

# Vaccinations Are Key in Shielding HIV Patients

BY HEIDI SPLETE  
Senior Writer

WASHINGTON — Protect HIV-infected patients from additional illness by vaccinating them against influenza, hepatitis A and B, pneumococcal disease, and tetanus-diphtheria, Dr. David H. Spach advised at the Ryan White CARE Act meeting on HIV treatment.

As flu season begins, "vaccinate everyone for flu regardless of their CD4 count or viral load," said Dr. Spach, of the University of Washington, Seattle. He presented a roundup of immunization recommendations for HIV patients:

► **Influenza.** Adults with AIDS are at significantly greater risk for influenza, compared with healthy adults, and even compared with healthy persons older than 65 years, according to data from a 3-year study of deaths from influenza or pneumonia (*Arch. Intern. Med.* 2001;161:441-6). Studies have shown that the flu vaccine is most effective for patients with CD4 counts greater than 100 cells/mm<sup>3</sup>. Patients with CD4 counts below 100 cells/mm<sup>3</sup> may not respond as well to the vaccine, but there are no published data on adverse effects of influenza vaccines in these low-CD4-count patients, Dr. Spach said.

Vaccinate HIV patients annually with the trivalent vaccine regardless of their CD4 count, but remember that the live vaccine is contraindicated for these patients, he said. Data from the Centers for Disease Control and Prevention from 1976-2006 confirm that peak flu activity occurs in the 4-month period from December through March, which reinforces the current recommendations to give HIV patients the flu vaccine at a regular visit just prior to the start of flu season.

► **Hepatitis B.** Clinicians may encounter HIV patients who received one or two doses of the hepatitis B vaccine and then disappeared for years.

But if an HIV patient has missed a dose, "it's fine to pick up where you left off," Dr. Spach said. Long intervals between the first and second doses of hepatitis B vaccine appear to have little effect on immunogenicity in HIV patients, and the third dose is more like a booster dose, he said. The CDC's Advisory Committee on Immunization Practices recommends a standard 20-mcg dose at baseline, with subsequent doses at 1 month and 6 months.

Consider a double dose of hepatitis B vaccine in HIV patients who do not respond to the initial three-dose series, Dr. Spach said. Patients with CD4 counts greater than 500 cells/mm<sup>3</sup> will respond better to a double dose than will those with lower counts. But regardless of CD4 count, the odds of response to a future dose are low if an HIV patient doesn't respond to the initial three-dose series, he noted.

► **Hepatitis A.** Data from a study of 133 HIV-infected adults showed that re-

sponse rates to hepatitis A vaccine are significantly greater in HIV patients with CD4 counts of at least 200 cells/mm<sup>3</sup>, compared with patients whose counts are less than 200 (*J. Infect. Dis.* 2003;187:1327-31).

"Those with CD4 counts under 200 really did not respond well at 7 and 9 months post vaccination," Dr. Spach said. Vaccine response rates at 7 and 9 months were 11% and 9%, respectively, compared with 53% and 69% among patients with CD4 counts of 200-500 cells/mm<sup>3</sup>, and 73% and 67% among patients with CD4 counts greater than 500 cells/mm<sup>3</sup>.

Based on these and other data, hepatitis A is not an optimal vaccine for patients with low CD4 counts. If a patient is set to start antiviral therapy, consider postponing hepatitis A vaccination to see whether the CD4 count increases.

► **Pneumococcal disease.** The rate of invasive pneumococcal disease in HIV-infected patients has decreased as a result of the widespread use of the seven-valent conjugate pneumococcal vaccine given to young children, Dr. Spach said.

Data from 2006 show a 20% decrease in invasive pneumococcal disease among HIV-infected adults since the childhood conjugate vaccine became widely used, with a 60% reduction in the incidence of illness from serotypes that were contained in the vaccine and a slight increase in strains that were not contained in the vaccine (*Ann. Intern. Med.* 2006;144:1-9). These findings parallel other studies in adults not infected with HIV who have shown a strong herd immunity. "This childhood vaccine probably has had a greater effect on preventing pneumococcal disease in HIV patients than our giving the standard adult polysaccharide vaccine."

No published data show that the 7-valent vaccine is better than the standard vaccine for HIV-infected adults, and current recommendations still call for a single dose of the 23-valent polysaccharide pneumococcal vaccine followed by another dose 5 years later. "But if you have a patient with children or who interacts with children, encourage those kids to get immunized with the conjugate vaccine," he said.

