Are you using antibiotics wisely?

30-50% OF ANTIBIOTICS PRESCRIBED FOR ACUTE RESPIRATORY INFECTIONS IN PRIMARY CARE ARE UNNECESSARY.

FAMILY PHYSICIANS LIKE YOU ARE KEY PARTNERS IN THE BATTLE AGAINST ANTIMICROBIAL RESISTANCE - AN EMERGING PUBLIC HEALTH THREAT.

KEY PRACTICE STATEMENTS

Below are key practice changes to help you optimize your antibiotic prescribing.

Using a viral prescription and/or a delayed prescription can be a better alternative to immediate use of antibiotics.

To learn more about the campaign or access evidence-informed resources, please visit: www.choosingwiselycanada.org/antibiotics

UNCOMPLICATED PHARYNGITIS
MOST CASES ARE VIRAL
You should consider antibiotics ONLY if a rapid strep test or a culture is positive. You don’t need a rapid strep test, or a culture IF:

1. Modified/McIsaac Centor score ≤ 1 OR
2. The patient has symptoms such as rhinorrhea, oral ulcers or hoarseness (these are signs of a viral infection)

UNCOMPLICATED SINUSITIS
MOST CASES ARE VIRAL
You should consider antibiotics ONLY in the following circumstance:

1. Symptoms have been present for at least 7 days AND
2. There are at least 2 of the PODS symptoms AND
3. One of the symptoms is O or D AND
4. The symptoms are severe OR they are still present after a 3 day trial of nasal corticosteroids

UNCOMPLICATED OTITIS MEDIA
MOST CASES ARE VIRAL
You should consider antibiotics in vaccinated children > 6 months and adults ONLY in the following circumstances:

• The tympanic membrane is suspected to be perforated and there is a purulent discharge
• The tympanic membrane is red and bulging WITH one of the three following criteria:

1. A fever is present (≥ 39°C) OR
2. The patient is moderately or severely ill OR
3. Symptoms lasting > 48 hours

MODIFIED/MCISAAC CENTOR SCORE
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Score</th>
</tr>
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<tbody>
<tr>
<td>Age 3-14 years</td>
<td>1</td>
</tr>
<tr>
<td>Age &gt; 45 years</td>
<td>-1</td>
</tr>
<tr>
<td>Tonsillar exudate</td>
<td>1</td>
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<tr>
<td>Tender or swollen lateral cervical lymph nodes</td>
<td>1</td>
</tr>
<tr>
<td>Temperature &gt; 38°C</td>
<td>1</td>
</tr>
<tr>
<td>Absence of cough</td>
<td>1</td>
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</tbody>
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PODS
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<th>PODS</th>
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<td>F</td>
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<td>D</td>
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<td>S</td>
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</table>
PNEUMONIA
Before giving an antibiotic prescription consider the following:

1. You should not make this diagnosis only on the basis of abnormal sounds (crackles) on lung exam.
2. You should confirm the presence of a new consolidation by a chest x-ray unless not possible in your setting.
3. Vaccinated children > 6 months and adults without vital sign abnormalities and a normal respiratory examination are unlikely to have a pneumonia. They most likely don’t need a chest x-ray.

COPD EXACERBATIONS
You should not consider antibiotics unless there is a clear increase in sputum purulence AND:

1. Increase in sputum volume AND/OR 2. Increased dyspnea.

• COMMON COLD
• INFLUENZA LIKE ILLNESS
• BRONCHITIS
• BRONCHIOLITIS
• ASTHMA EXACERBATIONS

Antibiotics are never warranted in these syndromes UNLESS there is a super-imposed bacterial otitis, sinusitis or pneumonia that meets the above criteria.

RESOURCES
Please use the following link to access and download clinician tools, educational posters and other patient resources to support the recommended changes in your practice: www.choosingwiselycanada.org/antibiotics

You can also integrate the Viral Prescription and Delayed Prescription in your existing Electronic Medical Record by using the e-forms and instructions provided for Accuro, TELUS Health (PS Suite) and OSCAR.

VIRAL AND DELAYED PRESCRIPTION

POSTERS FOR WAITING ROOMS

ANTIBIOTICS: THREE QUESTIONS TO ASK YOUR HEALTH CARE PROVIDER
1) Do I really need antibiotics?
Antibiotics fight bacterial infections, like strep throat, whooping cough or otitis media, but they don’t fight viruses – like common colds, flu, or most sore throats and sinus infections. Antibiotics are never warranted in these syndromes.

2) What are the risks?
Antibiotics can cause unwanted side effects such as diarrhea, nausea, vomiting, and allergic reactions. Antibiotics should only be taken when medically necessary.

