Pediatric Challenges with ASP in the Urgent Care Setting

AMERICAN ACADEMY OF PEDIATRICS: SECTION ON URGENT CARE MEDICINE

JOHN J. SANTOS MD, MBA
# Provisional Section on Urgent Care Medicine

## Who We Are

- Formed in 2016 as AAP Subcommittee under Section of Emergency Medicine
- Represent nearly 150 urgent care pediatricians encompassing all regions of the US
- July 1, 2019 recognized as a provisional Section on Urgent Care Medicine

## What We Do

- Work with the AAP to advocate for pediatric urgent care and pediatric-readiness in general urgent care centers
- Expand opportunities for pediatric urgent care education
- Promote urgent care research and collaboration
Urgent Care Collaboration
AAP with over 67,000 members and UCA with 3,500 members. SPUC has about 350 members and PUCC has had attendance of about 150 for its annual conference. Academic Pediatric Association partners to host the PAS conference each year with the 2019 conference having 10 abstracts and 3 platform presentations that incorporated Urgent Care into their scholarship.
Outpatient Antibiotic Use

- Antibiotic prescribing rates for patients less than 14 years old decreased 24% from 1993 to 2007\(^1\)
- In 2014, \textbf{266.1 million} courses of antibiotics were dispensed from community pharmacies\(^2\)
- At least 30% of antibiotics prescribed in the outpatient setting are unnecessary\(^3\)

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Antibiotic overuse is a serious concern in all areas of medicine and while outpatient antibiotic use has decreased in patients under 14 there were still over 250 million courses of antibiotics dispensed in 2014 and at least 30% of these are for inappropriate indications.
Urgent Care in Health Delivery

- Urgent Care is growing at a nearly 5% annual rate with 400-500 new sites opening every year\(^1\)
- Between 8,000 to 10,000 locations across the country with over $15 billion in charges in 2015\(^2\)
- 90 million visits to urgent care centers representing nearly 10% of all outpatient visits in 2017\(^1\)

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1. UCA – Urgent Care Industry White Paper 2018
2. Kalorama information. Urgent care market (clinic growth, revenues by procedure, IVD and vaccine sales 2018
As a rapidly growing segment of outpatient care, urgent care has an ability to significantly impact antibiotic prescribing rates, both good and bad.
Antibiotic Prescriptions by Location

Palms, D., et. al Comparison of Antibiotic Prescribing in Retail Clinics, Urgent Care Centers, Emergency Departments, and Traditional Ambulatory Care Settings in the United States. JAMA Intern Med. 2018;178(9):1267-1269
Antibiotic use linked to nearly 40% of all UC visits and of those 45% were for antibiotic inappropriate respiratory diagnoses (URI, Brochitis/Bronchiolitis, Asthma, Influenza, Non-suppurative OM and viral pneumonia). Antibiotics were prescribed for 13.8% of all ED visits but had the second highest rate of inappropriate antibiotic use at 24.6%. Office based visits had an overall antibiotic prescription rate of 7.1% in this study however, a study in Pediatrics from 2019 (Ray KN, Shi Z, Gidengil CA, et al. Antibiotic Prescribing During Pediatric Direct-to-Consumer Telemedicine Visits. Pediatrics. 2019;143(5):e20182491) found an antibiotic prescription rate of 31% in PCP offices.
Pediatric Urgent Care

- 24% of all urgent care visits are for patients <18 years old\(^1\)
- Only 9.6% of urgent care locations have a pediatrician on staff\(^2\)
- Approximately 500 dedicated pediatric urgent care sites in the country

\(^1\) FAIR Health White Paper March, 2018
However, there is a specific challenge in this pediatric population. While nearly a quarter of all urgent care visits are for pediatric patients, less than 10% of locations have a pediatrician on staff. Most of these are at dedicated pediatric urgent care sites, which, while growing represent less than 5% of all urgent care locations.
Antibiotic Use in Pediatric Urgent Care

- Limited data at this time but frequent inappropriate antibiotic use are in common pediatric illness such as URI, Bronchiolitis, Asthma, Influenza, Non-suppurative OM and viral pneumonia
- Pediatricians have lower rates of antibiotic use for URI in both office visits and urgent care

