Member Comments – Page 2-4

1st in a series: What would you do?
Best Practices/Barriers on Antibiotic Use and Bronchitis

CA ACP previously announced its partnership in a Choosing Wisely® grant led by the Integrated Healthcare Association with the goal of helping physicians, patients and other health care stakeholders think and talk about the overuse of health care resources. Our primary role in this effort is to engage and inform you about the resources available to effectively communicate with your patients and help reduce unnecessary tests and treatments, consistent with the culture of Choosing Wisely.

With that goal in mind--We invite your participation in the following exercise that is the first in a series of challenges to highlight Choosing Wisely and ACP’s High Value Care initiative.

...What would you do?

A 55-year old man comes to see you for a productive cough for the past 3 days. He had a “cold” about a week ago and describes it as a “doozy” with a runny nose, sinus congestion, a change in the character of his voice, and watery eyes. He took some over the counter cold remedies, but then developed the frequent coughing episodes and began producing yellowish-green sputum that has gotten thicker over the past couple of days. He coughs a lot at night, can’t sleep, and has bilateral lower lateral chest pain when he coughs a lot. He smokes ½ pack of cigarettes per day and has for the past 40 years. He received the influenza vaccine and there’s no influenza currently circulating in the community. He’s afebrile and his lungs are clear to auscultation. He has coryza and cough, but no sinus tenderness. His pulse oximetry in your office shows an oxygen saturation of 93% on room air. He says he really needs an antibiotic and says his wife had similar symptoms and got better when her doctor gave her antibiotics; he says he really needs a good night’s sleep and can’t miss work as a grocery store manager.

Which of these treatments would you do?

a) Treat him for acute bronchitis with azithromycin
b) Order a CBC with differential and a procalcitonin
c) Treat him for community acquired pneumonia with levofloxacin
d) Admit him to the hospital for intravenous antibiotics of azithromycin and ceftriaxone
e) Prescribe an albuterol inhaler and cough medicine
f) Treat him for an exacerbation of COPD (chronic bronchitis) with ciprofloxacin or azithromycin

◊ Tell us what you think! What’s the best thing to do?
◊ Do you (or your group) track your antibiotic use?
◊ How often do you encounter this situation for your patients (or your friends and family)?
◊ What barriers to appropriate use do you encounter?
◊ How do you deal with it? Any advice for your colleagues?
Comments In Response to Case Study

1. E -Prescribe an albuterol inhaler and cough medicine
2. A - Treat for bronchitis and azithromycin
3. Patient’s symptoms are because of post nasal drip and cold. I will prescribe albuterol inhaler for his COPD and also some cough medicine No antibiotics or further lab test. Patient should consume lots of fluids. Advise to come back if symptoms do not improve or worsen
4. What is the past history of infections, including during childhood? Or this is his first episode?
5. B - Order a CBC with differential and a procalcitonin. Also consider CXR
6. E - Prescribe an albuterol inhaler and cough medicine. Yes-we do track antibiotic use. I spend a little extra time to educate my patients. Common barrier is when other doctors do not practice the same way, patients get mixed information. If every physician practice reasonable, patients may not be happy initially, but they learn ultimately
7. E - Prescribe an albuterol inhaler and cough medicine. He has a viral URI, bronchitis worsened re smoking. Abx are not indicated; symptomatic Rx is
8. B - Order a CBC with differential and a procalcitonin. The best thing to do? Cough syrup and sleeping with head and torso elevated so Rhinorrhea snot goes more to esophagus than larynx. Ps. I am presuming he does not have a polymorphonuclear leukocytosis. I am not a frequent user of antibiotics in this sort of presentation, which is probably viral...would tell him to stop smoking. This scenario is fairly common in my practice. When I explain to my patients why antibiotics are a bad idea for this presentation, they go along with my decision. I follow-up, though, by calling them (which makes them feel better) and letting them know their lab results as soon as they are posted on EMR: If CBC and procalcitonin suggests bacterial infection, or his course worsens, I will, of course, re-evaluate him and rethink the therapy.
9. E -Prescribe an albuterol inhaler and cough medicine. Patient’s symptoms are that of a virus and it is the cough that bothers him most. The albuterol and cough medicine will be most helpful. I’d explain why antibiotics are not appropriate, and would suggest that his wife got better in spite of the antibiotic she was given. I would have him return if he develops fever, increase SOB or his symptoms don’t start to improve after 7-10 days.
10. E - Prescribe an albuterol inhaler and cough medicine. With two-week follow-up appointment.

