The Cold Standard

A Toolkit for Using Antibiotics Wisely for the Management of Respiratory Tract Infections in Primary Care

2019 | VERSION 1.0
FACING THE FACTS: Antibiotic Overuse in Primary Care

- **30-50%** of antibiotics used for respiratory tract infections (RTIs) in primary care are avoidable.

- The College of Family Physicians of Canada (CFPC) and Choosing Wisely Canada reviewed the best evidence currently available to develop practice change recommendations for treating RTIs in primary care settings: [www.choosingwiselycanada.org/antibiotics-primary-care](http://www.choosingwiselycanada.org/antibiotics-primary-care).

- While these recommendations are generally known by clinicians, there are recognized barriers to implementing them in practice, such as perceived patient expectations, or clinicians feeling like doing anything is better than doing nothing. These can be addressed by implementing the clinical tools described in this toolkit.

- A common myth is that prescribing antibiotics for RTIs saves time; however, studies show that prescribing unnecessary antibiotics takes just as much time while increasing the risk of adverse effects.¹²
TOOLS TO SUCCEED:
Implementing 3 Simple Tools to Support Practice Changes

The tools below support the practice changes developed by Choosing Wisely Canada and the CFPC and can be found here at: www.choosingwiselycanada.org/campaign/antibiotics-primary-care.

1. Posters

**How does it work?**

A poster can educate patients and act as a behavioural ‘nudge’ by setting expectations. Posters have been shown to be effective as part of an outpatient antimicrobial stewardship intervention for reducing inappropriate prescriptions.1,2

**How do you implement it?**

Print the poster and hang it in the waiting area or examination rooms in your practice. You can also use it as a screen saver on your clinic computers or include it in the information broadcast on your waiting room televisions.

‘Sorry’ posters are available in:
- English, French, Simplified Chinese, Spanish, Arabic, Punjabi and Tagalog.

‘Three Questions’ posters are available in:
- English, French, Simplified Chinese, Spanish, Arabic, Punjabi and Tagalog.

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1. Posters

1) Do I really need antibiotics?
Antibiotics fight bacterial infections, like strep throat, whooping cough and bladder infections. But they don’t fight viruses – like common colds, flu, or most sore throats and sinus infections. Ask if you have a bacterial infection.

2) What are the risks?
Antibiotics can cause unwanted side effects such as diarrhea and vomiting. They can also lead to “antibiotic resistance” – if you use antibiotics when you don’t need them, they may not work when you do need them in the future.

3) Are there simpler, safer options?
The best way to treat most colds, coughs or sore throats is with plenty of fluids and rest. Talk to your health care provider about the options.

Talk about what you need, and what you don’t. To learn more, visit www.choosingwiselycanada.org/antibiotics.

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THE COLD STANDARD
2. Viral Prescription

**How does it work?**

Patients with viral infections are seeking relief from their symptoms, and antibiotics do not help them recover. However, there are some alternative treatments that can improve their symptoms. Because patients have come to expect a prescription as part of their treatment plan for bacterial infections, you can use the same approach for viral infections (minus the antibiotic, of course!).

**How do you implement it?**

Print the handout and review it with, and give it to, the patient. Offices using electronic health records (EHRs) can incorporate this tool into a patient’s electronic medical record (EMR) by following the instructions included in the downloadable file.

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3. Delayed Prescriptions

**How does it work?**

You can use delayed prescriptions for select patients (e.g., otitis media, uncomplicated sinusitis; see the table on page 5) or give them to the parents/guardians of paediatric patients. Contrary to what many clinicians think, delayed prescriptions only get filled one third of the time and there is no difference in satisfaction between receiving an immediate prescription and a delayed prescription.\(^5\) Note that this tool should not be used for all patients with RTIs since the majority should receive no antibiotics at all.

**How do you implement it?**

Print the handout to accompany the prescription. Offices using EHRs can incorporate this tool into a patient’s EMR by following the instructions included in the downloadable file.

