

October 12, 2011

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Dear Pharmacist:

Education for Quality Improvement in Patient Care (EQIP) is a joint program of the BC Ministry of Health Services, the BC Medical Association, and the University of BC. EQIP's Working Group includes representation from the College of Pharmacists of BC.

Through this program, general practitioners in the province receive personalized prescribing portraits that contain evidence-based messages alongside individualized prescribing data on specific drug topics. These prescribing portraits are completely confidential - provided not as audits, but rather as tools for self assessment.

Pharmacists play a key role in ensuring optimal use of medications. We are therefore providing you with the two most recent evidence-based tools that EQIP sent to physicians. These two topics were developed in collaboration with the BC Centre for Disease Control's *Do Bugs Need Drugs?*[®] program. You are receiving sample portraits with fictionalized data.

Please find enclosed:

1. A portrait on appropriate use of antibiotics for **uncomplicated cystitis**
 - Key message: Choose nitrofurantoin as empiric therapy for uncomplicated cystitis due to high rates of *E. coli* resistance to ciprofloxacin and trimethoprim-sulfamethoxazole (TMP-SMX) in B.C.
2. A portrait on appropriate use of antibiotics for three **upper respiratory tract infections**
 - Key message 1: Antibiotics are not indicated for acute bronchitis.
 - Key message 2: Antibiotics are indicated only for bacterial (not viral) sinusitis. Recommended agent for bacterial sinusitis is amoxicillin (alternatives: doxycycline, TMP-SMX). However, most cases of acute sinusitis are viral and do not require antibiotics.
 - Key message 3: Antibiotics are indicated for acute pharyngitis only when a culture confirms Group A Streptococcus. Treatment goal is to prevent Rheumatic Fever and recommended agent is penicillin V (alternatives: amoxicillin, erythromycin).

If you have any questions about the enclosed materials, please contact EQIP by telephone at 250-405-1940 or toll-free by fax at 1-866-406-0303.

Sincerely,



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Executive Director, Drug Use Optimization
Pharmaceutical Services Division,
BC Ministry of Health Services



How often is nitrofurantoin your first choice for UTI?

Your personal prescribing portrait for uncomplicated acute cystitis^{1,2}

Clinical Vignette



An otherwise healthy 30-year-old woman presents with frequency and dysuria. Her dipstick is positive for leukocytes and nitrites, which confirms your diagnosis of uncomplicated acute bacterial cystitis.

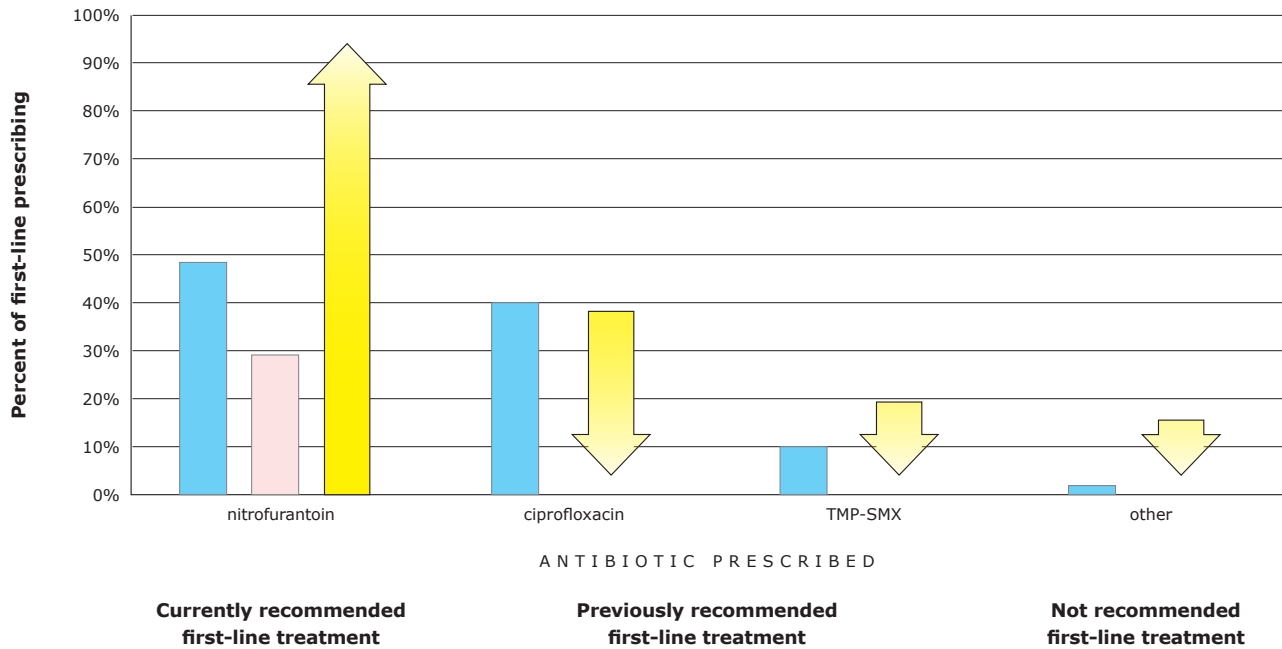
What would YOU prescribe?

