

INFLUENZA AND PNEUMOCOCCAL PROPHYLAXIS

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Week 11

Educational Objectives:

1. Describe the indications for influenza vaccination according to risk groups
2. Distinguish when to use the two types of influenza vaccine (TIV or LAIV)
3. Understand the role of antivirals in the prevention and treatment of influenza
4. Describe indications for pneumococcal vaccination according to risk groups

CASE ONE:

It is early November, and the following patients have indicated to your office check-in staff that they would like to receive the flu shot:

A 54-year-old man with diabetes, hypertension, and gout

A 73-year-old man with history of depression

A 48-year-old woman with a 20 pack-year tobacco history

A 36-year-old healthy pregnant woman

A 36-year-old HIV+ man with no history of opportunistic infections

A 49-year-old man with ESRD, currently on dialysis and preparing for renal transplant

A 23-year-old RN with mild intermittent asthma who works in a nursing home

A 21-year-old man undergoing staging for Hodgkin's lymphoma

Questions:

1. **What is the epidemiology of influenza in the United States, and which groups are at greatest risk of serious complications?**

2. **What are the recommendations regarding influenza vaccination? Based on these recommendations, which of your presenting patients should receive the vaccine?**

3. **What is the difference between Trivalent Inactivated influenza Vaccine (TIV) and Live Attenuated Influenza Vaccine (LAIV)? When do you use LAIV instead of TIV, and do your recommendations change when using LAIV?**

4. **The vaccine distribution system has been disrupted unexpectedly by the failure of one of the four licensed manufacturers to meet production standards this flu season. How would you prioritize the administration of TIV?**

5. **What role might antiviral agents play in reducing the morbidity and mortality due to influenza? Consider both prophylaxis and treatment.**

CASE TWO:

You take your patients' interest in flu vaccinations as an opportunity to review their need for the Pneumococcal Vaccine.

6. **How would you advise the patients above regarding their potential for benefit from this vaccine?**

Primary References:

1. U.S. Department of Health and Human Services. Recommendations of the Advisory Committee on Immunization Practices (ACIP): Prevention and control of influenza. *MMWR* July 2006;(55):RR-10. Excerpts: 1-8, 11-18, 20, 24, 28, 29.

2. Department of Health and Human Services, Centers for Disease Control and Prevention. Pneumococcal Polysaccharide Vaccine: What you need to know. Vaccine Information Statement. 1997.

Additional References:

3. U.S. Department of Health and Human Services. Recommendations of the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the (ACIP): Influenza Vaccination of Health-Care Personnel. *MMWR*. February 2006; 55(RR02):1-16.
4. Update: Influenza vaccine supply and recommendations for prioritization during the 2005-06 influenza season. *MMWR*. Sept 2005;54(34):850.
5. Jefferson T, Demicheli V, Rivetti D, et al. Antivirals for influenza in healthy adults: systematic review. *Lancet*. 2006;367:303-313.
6. U.S. Department of Health and Human Services. Recommendations of the (ACIP): Prevention of pneumococcal disease. *MMWR*. April 1997; (46):RR-8.