► **Tetanus.** The new Tdap vaccine (approved in June 2005) is not a live vaccine, so it's safe for HIV patients. Tdap is not Food and Drug Administration-approved for HIV patients specifically, but it is not contraindicated for them, and it will protect them from pertussis, diphtheria, and tetanus. New recommendations for non-HIV-infected adults call for replacing the next booster dose of Td (tetanus-diphtheria toxoids) with the Tdap vaccine, which should be given routinely to patients whose last Td vaccination was more than 10 years ago. ■

For the latest immunization information, visit the CDC's National Immunization Program Web site, [www.cdc.gov/nip](http://www.cdc.gov/nip).

# Concerns About Being Judged May Keep Students From HIV Testing

BY FRAN LOWRY  
Orlando Bureau

TORONTO — College students are reluctant to get tested for HIV because they fear being judged by others, according to a poster presented at the 16th International AIDS Conference.

In a survey of 491 students at York University, Toronto, 49 (10%) reported having been tested for HIV. Two-thirds of them reported having had unprotected sex in the previous 6 months, although many were ignorant of their HIV status, said Trevor A. Hart, Ph.D., of the department of psychology at the university. "In Canada, where access to medical care and HIV testing are readily available and cost nothing, these results are quite troubling," he said in interview.

There are 2,500 cases of new HIV infections in Canada a year. But in a 2003 survey of Canadians over age 15, only 27% reported ever having been tested for HIV (excluding testing for the purposes of insurance, blood donation, and participation in re-

search), according to a 2005 report by Public Health Agency Canada. Dr. Hart and his colleagues decided to see if they could find out why the students weren't being tested.

They filled out a questionnaire in which they were asked about their sexual activities in the previous 6 months; their HIV testing histories and willingness to get tested; their concerns about being judged for getting an

**Knowing your HIV status should be 'like knowing your blood type, or when last you got a tetanus shot.'**

DR. HART

HIV test; and social anxiety. Most of the students (80%) were female; the mean age was 18 years, with a range of 17-24 years. The results revealed that social anxiety and fear of being judged prevented the young adults from getting tested for HIV and learning about their status. Those who were more socially anxious were more likely to be concerned about being judged about HIV testing by their siblings. They were also inhibited by friends, their family doctor, grandparents, coworkers, and God. Family doctors should ask patients if they are sexually active, and if so, ask if they know their HIV status. "It's like knowing your blood type, or when last you got a tetanus shot," he said. ■



# MRSA Raises Tx Failure Rates Of Diabetic Foot Infections

BY DOUG BRUNK  
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SAN FRANCISCO — The isolation of methicillin-resistant *Staphylococcus aureus*, either alone or as part of a polymicrobial infection, was associated with treatment failure in 35% of patients with a diabetic foot infection, Dr. Matthew E. Falagas noted in a poster session at the annual Interscience Conference on Antimicrobial Agents and Chemotherapy.

The finding comes from an analysis of 15 randomized, controlled trials that compared the use of different antibiotics for treating diabetic foot infections.

The analysis showed "a considerable proportion of patients with diabetes who have infection in their foot would not be treated effectively with current [antimicrobial] management," Dr. Falagas of the Alfa Institute of Biomedical Sciences in Athens, Greece, said in an interview. "About one-fourth of patients fail to be cured with the current antimicrobial regimens and treatment."

He and his associates found that different regimens of appropriate antibiotics (including penicillins, carbapenems, cephalosporins, and fluoroquinolones) were associated with similar treatment failures. But in the 68 patients whose infections were caused by methicillin-resistant *Staphylococcus aureus* (MRSA) alone or as part of a polymicrobial infection, treatment failure was 35%, compared with 23% in the 1,522 patients whose infections were caused by different bacteria.

In patients with infections caused by MRSA, the use of linezolid was not associated with a significantly lower failure rate, compared with other antibiotics (32% vs. 37%, respectively). The researchers also observed no significant differences in overall treatment failure when they compared patients who had osteomyelitis with those who did not (27% vs. 23%, respectively).

The treatment failures seen in the study were not a matter of patient compliance "because most of these patients were treated in the hospital with [intravenous] antimicrobial agents," said Dr. Falagas, who is also with the department of medicine at Tufts University, Boston. Patients who took carbapenems had fewer treatment failures, he added. ■



Treatment failure occurred in 35% of patients with an MRSA infection.