

### Antibiotic Prescribing Recommendations for Common Conditions in Primary Care

Condition	Empiric Antibiotic Therapy	Alternative (PCN Allergy)	Comments
Common cold / non-specific upper respiratory infection <sup>1,2</sup>	No antibiotics	No antibiotics	
Acute uncomplicated bronchitis <sup>1,2</sup>	No antibiotics	No antibiotics	<p>Cough may last up to 6 weeks. Antibiotics are not routinely indicated, regardless of cough duration.</p> <p>Focus on ruling out pneumonia:</p> <ul style="list-style-type: none"> <li>Rare among otherwise healthy adults in the absence of abnormal vital signs (HR ≥ 100 beats/min, RR ≥ 24 breaths/min, or temp ≥ 38 °C) and abnormal lung examination findings (focal consolidation, egophony, fremitus).</li> <li>Colored sputum does not indicate bacterial infection.</li> <li>For most cases, chest radiography is not indicated.</li> </ul>
Acute rhinosinusitis <sup>1,2,3,4</sup>	<p><b>Only if bacterial</b> (see comment):</p> <p>--Amox/clav 500mg/125mg TID x 5-7 days</p> <p>--Amox/clav 875mg/125mg BID x 5-7 days</p> <p>--Amoxicillin 500mg TID x 5-7 days</p>	<p><b>Only if bacterial</b> (see comment):</p> <p><u>Preferred:</u></p> <p>--Doxycycline 100mg BID or 200mg daily x 5-7 days</p> <p><u>Alternative:</u></p> <p>--Levofloxacin 500mg daily x 5-7 days</p> <p>--Moxifloxacin 400mg daily x 5-7 days</p>	<p>Approximately 98% of cases are viral.</p> <p>Reserve antibiotics for:</p> <ul style="list-style-type: none"> <li>Symptoms &gt; 10 days without improvement</li> <li>Severe symptoms for &gt; 3 days (high fever &gt; 39 °C and purulent nasal discharge or facial pain)</li> <li>Double sickening – worsening &gt; 3 days after improvement of a prior typical viral illness</li> </ul>
Pharyngitis <sup>1,2,5</sup>	<p><b>Only if positive streptococcal testing</b> (see comment):</p> <p>--Penicillin VK 250mg QID or 500mg BID x 10 days</p> <p>--Amoxicillin 500mg BID x 10 days</p> <p>--Benzathine penicillin G, intramuscular, 1.2 million units x 1 dose</p>	<p><b>Only if positive streptococcal testing</b> (see comment):</p> <p><u>No history of anaphylaxis / Type I hypersensitivity:</u></p> <p>--Cephalexin 500mg BID x 10 days</p> <p>--Cefadroxil 1 gram daily x 10 days</p> <p><u>History of anaphylaxis:</u></p> <p>--Clindamycin 300 mg TID x 10 days</p> <p>--Azithromycin 500mg x 1, then 250mg daily x 4 days</p>	<p>More than 85% of cases are viral.</p> <p>Determine need to test by Centor criteria:</p> <ul style="list-style-type: none"> <li>(1) Fever by history, (2) tonsillar exudates, (3) tender anterior cervical adenopathy, (4) absence of cough</li> </ul> <p>If &lt; 3 Centor criteria, <u>no testing, no antibiotic treatment</u></p> <p>If 3 or more Centor Criteria:</p> <ul style="list-style-type: none"> <li>Rapid antigen detection test and/or culture for Group A Strep</li> <li><b>Give antibiotics only if positive</b></li> </ul>

