A clinical diagnosis of bacterial pneumonia in nursing home residents most often can be treated with a single oral course of antibiotic therapy targeted toward community-acquired pneumonia pathogens, Ghinwa Dumyati, MD, said at the AMDA — The Society for Post-Acute and Long-Term Care Medicine’s annual conference.

Dr. Dumyati, an infectious disease specialist, serves as a professor of medicine at the University of Rochester Medical Center and directs the Rochester (NY) Nursing Home Collaborative (http://www.rochesterpatientsafety.com).

In formulating pneumonia treatment guidelines (http://bit.ly/2Ydfjcf) several years ago for nursing home residents, “we decided we’d treat this population as community-acquired pneumonia (CAP), but we’d also look at the severity of illness and the follow-up,” Dr. Dumyati said. “If patients were not getting better and we’d started with a narrow agent for CAP, then we’d broaden.”

A major goal, she said, was to reduce the use of quinolones. Cefpodoxime is the recommended first-line agent for uncomplicated bacterial pneumonia with mild to moderate pneumonia symptoms, with amoxicillin/clavulanate as an option if aspiration is suspected. Doxycycline is another first-line alternative — for instance, for patients who are “highly” allergic to beta-lactam antibiotics, she said. Levofloxacin or moxifloxacin are reserved as second-line agents.

When pneumonia symptoms are severe or fail to respond to initial therapy, intramuscular ceftriaxone and oral doxycycline are recommended — unless there’s a high likelihood of Pseudomonas aeruginosa, in which case levofloxacin is the recommendation. Based on the guidelines and the best available evidence, “this is what we decided to do in our community,” said Dr. Dumyati.

The guidelines also recommend a treatment duration of 5 days, provided the patient has been afebrile for 48 to 72 hours, is breathing without supplemental oxygen, and has no more than one symptom of clinical instability (heart rate > 100 beats/minute, respiratory rate > 24 breaths/minute, and systolic blood pressure of 90 mm Hg or less). “We’ve significantly reduced antibiotic use in our nursing homes overall with just going to 5 days’ duration for bacterial pneumonia if patients improve, because it’s such a common infection,” she said.

A diagnosis of pneumonia generally requires a combination of respiratory and constitutional symptoms. Mobile chest X-rays are not only hard to obtain in nursing home residents, but the images have relatively poor quality, and radiologists disagree frequently on the presence or absence of infiltrates, pleural effusions, and other findings, she said.

Also, previous films are often unavailable for comparison, which can be a problem because many older adults have abnormal chest X-rays. Given these challenges, “as a group in Rochester, we decided that we will not look at the chest X-ray alone,” she said.

Differentiating bacterial from nonbacterial etiologies is important, though it still is “not easy,” Dr. Dumyati said. A white blood cell count of 14,000 cell/mm³ or greater, or left shift, is suggestive of a bacterial infection. But with respect to other tests, there are no clear winners. Serum procalcitonin levels can be helpful in differentiating bacterial and viral respiratory infections, for instance, but the test is “expensive, and there’s a delay in results,” she said. She noted that in Rochester, “there’s more use of it in the hospital.”

Sputum cultures may yield the culprit pathogen, but the cultures are “usually colonized with multi-drug-resistant organisms” and tend not be used in many nursing homes. “It’s a dilemma,” she said. “If the sputum is contaminated with MRSA [methicillin-resistant Staphylococcus aureus], you might treat for MRSA when it’s not really the [pneumonia-causing] pathogen.”

Dr. Dumyati also said she generally doesn’t advise ordering a full respiratory viral panel “unless there is an outbreak,” in which case she would order the panel for a couple of residents. More often, “we get a viral PCR [polymerase chain reaction] test for rhinovirus, influenza, and parainfluenza,” she said. But because these agents are “much cheaper,” she said, noting that she pushes for routine 48-hour post-antibiotic initiation reviews.

The Rochester treatment guidelines do not address MRSA because it’s preferred overall that MRSA pneumonia be treated in the hospital, she noted.

Empiric treatment of pneumonia should consider risk factors for multi-drug-resistant pathogens, such as antibiotic use in the prior 90 days, recent hospitalization, poor functional status, and immune suppression, Dr. Dumyati said. In general, underlying resident characteristics are a more important risk factor for multi-drug-resistant organisms than exposure to a specific health care facility, she said.

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Overtesting and Overtreating: A Problem With C. difficile

Christine Kilgore

Testing for Clostridioides difficile should be done only for patients who have a new onset of unexplained “true diarrhea,” which means three or more loose stools in 24 hours — uniform stools that take the shape of a collection container, Ghinwa Dumyati, MD, said at the AMDA — The Society for Post-Acute and Long-Term Care Medicine’s annual conference.

Testing for C. difficile should be done only for patients who have a new onset of unexplained “true diarrhea,” which means three or more loose stools in 24 hours — uniform stools that take the shape of a collection container, Ghinwa Dumyati, MD, said at the AMDA — The Society for Post-Acute and Long-Term Care Medicine’s annual conference.

The need for more careful screening is one of the “biggest issues” with C. difficile testing today, said Dr. Dumyati, who directs the Rochester (N.Y.) Nursing Home Collaborative, part of a larger citywide initiative to prevent C. difficile (http://www.rochesterpatientsafety.com). “We’re testing everyone and they’re positive, just as with urinary tract infections, and we might be giving them antibiotics they don’t need.” You could even end up putting people in isolation who don’t need to be.

She issued one more plea: To not perform repeat testing. “There is no test of cure,” said Dr. Dumyati, who is also a professor of medicine at the University of Rochester Medical Center. “Because once you have C. difficile, you can be colonized for [at least] several weeks afterwards.”

There is no consensus on the best laboratory testing method. Using a nucleic acid amplification test (NAAT) alone is one option, she said, but it’s recommended only if there are institutional criteria on careful screening (for instance, the laboratory will reject formed stool). The other option, as recommended in the most recent national guidelines, is multistep testing that builds upon a toxin enzyme immunoassay (EIA) test. Either NAAT with confirmation of a toxin via a toxin EIA test, or a glutamate dehydrogenase (GDH) EIA test plus toxin EIA test that is arbitrated by NAAT if the toxin EIA test is negative.

Toxin EIA tests, which detect free toxins, have low sensitivity and moderate specificity. GDH EIA tests, which detect the common C. difficile antigen, have high sensitivity but low specificity. “That’s why there’s been a push overall to do PCR [polymerase chain reaction],” Dr. Dumyati explained. In the Rochester community, she said, “some do just the PCR, and others [take a multistep approach].”

The most recent guidelines for C. difficile infection from the Infectious Diseases Society of America (IDSA) and Society for Healthcare Epidemiology of America (SHEA) were published last year (Clin Infect Dis 2018;66:e1–e48).

Vancomycin or fidaxomicin are the drugs of choice for an initial episode of C. difficile infection, and metronidazole is recommended only for mild disease or when access to the other drugs is limited. The newer antibiotic fidaxomicin has less of an effect on the microbiome and has been associated with a nearly 10% reduction in recurrence. “The issue,” Dr. Dumyati said, “is the cost ... $3,600 for 10 days.”

Fecal microbiota transplantation is recommended for patients with multiple recurrences who have failed antibiotic regimens. And, although it’s not included in the IDSA/SHEA guidelines, bezlotoxumab, a human monoclonal antibody that binds to C. difficile toxin B and neutralizes its effect, is another choice for recurrent disease, Dr. Dumyati said. Research has shown that bezlotoxumab does not influence cure rates significantly in patients with C. difficile.