Nitrofurantoin is now the first-line* (empiric) treatment for uncomplicated acute cystitis.

Escherichia coli (*E. coli*) resistance to ciprofloxacin and trimethoprim-sulfamethoxazole (TMP-SMX) now exceeds 20% in BC, thus limiting the effectiveness of these treatments.

Your First-Line* Prescribing for Cystitis in 2009 with BC Average and Target BC Average First-Line Prescribing^{2,3}

Prescribing data only shown for patients coded ICD-9:595 (cystitis): ■ Your Prescribing | ■ Provincial Prescribing | ■ Target Provincial Prescribing



*First-line, in this portrait, refers to the first antibiotic dispensed within 48 hours of coding 595 in an MSP claim, i.e. generally before results of a culture.

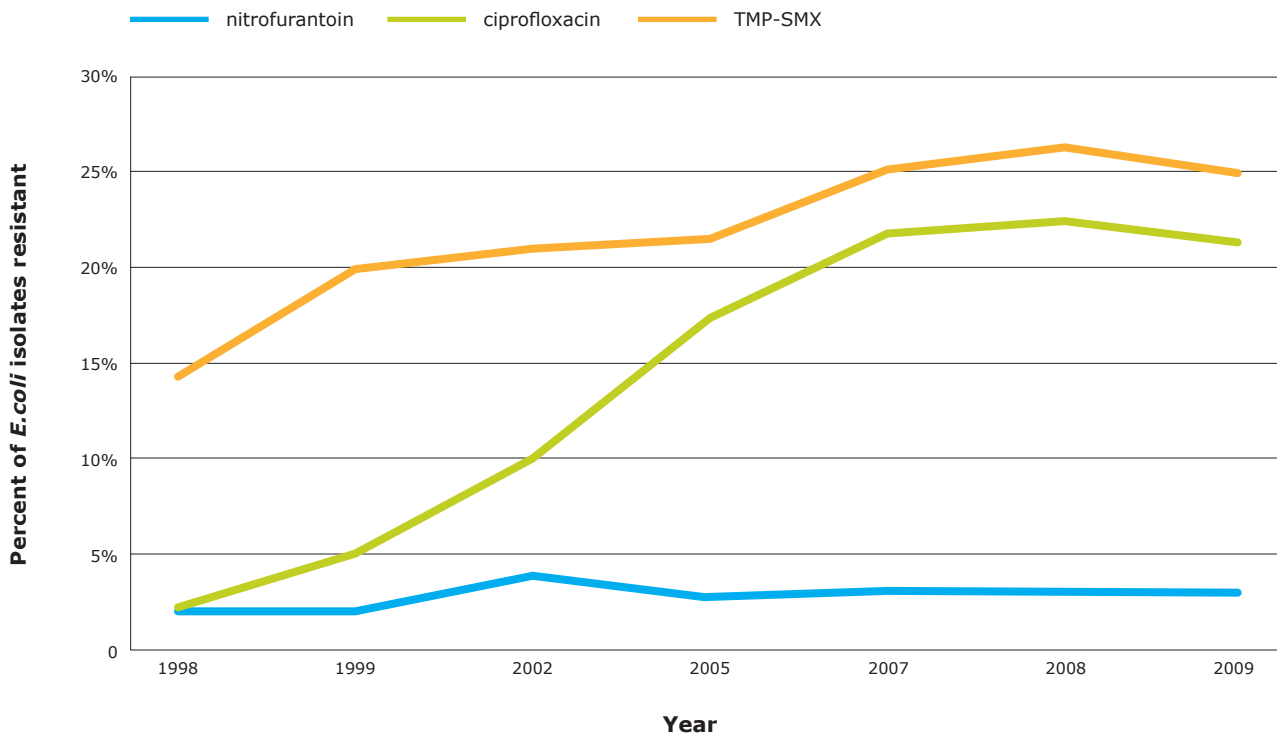
Fluoroquinolones and trimethoprim-sulfamethoxazole are not first-line treatments for uncomplicated acute cystitis.