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Non-purulent skin and soft tissue infection (cellulitis, erysipelas) <sup>6</sup>	--Penicillin VK 250 – 500mg Q6hrs x 5 days --Cephalexin 500mg Q6hrs x 5 days	<u>No history of anaphylaxis / Type I hypersensitivity:</u> --Cephalexin 500mg Q6hrs x 5 days <u>History of anaphylaxis:</u> --Clindamycin 300mg QID x 5 days --Linezolid 600mg BID x 5 days (avoid if patient is on an SSRI)	Most common etiology: Beta-hemolytic Strep  Extend treatment if infection has not improved within 5 days.  Doxycycline and TMP-SMX may not provide adequate streptococcal coverage.
Purulent skin and soft tissue infection (abscess, furuncle, carbuncle) <sup>6</sup>	<b><u>Only if systemic signs of infection</u></b> (see comment): --Doxycycline 100mg BID x 5 days --TMP-SMX 1-2 DS tabs BID x 5 days		Most common etiology: <i>Staph aureus</i> (MSSA or MRSA)  First-line treatment is incision and drainage. Culture of pus is recommended. Administer adjunctive antibiotics if signs of systemic infection (temp >38°C or <36°C, RR >24, HR >90, or WBC >12,000 or <400 cells/μL)
Urinary Tract Infection (acute uncomplicated cystitis) <sup>7,8</sup>	<b><u>Only treat if the patient has symptoms</u></b> (see comment): <u>First line:</u> --Nitrofurantoin 100mg BID x 5 days (avoid if CrCl < 60) --TMP-SMX 1 DS tab BID x 3 days --Fosfomycin 3g x 1 dose <u>Alternative agents:</u> --Cefuroxime 250mg BID x 7 days --Ciprofloxacin 250mg BID x 3 days (only if no alternative treatment options)		Only screen for and treat asymptomatic bacteriuria in pregnant patients and in those who will undergo a urologic procedure. In all other patients, do not screen for asymptomatic bacteriuria, and do not treat a positive UA or urine culture unless the patient has symptoms suggestive of a urinary tract infection.  In men: <ul style="list-style-type: none"> <li>• Consider prostatitis</li> <li>• Consider urethritis (gonorrhea and chlamydia) if sexually active</li> <li>• Consider longer treatment courses</li> </ul>
COPD Exacerbation <sup>9</sup>	<b><u>Only if moderate to severe illness</u></b> (see comment): --Amoxicillin 500mg TID x 5-10 days --Azithromycin 500mg x 1, then 250mg daily x 4 days --Doxycycline 100mg BID x 5-10 days --Amox/clav 875mg/125mg BID or 500mg/125mg TID x 5-10 days		Triggers may include viral or bacterial etiologies.  Treatment may include short-acting bronchodilators, corticosteroids, and antibiotics.  Reserve antibiotics for patients with moderate to severe illness, with three cardinal symptoms (increase in dyspnea, increase in sputum volume, and increase in sputum purulence), or two cardinal symptoms, if one is increase in sputum purulence.

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### References

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3. Chow AW, Benninger MS, Brook I, et al. IDSA clinical practice guideline for acute bacterial rhinosinusitis in children and adults. *Clin Infect Dis.* 2012;54(8):e72-e112. doi:10.1093/cid/cir1043.
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8. Nicolle LE, Bradley S, Colgan R, et al. Infectious Diseases Society of America guidelines for the diagnosis and treatment of asymptomatic bacteriuria in adults. *Clin Infect Dis.* 2005;40(5):643-654. doi:10.1086/427507.
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Subject: Antibiotic Prescribing Feedback: Mar - May 2017

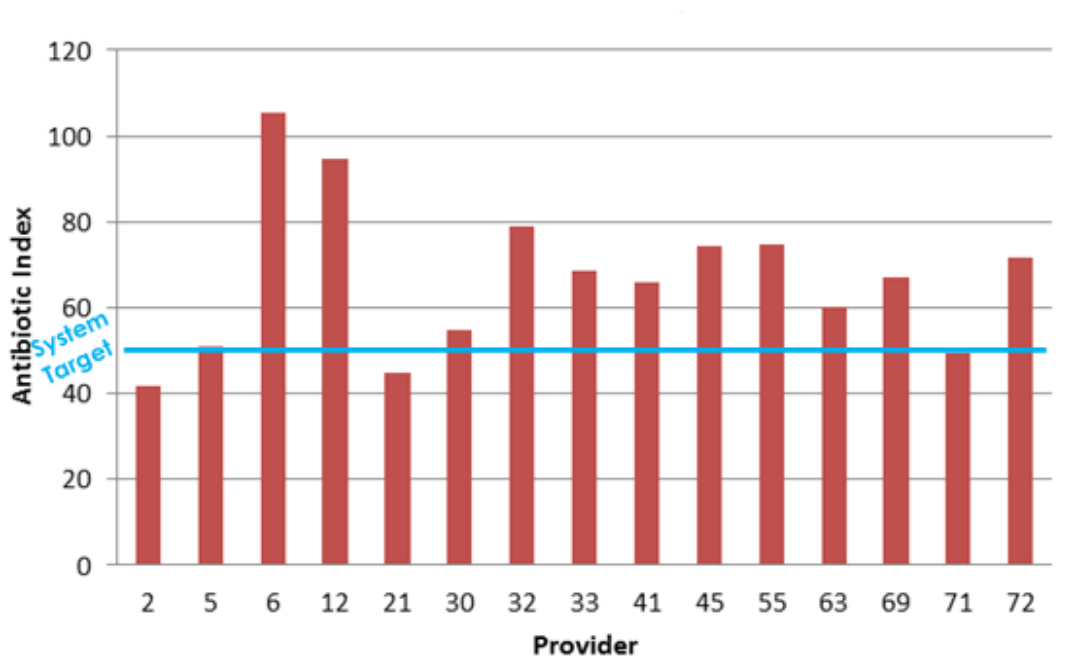
Attached:  Antibiotic Prescribing Recommendations for Common Conditions in Primary Care - FINAL.docx

