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GERIATRIC EMERGENCY DEPARTMENT NEWSLETTER

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Influenza Update: Diagnosis and Treatment of Older Adults with Possible Influenza in the Emergency Department

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Older adults with influenza present to the ED with nonspecific symptoms and/or exacerbations of co-morbid illnesses. As influenza is both more difficult to diagnose and more deadly in older adults, there are several nuances to consider.

Influenza affects several high-risk persons. What is unique about older adults?

1. Emergency Department utilization for influenza is higher among those who have not been vaccinated.
2. In the United States, persons aged 65 and older have the highest rate of influenza-associated hospitalization, followed by those aged 50- 64, and young children.
3. Mortality rates from influenza are highest in adults aged >=65 years.

Consider these practices when an older adult presents to the Emergency Department with suspected influenza:

1. **Provide a mask** for the patient during the ambulance transport as well as during the time of registration. Isolation should continue during the initial diagnostic testing, and during the assessment and the care. A face mask and hand hygiene should be used by providers. Likewise, the patient should wear a mask when being transported outside of their room. Isolation techniques should continue while the patient is awaiting hospitalization.

2. **Key features of the presentation include an abrupt onset of fever, cough, and muscle aches.** Additional features include: sore throat, runny nose, headache, fatigue, and generalized weakness. Younger individuals may have vomiting and diarrhea. Older adults may not have a fever, when defined as temperature of 38C. Influenza testing is not required to confirm the clinical diagnosis or to start antiviral medications, when influenza viruses are circulating in the community.

3. **Influenza often presents atypically in older adults, without fever or upper respiratory symptoms as chief complaint**. During flu season, consider influenza when evaluating older adults without an obvious case of: fever, delirium, COPD exacerbation, pneumonia, generalized weakness, and accelerated functional decline. Review medications which had been appropriate during a baseline, but which now may need adjustment, e.g. diuretics, hypoglycemic agents, psychotropic medications, cardiac medications.

4. **Influenza testing may be helpful when it will change clinical management decisions:** a) when influenza is not yet circulating in the community, b) when the patient lives in an institutional setting, so as to define an outbreak, and c) to define whether or antibiotics are needed.

5. **Initial rapid diagnostic testing for influenza** is a nasopharyngeal swab, which takes about ten minutes. A negative test may not rule out influenza. Testing (among those who will not be admitted) should be performed when the test results will influence treatment. Molecular assays are recommended for hospitalized patients with suspected influenza. Train staff on the proper technique of nasopharyngeal swab collection, as test accuracy depends on good specimen collection.

6. **Initial treatment** is oseltamivir 75 mg po BID for five days (adjust for creatinine clearance of less than 60). Early treatment shortens the duration of symptoms by one day. Peramivir is available at 600 mg intravenous infusion over 15-30 minutes as a single dose. Adjust the dosage for renal disease. The cost for this medication is ten times that of oseltamivir. The duration can be continued for 5 days in severe cases.

7**. "Red Flag" symptoms include:** dyspnea, pain or pressure in the chest / abdomen, sudden dizziness or confusion. Flu-like symptoms that improve but then return with fever and respiratory distress should prompt consideration of secondary bacterial pneumonia. The most serious complications include: pneumonia, respiratory failure, ear and sinus infections, myocarditis, acute myocardial infarction, encephalitis, rhabdomyolysis, multi-organ failure, sepsis, and worsening of chronic conditions.

8. **Additional considerations for admission to the hospital for older patients include:** inability to take oral fluids; dehydration; change in mental status or in function; those with an uncertain clinical course or who are frail.

9. **Chemoprophylaxis should be initiated for nursing home outbreaks:** oseltamivir 75 mg po daily for two weeks and then one week longer than the duration of the outbreak. Adjust for impaired renal function. Those (residents and staff members) who have not been vaccinated should be offered the inactivated influenza vaccine. Chemoprophylaxis (before or after exposure) of individuals or in household contacts has moderate to high effectiveness, but is not routinely recommended. Nuances of chemoprophylaxis are outlined on the Center for Disease Control website. For Emergency Department patients diagnosed with flue and returning to a residential facility, discuss diagnosis and treatment with their attending physician to facilitate institutional infection control measures.

10. **Boarding of older patients** who are being treated for influenza poses risk for functional decline and delirium. Strategies to mitigate risk should be deployed.

Uyeki TM. Influenza. Annals of Internal Medicine. 2017; 167(5):ITC33-ITC48.
Influenza vaccine for 2018-2019. The Medical Letter. 2018; 60(1558):169-174.

Aurora Geri ED Sites

Aurora Sheboygan Memorial Medical Center
2629 N 7th St, Sheboygan, WI 53083

- Rommel Bote, MD
- Amber Koll, ER PA-C
- Lisa Entringer, RN, ED CM
- Craig Schicker, ED Manager
- Vicki Karrels, Interim QI Coordinator

Aurora West Allis Medical Center
8901 W Lincoln Ave, West Allis, WI 53227

- Sean Nolan, DO
- Kristen Nitka, ED Educator
- Amy Gartmann, QI Coordinator
- Caroline Rowley, SW

Aurora St. Luke's South Shore
5900 S Lake Dr, Cudahy, WI 53110

- Eric Almeida, MD
- Yvette Procter, ED Manager
- Jodie Beidatsch, RN, CNS
- Ruthanna Ringel, SW

Aurora Medical Center Oshkosh
855 N Westhaven Dr, Oshkosh, WI 54904

- Daniel Gale, MD
- Nicole Slusser, RN, ED Manager
- Meri Kelm, SW
- Trina Batley, QI Coordinator
- Ambir Dorn, RN, ED Supervisor

Aurora Sinai Medical Center
945 N 12th St, Milwaukee, WI 53233

- Michael Cicero, MD
- Travis Bond, ED Manager
- Bobby Davis, SW
- Melissa Spiering, Director of Quality