Rates of *E. coli* resistance to ciprofloxacin mirror the increase in fluoroquinolone utilization.

Overuse of fluoroquinolones is contributing to resistance in other enteric Gram negative organisms.

Nitrofurantoin is a narrow spectrum antibiotic that acts only on urinary pathogens. Rates of *E. coli* resistance to nitrofurantoin have remained at 5% or less in BC over the past 15 years, despite increasing utilization.⁴

Rates of *E. coli* Resistance to Ciprofloxacin, Nitrofurantoin and TMP-SMX⁴



Notes

Inaccuracy in your personal prescribing portrait may arise from incomplete patient visit data or imprecise diagnosis coding.

1. A detailed explanation of the definitions and assumptions used to create this portrait is available at www.eqip.ca/UTI

Messages and resistance data provided by the BC Centre for Disease Control's *Do Bugs Need Drugs?* program.

- Where identifiable in the data, patients with complicating factors have been removed from your portrait. Approximately 25% of patients province-wide have been removed according to these criteria. Refer to www.eqip.ca/UTI for a comprehensive list of exclusions; refer to www.bugsanddrugs.ca for detailed treatment recommendations.
- "Target Provincial Prescribing" of nitrofurantoin is set at greater than 75% but less than 100% to allow for patients for whom nitrofurantoin is not indicated, such as those with an eGFR ≤ 60 mL/min. For these patients, nitrofurantoin may not reach adequate concentration in the urine.
- Epidemiology Services British Columbia Centre for Disease Control. Antibiotic resistance trends in the Province of British Columbia. August 2008. BC Centre for Disease Control. Available online: www.bccdc.ca/prevention/AntibioticResistance/default.htm



How do you manage first visits for acute bronchitis, sinusitis, and pharyngitis?

Clinical Vignette



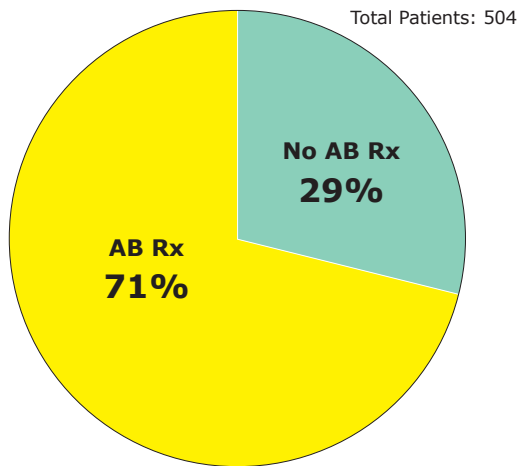
A 40-year-old woman presents with a sore throat, headache, and a productive cough that has lasted over a week. Other vital signs are normal and there are no abnormal chest sounds. She says she usually gets an antibiotic when a cold goes to her chest.

What would YOU do?

When managing the above conditions, avoid use of antibiotics unless there is clear evidence of bacterial sinusitis or Group A Streptococcal pharyngitis.



YOUR First Visit Management of Acute Bronchitis (Patients You Have Coded as 466 & 490) in 2009*



Antibiotics are not indicated for acute bronchitis^{2a}

Acute exacerbation of COPD is a different condition and requires different management. See Guidelines.^{2a}



PROVINCIAL First Visit Management of Acute Bronchitis (Patients Coded as 466 & 490) in 2009*