Dear Dr. X,

Your Antibiotic Index for Mar – May 2017 was 42. This means you prescribed antibiotics at rate of 42 prescriptions per 1,000 patients per year.

The **VA System Target Antibiotic Index is 48**.

The figure below demonstrates your prescribing practice compared to that of your primary care colleagues. You are number 2.




**Your antibiotic index suggests you may be prescribing antibiotics appropriately. Your target antibiotic index may be higher or lower than the target for the system.**

The antibiotic prescribing recommendations are attached for your reference.

Please feel free to reach out with any questions.

**Supplementary Figure 1.** Example email to a clinician prescribing at or below the VA system target antibiotic index.

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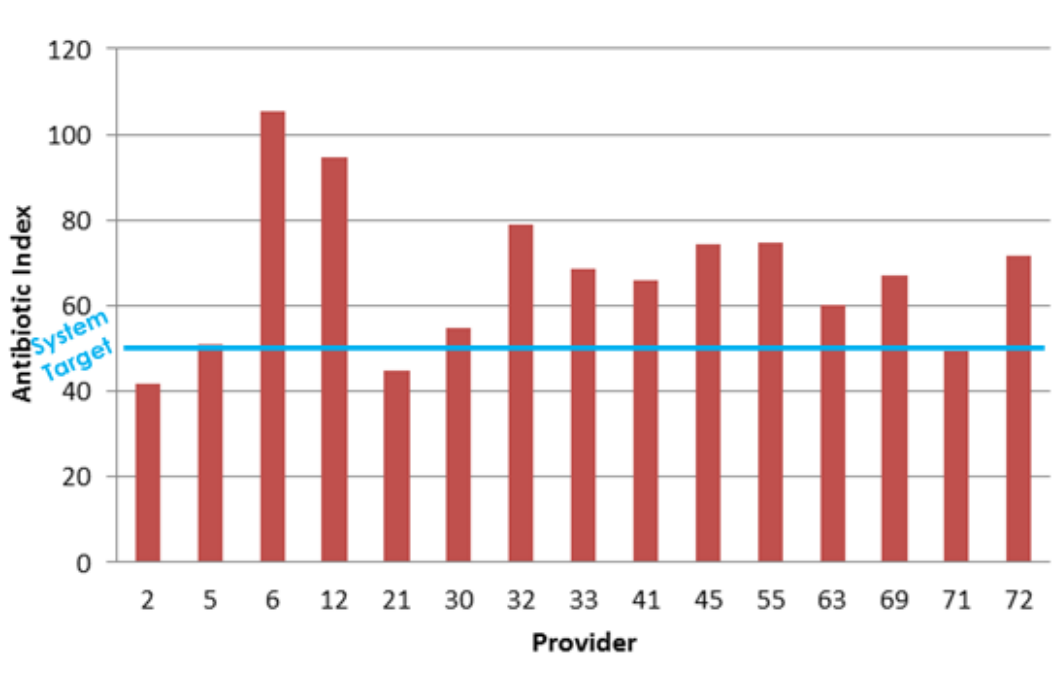
Attached:  Antibiotic Prescribing Recommendations for Common Conditions in Primary Care - FINAL.docx

Dear Dr. Y,

Your Antibiotic Index for Mar – May 2017 was **95**. This means you prescribed antibiotics at rate of 95 prescriptions per 1,000 patients per year.

The **VA System Target Antibiotic Index is 48**.

The figure below demonstrates your prescribing practice compared to that of your primary care colleagues. You are number 12.



**Your antibiotic index is higher than the target for the system. You may be writing unnecessary antibiotic prescriptions. Your target antibiotic index may be higher or lower than the target for the system.** Please review the attached recommendations.

Please feel free to reach out with any questions.

**Supplementary Figure 2.** Example email to a clinician prescribing above the VA system target antibiotic index.