

Immunization update: How to protect your at-risk patients



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Series Editor

Principal Source: Advisory Committee on Immunization Practices. Recommended adult immunization schedule: United States, October 2007-September 2008. *Ann Intern Med.* 2007;147:725-729.

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Psychiatric patients who use drugs, alcohol, or tobacco and those who engage in high-risk sexual behaviors can be protected from acquiring viral infections such as hepatitis A and B, influenza, and human papillomavirus (HPV). The recently updated adult immunization schedule (*Table, page 39*)^{1,2} from the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP) gives mental health professionals the opportunity to recognize risk and refer patients for vaccinations as part of preventive care. See *Related Resources (page 39)* for a link to the complete CDC vaccination recommendations.

Hepatitis A and B. Substance abuse and high-risk sexual behaviors contribute to the high prevalence of comorbid alcohol-related liver disease and viral hepatitis among psychiatric patients. Individuals with chronic liver disease—regardless of its cause—should be screened for hepatitis A and B infection and, if negative, offered the appropriate vaccination series. Acute viral hepatitis in patients with pre-existing chronic hepatitis from any cause, such as alcohol abuse or hepatitis C, is associated with severe hepatic dysfunction and liver failure.³

Hepatitis B screening and vaccination is recommended for psychiatric populations that include clients of substance abuse treat-

ment centers and institutions and daycare facilities for developmental disabilities, as well as IV drug users. Anyone who uses illegal drugs—injectable or noninjectable—should be vaccinated for hepatitis A.

Only individuals susceptible to hepatitis A and B should be vaccinated.³ To determine immune status for hepatitis B, serum tests for hepatitis B surface antigen (HepBsAg), hepatitis B surface antibody IgG (HepBsAb), and hepatitis B core antibody IgG (HepBcAb) are necessary to differentiate among patients who:

- are susceptible to infection
- had an infection that cleared
- have chronic active infection
- already have been vaccinated.

The hepatitis A IgG serum test determines a patient's hepatitis A immune status. A negative result shows no previous infection, and the patient is eligible for vaccination. A positive result indicates previous infection meaning vaccination has no benefit.³

Influenza. Tobacco use and subsequent chronic pulmonary disease is an indication

Practice Points

- **Recommend hepatitis A and B vaccination for psychiatric patients who abuse substances or engage in high-risk sexual behaviors.**
- **Tobacco use and subsequent chronic pulmonary disease—common among psychiatric populations—is an indication for annual influenza vaccination.**
- **All women ≤26 are eligible to receive the human papilloma virus vaccine.**
- **Immunity testing is required for hepatitis A and B and varicella vaccines.**

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Table

Updated CDC adult vaccination recommendations

Vaccination	Changes in recommendations
Human papilloma virus	New recombinant vaccine (2007): quadrivalent, 3-dose series Indicated for all women age ≤26 years
Herpes zoster	New live attenuated vaccine (2006): single dose Indicated for immunocompetent adults age ≥60
Acellular pertussis	New vaccine (2006) may substitute for tetanus and diphtheria booster
Influenza	New indications: patients with aspiration risk or pregnancy during flu season
Hepatitis B	Broader wording: all sexually-active persons not in long-term mutually monogamous relationships
Mumps, measles, and rubella	New recommendation: second dose for health care workers as result of recent mumps outbreaks
Varicella	Broader indication: all immunocompetent adults without immunity to varicella
Various live attenuated vaccines	Recommendations for HIV-infected individuals split by CD4+ T lymphocyte count of < or ≥200 cells/μL
<small>HIV: human immunodeficiency virus; CD4: cluster of differentiation 4; CDC: Centers for Disease Control and Prevention Source: References 1,2</small>	

Clinical Point

HPV, influenza, and pneumonia vaccines are recommended regardless of evidence of immunity or prior infection

for annual influenza vaccination.⁴ Most individuals will receive the injectable, inactivated vaccine. The intranasal, live attenuated vaccine is reserved for nonpregnant adults age ≤49 without high-risk medical conditions and who are not in close contact with immunocompromised persons.¹

Pneumococcal and influenza vaccinations also are recommended for persons with chronic liver disease.¹ Consider recommending influenza, pneumococcal, varicella, and hepatitis B vaccinations for psychiatric patients in long-term care facilities.¹

HPV. Cervical cancer is highly associated with HPV, a sexually transmitted organism, and the HPV vaccine can effectively prevent infection and subsequent neoplasia. All women age ≤26 are eligible for the vaccine. Women with evidence of HPV infection—such as abnormal Pap smear, genital warts, or a positive HPV DNA test—are still eligible to receive the HPV vaccine because several viral strains cause disease.¹ Because mental health providers may treat otherwise medically healthy young people, including those who engage in high-risk behaviors, psychiatrists have

an opportunity to refer for vaccinations in individuals who may not consistently utilize primary care.

Immunity screening considerations. Vaccines for HPV, influenza, and pneumonia are recommended regardless of evidence of immunity or prior infection. Hepatitis A and B vaccines require a history of never having had the illness or laboratory evidence of a lack of immunity.

References

1. Advisory Committee on Immunization Practices. Recommended adult immunization schedule: United States, October 2007–September 2008. *Ann Intern Med.* 2007;147:725-729.
2. Poland GA, Schaffner W. Adult immunization guidelines: a patient safety and quality-of-care issue. *Ann Intern Med.* 2007;147:735-737.
3. Lau DT, Hewlett AT. Screening for hepatitis A and B antibodies in patients with chronic liver disease. *Am J Med.* 2005;118(suppl 10A):28S-33S.
4. Arcavi L, Benowitz NL. Cigarette smoking and infection. *Arch Intern Med.* 2004;164(20):2206-2216.

Related Resources

- Immunization Action Coalition: Vaccine information for health care professionals. www.immunize.org.
- Centers for Disease Control and Prevention. Adult immunization schedule. www.cdc.gov/vaccines/recs/schedules/adult-schedule.htm.

Disclosure

Dr. Goldsmith reports no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.