medicare vs commercial insurance	0.75 (0.71-0.79)	-
Median household income <\$50 000 vs >\$100 000	0.57 (0.54-0.60)	.
Median household Income \$50 000-\$100 000 vs >\$100 000	0.89 (0.85-0.92)	-
Charlson Comorbidity Index score 1-2 vs 0	0.89 (0.86-0.92)	
Charlson Comorbidity Index score ≥3 vs 0	0.80 (0.77-0.84)	-

Figure 2. Forest Plots Showing Adjusted Odds Ratios for Video Use for Telemedicine Visit

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Adjusted odds ratio (95% CI)



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Thank you!

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