PATIENT PAMPHLETS

To learn more, visit www.choosingwiselycanada.org/antibiotics
Bronchiolitis is...

- a viral respiratory infection
- the leading cause of infant hospitalization in Canada

Low-value tests & medications increase costs, length of stay and do not improve patient outcomes. We aimed to:

- Establish baseline management of bronchiolitis by pediatric emergency physicians
- Deliver interdisciplinary group facilitated feedback session to identify strategies for practice improvement
- Evaluate the effects of the intervention

Outcomes

Providing physicians with individual practice data along with identifying areas for improvement in a collaborative group setting is an effective way to reduce low-value care.

Pre-Feedback Session and Post-Feedback Session Intervention usage rates of low-value interventions for bronchiolitis patients

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Pre-Feedback Session</th>
<th>Post-Feedback Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest X-Ray</td>
<td>21%</td>
<td>Absolute change: 3%</td>
</tr>
<tr>
<td></td>
<td>18%</td>
<td>Relative change: 14%</td>
</tr>
<tr>
<td>Respiratory Viral Tests</td>
<td>32%</td>
<td>Absolute change: 11%</td>
</tr>
<tr>
<td></td>
<td>21%</td>
<td>Relative change: 34%</td>
</tr>
<tr>
<td>Steroids</td>
<td>13%</td>
<td>Absolute change: 8%</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>Relative change: 62%</td>
</tr>
<tr>
<td>Salbutamol</td>
<td>22%</td>
<td>Absolute change: 10%</td>
</tr>
<tr>
<td></td>
<td>12%</td>
<td>Relative change: 45%</td>
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Urinary Tract Infections in the Paediatric Emergency Department:
A Choosing Wisely Initiative to Promote Diagnostic and Antimicrobial Stewardship

Presenter: Olivia Ostrow, MD
Contact Info: Department of Paediatrics, Division of Emergency Medicine, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, M5G 1X8, Telephone 416-813-2197, olivia.ostrow@sickkids.ca

Aim: To improve UTI diagnostic accuracy by 50% and promote antimicrobial stewardship through timely antibiotic discontinuation for negative cultures and standardized antimicrobial treatment duration for uncomplicated UTIs in a 12-month period

Multifaceted Intervention:
- An evidence-based empiric UTI diagnostic algorithm to aid with diagnostic decision-making
- A daily call-back system where patients were contacted to stop antibiotics with negative cultures
- An EMR practice alert as a reminder of the standardized antimicrobial prescription duration

Impact

False Positive UTI Diagnosis

Total Antibiotic Days Saved By Month

Challenges & Lessons Learned
- Consistency of call backs was variable and less likely to occur on weekends and holidays due to limited staffing.
- It takes time to change behaviour and motivate practice changes. Sometimes it’s easier for outsiders to recognize the problem before those that are ‘buried in the trenches’.
- The balancing measure only accounts for patients returning to our ED within 72 hours (1 return visit in 5 months), but there is the potential for some patients to have sought healthcare elsewhere
- Switching to a new hospital-wide EMR during implementation can lead to data and other delays.
Decrease in Antibiotic Utilization by General Practitioners in NL

Choosing Wisely Canada Recommendations

1. Don’t use antibiotics for upper respiratory infections that are likely viral in origin, such as influenza-like illness, or self-limiting, such as sinus infections of less than seven days of duration.

2. Don’t prescribe antibiotics in adults with bronchitis/asthma and children with bronchiolitis.

3. Don’t use antibiotics in adults and children with uncomplicated sore throats.

4. Don’t use antibiotics in adults and children with uncomplicated otitis media.

5. Don’t prescribe antibiotics for asymptomatic bacteriuria (ASB) in non-pregnant patients.

Practice Point

1. The rate of antibiotic prescriptions per 100 inhabitants in Canada is 64. The rate in NL per 100 inhabitants is 95.5.

Method

1. Data was obtained from the NLPDP program for active patients aged 65 years and older (received at least one prescription for any drug) 1 Apr 2013–30 Mar 2018.

Results

- 84% (N = 236,235) of antibiotic prescriptions were provided by General Practitioners (GPs).
- There is 9.0% decrease in the number of antibiotics prescriptions by GPs in 2017 compared to 2016.

Conclusions

1. During the past year, the volume of antibiotic prescriptions provided in the NLPDP program has decreased by 9.0%. However, antibiotic use remains high.

2. As part of an audit and feedback program, GPs will receive their personal data compared to their peers, both as an absolute volume and as a rate per 100 patients aged 65 years and older seen annually.