<table>
<thead>
<tr>
<th>ARI Diagnosis Category*</th>
<th>Setting Specialty</th>
<th>Total N = 544,531</th>
<th>Office Visit n = 439,783</th>
<th>Urgent Care Center n = 72,890</th>
<th>RHC n = 14,458</th>
<th>ED n = 17,400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper respiratory infection</td>
<td>Denominator</td>
<td>124,907 (16%)</td>
<td>89,154 (9%)</td>
<td>69,154 (9%)</td>
<td>5088 (8%)</td>
<td>3985 (8%)</td>
</tr>
<tr>
<td>Children receiving antibiotics from pharmacies, n (%)</td>
<td>19,763 (16%)</td>
<td>27,432 (28%)</td>
<td>7563 (28%)</td>
<td>6335 (8%)</td>
<td>1896 (30%)</td>
<td>954 (29%)</td>
</tr>
<tr>
<td>Acute bronchitis</td>
<td>Denominator</td>
<td>35,412 (75%)</td>
<td>12,796 (77%)</td>
<td>12,796 (77%)</td>
<td>925 (76%)</td>
<td>1987 (80%)</td>
</tr>
<tr>
<td>Children receiving antibiotics from pharmacies, n (%)</td>
<td>26,573 (75%)</td>
<td>1379 (75%)</td>
<td>1379 (75%)</td>
<td>1987 (80%)</td>
<td>950 (75%)</td>
<td>1223 (22%)</td>
</tr>
<tr>
<td>P value</td>
<td>Reference</td>
<td>0.01</td>
<td>0.07</td>
<td>0.45</td>
<td>0.01</td>
<td>0.21</td>
</tr>
</tbody>
</table>

*Similar results for other ARI conditions (acut eotitis media, sinusitis and pharyngitis are shown in an online Supplemental Digital Content Table 4) | ED, emergency departments; FP, family physicians; NPPA indicates nonphysicians (ie, nurse practitioners or physician assistants); PEDS, pediatrician; RHC, retail health clinic.

So, while the health care world in general and urgent care specifically, struggles with antibiotic stewardship. If we take a closer look at how many pediatricians approach antibiotic use we begin to see a different picture. The vast majority of inappropriate antibiotic use is for common pediatric illnesses such as URI, bronchiolitis, asthma, influenza, non-suppurative OM and viral pneumonia. In this recent study from the Pediatric Infectious Disease Journal we can see that while family practice and NP/PA providers prescribe antibiotics nearly 30% of the time in either the office or urgent care, pediatricians are between 9 and 8% in those areas respectively.
Collaboration with SPUC and The Antibiotic Resistance Action Center (ARAC) with technical experts from the Centers for Disease Control and Prevention’s Office of Antibiotic Stewardship.

Study Aim #1 (Primary): Build capacity for implementing quality improvement projects at the local and multi-institutional level in pediatric urgent care.

Study Aim #2: Understand the prescribing patterns for antibiotics in specialized pediatric urgent care centers.

Study Aim #3: Implement a randomized cluster trial of interventions to reduce inappropriate antibiotic prescribing.

Reduce inappropriate antibiotic use in participating pediatric urgent cares by 20% from baseline by November 30, 2019.
Indications for Antibiotic Use

Diagnoses:
- Suppurative otitis media, 1189, 42%
- Sinusitis, 88, 3%
- Pneumonia, 118, 4%
- Other, 131, 5%
- Skin, cutaneous and mucosal infections, 504, 18%
- Urinary tract infections (UTI), 91, 3%

Antibiotic Use for AOM:
- Amoxicillin
- Amox/Clavulanate
- Cefdinir
- Ceftriaxone
- Other
Vast majority of indication are for appropriate antibiotic use in initial study sample with 153 provider and 20 different institutions. Drilling down into AOM, amoxicillin was the most common antibiotic used followed but amox/clav reflecting good use of narrow spectrum antibiotics with cefdinir and ceftriaxone (3rd generation cephalosporins) used sparingly.
Interventions

- Commitment letter from study participants posted in patient care rooms
- Dialogue Around Respiratory Illness Treatment (DART modules)
- Patient education handouts for Strep Throat testing and Delayed Antibiotics
Kids (and Their Parents) Say the Damnedest Things

- “Every time she gets a cold, she ends up with strep throat.”
- “Well my doctor gave me antibiotics and my kid has the same symptoms.”
- “We are going out of town tomorrow and want to get her started on something before we leave.”
- “She’s allergic to penicillin.”
- “We knew something was wrong because she wanted to come.”
Thank You