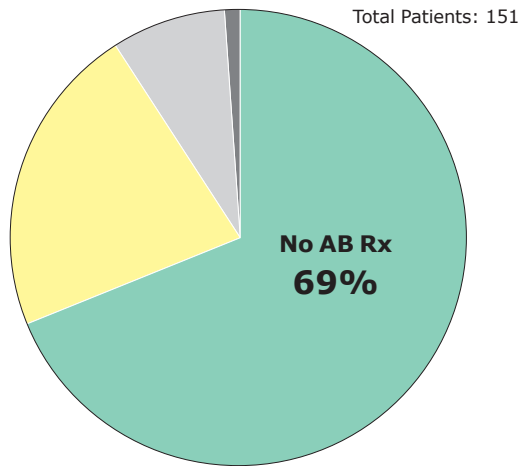
	No AB Rx	Macrolides	Penicillins	Fluoroquinolones	Other
Current Provincial Prescribing	151,944 (44%)	103,406 (30%)	42,236 (12%)	18,939 (6%)	25,467 (7%)
Target Provincial Prescribing	100%	↓	↓	↓	↓

*Patients with chronic obstructive pulmonary disease (COPD) have been removed from the data. COPD is defined as one hospitalization or two medical visits occurring within 365 days and coded with a diagnostic code of 491-Chronic bronchitis, 492-Emphysema, or 496-Chronic airways obstruction, not elsewhere classified where the patient was aged 45 or older.



YOUR First Visit Management of Acute Sinusitis (Patients You Have Coded as 461) in 2009

■ No AB (69%) |
 ■ Amoxicillin (22%) |
 ■ Doxycycline (0%) |
 ■ TMP-SMX (0%)
■ Fluoroquinolones (0%) |
 ■ Macrolides (8%) |
 ■ Other (1%) — *Should be reserved for third-line treatment*



Only 0.5% to 2.0% of sinusitis episodes are bacterial.^{2a}

Acute bacterial infection is more likely if:

Symptoms persist for at least 10 days or worsen after 5–7 days with both nasal congestion/purulent nasal discharge **and** facial pain +/- fever, maxillary toothache or facial swelling.

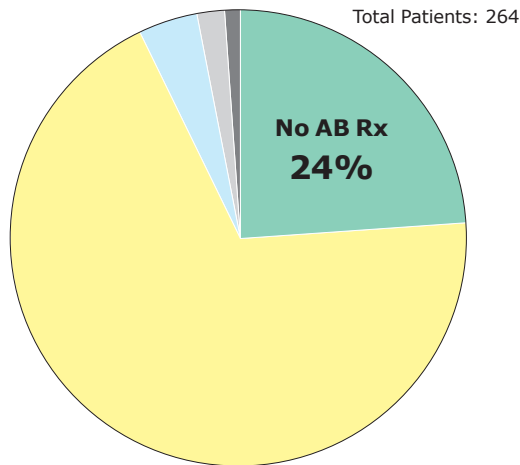
Recommended treatment (only when indicated):

Amoxicillin, 10 days (alternatives: doxycycline, trimethoprim-sulfamethoxazole [TMP-SMX]).^{2a} (Children under 8 years should not receive doxycycline. Children under 2 months should not receive TMP-SMX.)



YOUR First Visit Management of Acute Pharyngitis (Patients You Have Coded as 462) in 2009

■ No AB (24%) |
 ■ Penicillin V (0%) |
 ■ Amoxicillin (69%) |
 ■ Erythromycin (4%)
■ Fluoroquinolones (0%) |
 ■ Macrolides (2%) |
 ■ Other (1%) — *Not recommended for pharyngitis*



Only Group A Streptococcal pharyngitis requires treatment with an antibiotic. Group A Strep is found in 10–20% of patients with sore throat.^{2a,b}

An accurate diagnosis of Group A Strep requires a culture. It is safe to delay treatment until the culture results are available. Patients should take the full course of treatment to prevent rheumatic fever.

Recommended treatment (only when indicated):

Group A Strep is invariably sensitive to penicillin V, 10 days (alternatives: amoxicillin, erythromycin).^{2a,b}

Notes

Use of codes other than 466, 490, 461 and 462 will result in an inaccurate portrait. See enclosed leaflet for a list of respiratory related ICD-9 codes.

- A detailed explanation of the definitions and assumptions used to create this portrait is available at www.eqip.ca/URTI. Messages and evidence provided by the BC Centre for Disease Control's *Do Bugs Need Drugs?* program.
- For complete treatment recommendations, refer to:
 - Blondel-Hill E, Fryters S. Bugs and Drugs: Capital Health Edition 2006. Capital Health Authority, Edmonton, 2006. Available online at www.bugsanddrugs.ca
 - Guidelines and Protocols Advisory Committee (GPAC): Sore throat—Diagnosis and Management. Effective March, 2003. www.bcguidelines.ca/gpac/pdf/throat.pdf