11. The patient described in this clinical vignette is likely suffering from acute bronchitis as a sequela of the URI that he suffered the prior week. URI are commonly viral especially with the symptoms that he reported and the progression to acute bronchitis is not uncommon. Common "bugs" include: rhinovirus, coronavirus, influenza, parainfluenza, RSV, and human MPV. Given patient is not otherwise immunosuppressed and no concern for influenza per the stem, symptomatic management is appropriate. Up to 50% of individuals will have purulent sputum due to epithelial & inflammatory cell
sloughing; purulent sputum DOES NOT equal bacterial infection. Given lack of fever (which would cause concern for influenza vs bacterial infection) and no other concerning systemic features on ROS and/or physical exam, then treatment of viral bronchitis is appropriate.

**Proposed treatments:**
a) Treat acute bronchitis with azithromycin: Not indicated given likelihood of viral bronchitis;
b) CBC with diff and procalcitonin: Given lack of fever, tachycardia, tachypnea, significant hypoxemia, or concern for consolidation on physical exam; the pre-test probability of true bacterial pneumonia is low and thus these tests are not useful. If the clinical situation was more unclear and the pre-test probability was at least intermediate for a bacterial pneumonia, then an argument for these tests could be made;
c) CAP with Levaquin: No signs/symptoms of CAP, thus abx not indicated;
d) Admit with IV abx: Again, no need for abx, especially no concerns that would require admission to inpatient hospitalization;
e) Prescribe albuterol and cough medicine: Despite the lack of great data on this intervention, I would likely prescribe either albuterol vs ipratropium inhaler and codeine based cough suppressant if not otherwise contraindicated; and
f) COPD exacerbation treatment: Given this is first report of this condition and with prior strong URI symptoms, then would not treat for COPD. However, would discuss smoking cessation with patient and discuss concerns of COPD in future.

**Do we track abx use:**
- Right now we are not formally tracking the use of abx in the outpatient setting. However, we are more widely broadcasting high value care and responsible ordering practices.

**How often encountered:**
- This clinical situation is encountered very frequently and during the winter/early spring, it would be easy to say it is encountered multiple times/day.

**Barriers/How to deal with it:**
- There are definite barriers that have come up. Patients that otherwise become excessively demanding and upset by the lack of abx prescription are definitely not uncommon. However, I’ve found that by actively listening to their concerns and comments, there is a lot of room for therapeutic reassurance. While for physicians that see this complaint thousands of times over their careers, these symptoms may be brand new for a patient or maybe they have been accustomed to receiving abx for this and they believe that you are now asking them not to receive the "standard of care". By educating the patient in a compassionate way, they ultimately have a better understanding of their condition and can actually help provide "herd reassurance" to their family and friends with the same symptom complaints.
- Another barrier is that at our academic institution, we see a number of post-transplant individuals on heavy immunosuppressive regimens. This can also be a barrier to high value care due to the fear we have in not treating aggressively. While these patients may need to be observed more aggressively/carefully for
development of infections that require therapy and to think "outside of the box" at times to ensure we aren't missing a clear alternative diagnosis, these patients can just as well have a viral bronchitis.

Specific for this patient: I would have a compassionate discussion with the patient that includes touching base about all of the symptoms that he is reporting to ensure that he doesn’t think I’m cutting him off or not having sufficient concern. With respect to his nocturnal cough and staying up throughout the night, I would discuss with him the issue with respect to worsened airway reactivity at night, similar to asthmatic patients. I would also do a quick review to ensure we weren’t missing other common diagnoses such as concurrent post nasal drip or GERD. Would then touch base about his lower bilateral chest pain when he coughs excessively and inform him that this is likely related to muscle strain, but would clarify to ensure no component of pleurisy. I would discuss then that this is likely viral acute bronchitis and that the gold standard of care is supportive. Abx treatment in this case presents putting the patient at risk for adverse effects of the abx without benefit of treating a true bacterial infection and causes further risk of development of abx resistance in the community. Additionally, I would commit some time to discussing smoking to identify where this patient fits on the transtheoretical model of change (pre contemplative, contemplative, planning, action, etc.) and discuss (if appropriate) possible interventions for smoking cessation (quit date, supportive resources, prescription therapy, etc.).