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The Delayed Prescription is available in: English, French, Simplified Chinese, Spanish, Arabic, Punjabi and Tagalog.
# Managing Respiratory Tract Infections

<table>
<thead>
<tr>
<th>Syndrome</th>
<th>Tool</th>
<th>When are Antibiotics Indicated?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uncomplicated otitis media</strong></td>
<td>Patient resources</td>
<td>For vaccinated individuals aged 6 months and older, either a perforated tympanic membrane with</td>
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<tr>
<td></td>
<td>Re-assessment as needed or</td>
<td>purulent discharge or a bulging tympanic membrane with one of the three following criteria:</td>
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<tr>
<td></td>
<td>delayed prescription</td>
<td>1. Fever (≥39°C)</td>
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<td></td>
<td></td>
<td>2. Moderately or severely ill</td>
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<td></td>
<td></td>
<td>3. Significant symptoms lasting &gt; 48 hours</td>
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<tr>
<td><strong>Uncomplicated pharyngitis</strong></td>
<td>Viral prescription</td>
<td>Patient’s modified Centor score is ≥ 2 AND throat swab culture (or rapid antigen test if</td>
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<tr>
<td></td>
<td>Throat swab not indicated if</td>
<td>available) confirms presence of Group A Streptococcus.</td>
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<tr>
<td></td>
<td>Centor score ≤ 1</td>
<td></td>
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<tr>
<td><strong>Uncomplicated sinusitis</strong></td>
<td>Viral prescription</td>
<td>Symptoms have persisted for more than 7–10 days without improvement.</td>
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<tr>
<td></td>
<td>Re-assessment as needed or</td>
<td>Antibiotics should only be considered if the patient has at least 2 of the PODS symptoms</td>
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<tr>
<td></td>
<td>delayed prescription</td>
<td>listed below, one of those being O or D, AND the patient meets one of the following criteria:</td>
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<tr>
<td></td>
<td></td>
<td>1. The symptoms are severe</td>
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<td></td>
<td></td>
<td>2. The symptoms are mild to moderate with no response after a 72 hour trial with nasal</td>
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<tr>
<td></td>
<td></td>
<td>corticosteroids.</td>
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<td></td>
<td></td>
<td><strong>P:</strong> Facial Pain/pressure/fullness;</td>
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<tr>
<td></td>
<td></td>
<td><strong>O:</strong> Nasal Obstruction;</td>
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<tr>
<td></td>
<td></td>
<td><strong>D:</strong> Purulent/discoloured nasal or postnasal Discharge;</td>
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<td></td>
<td></td>
<td><strong>S:</strong> Hyposmia/anosmia (Smell)</td>
</tr>
<tr>
<td><strong>Upper respiratory infection</strong></td>
<td>Viral prescription</td>
<td>No role unless clear evidence of secondary bacterial infection.</td>
</tr>
<tr>
<td>(common cold)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Influenza like illness</strong></td>
<td>Viral prescription</td>
<td>No role unless clear evidence of secondary bacterial infection.</td>
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<tr>
<td><strong>Pneumonia</strong></td>
<td>Chest x-ray only if indicated by physical exam</td>
<td>Chest x-ray, where available, showing pneumonia (Physical examination alone, demonstrating</td>
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<tr>
<td></td>
<td>Patients with no vital sign</td>
<td>respiratory crackles, is not sufficient to establish a diagnosis).</td>
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<td></td>
<td>abnormalities and a normal</td>
<td></td>
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<td></td>
<td>respiratory examination are</td>
<td></td>
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<tr>
<td></td>
<td>unlikely to have pneumonia</td>
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<td></td>
<td>and don’t need a chest x-ray.</td>
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<tr>
<td><strong>Bronchitis/asthma/bronchiolitis</strong></td>
<td>Consider steroids and</td>
<td>No role unless clear evidence of secondary bacterial infection.</td>
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<td></td>
<td>short-acting bronchodilators</td>
<td></td>
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<tr>
<td><strong>Acute exacerbation of chronic</strong></td>
<td>Consider steroids and</td>
<td>Clear increase in sputum purulence with either increase in sputum volume and/or increased</td>
</tr>
<tr>
<td><strong>obstructive pulmonary disease</strong></td>
<td>short-acting bronchodilators</td>
<td>dyspnea.</td>
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Measuring Success

Process Measures: How often clinical tools are used in practice

- Count data over time—the simplest way to measure uptake of the tools in your practice, but note this may be influenced by seasonality.
  - Number of times a viral/delayed prescription or patient resource is given each week/bi-weekly/monthly
  - Number of clinicians that are giving viral/delayed prescriptions bi-weekly/monthly
- Proportion data over time—a better measure, but requires knowing the denominator of unique patient visits to your office with RTI. One way to obtain this is having a member of the office staff count these visits each week. This allows you to track:
  - Number of times a viral/delayed prescription or patient resource is given each week per unique patient visit for RTI or specific viral syndrome
- Survey—can be developed to address the number of clinicians in the clinic that are aware of the recommendations.

Outcome Measures: Antibiotic use for patients with RTI

- Antibiotic prescribing for RTI
  - Number of unique patient visits (or visits per 1000 patient visits) for RTI or specific viral syndrome; for example, bronchitis
- If you are unable to separate RTIs, measure and track antibiotic prescriptions over time.
- You can obtain data using any of the following methods:
  - Manual audit—Have a member of the office staff count every unique patient visit or every visit for a RTI as the denominator, then count each prescription for antibiotics (or viral/delayed Rx) given for a RTI
  - Automated audit with your EMR—Some EMRs allow searches by prescription or by diagnostic codes, which can be generated and normalized per patient visit
  - Prescriber-level report from your provincial ministry of health. Contact your health authority to find out availability in your region.

Balancing Measures: Unintended consequence not expected to change

- Patient visits to another urgent care centre after their initial encounter in the clinic (e.g., emergency department, walk-in clinic, urgent care centre, etc.)
  - Clinicians in a capitated system may receive reports on emergency department visits by their patients (these may decrease)
- Patient satisfaction (this could be an outcome measure)
  - Patient satisfaction surveys can be used in the waiting room or sent by email to determine if patients are satisfied with their care (this may improve)
- Return visits to the clinic
  - Number of return visits within 10 days for the same diagnosis (this would not be expected to increase)
Examples From the Field

The Regina Family Medicine Unit has been using the RTI tools for over a year and have the additional support of the Saskatchewan Clinician Report, which provides audit and feedback information to clinicians regarding their antibiotic prescribing data. Here is what clinicians are saying:

“\nThe informational poster promoting antibiotic awareness allows me to reinforce the information when explaining why an antibiotic is not indicated for a viral infection and provides an easy to understand graphic for patients to see that the vast majority of upper respiratory infections are viral.\n
Clara Rocha Michaels, MD, CCFP"

“Using the viral pad is providing excellent patient care since it outlines the standard of care treatments for viruses. Patients are provided with education and quality medical care when inappropriate antibiotics are avoided.

Marty Heroux, MD, CCFP"

“\nI use the viral prescription regularly in my practice because the information it provides is the same education I would verbally provide. It is a visual reinforcement and resource for the patient once they leave and need a reminder of what the typical treatment for a viral infection is.\n
Barb Beaurivage, NP"

“As a physician working with resident physicians on a regular basis, I have seen the efficacy of the Viral Rx pads in helping residents in their conversations with patients about what they can do to treat their viral illnesses without antibiotics.

Solveig Nilson, MD CCFP”
Quality Improvement in Your Practice

- Quality improvement is a great way to obtain CME credits.
- Earn up to five Mainpro+® credits using a Linking Learning to Practice exercise to document how this tool has affected your practice.

Visit [www.cfpc.ca/Linking_Learning_exercises](http://www.cfpc.ca/Linking_Learning_exercises) to learn more.
References


Additional References


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King LM, Fleming-Dutra KE, Hicks LA. Advances in optimizing the prescription of antibiotics in outpatient settings. BMJ. 2018;363:k3047. PMID: 30440341


THIS TOOLKIT
WAS PREPARED BY:

GUYLÈNE THÉRIAULT, MD, CCFP
Primary-Care Co-Lead, Choosing Wisely Canada

OLIVIA OSTROW, MD, FAAP
Pediatrics Lead, Using Antibiotics Wisely
Pediatrician, The Hospital for Sick Children

JEROME LEIS, MD, M.Sc., FRCPC
Clinician Lead, Using Antibiotics Wisely
Infectious Diseases Physician, Sunnybrook Health Sciences Centre

ALLAN GRILL, MD, CCFP (COE), MPH, FCFP, CCPE
Physician Advisor, The College of Family Physicians of Canada
Family Physician, Markham Stouffville Hospital

DOREEN DAY, MHSc
Project Manager, Pan-Canadian Initiatives, Choosing Wisely Canada

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