

Family Physicians Lag in Tdap Guideline Adoption

The majority of those surveyed found no barriers with regard to supply or reimbursement.

BY ROBERT FINN
San Francisco Bureau

HONOLULU — One year after the Centers for Disease Control and Prevention issued new recommendations on vaccinating adolescents against pertussis, 96% of pediatricians but only 75% of family physicians were recommending the vaccine routinely, according to a mail-based survey.

In a multivariate analysis, the only two variables independently associated with recommending Tdap were medical specialty (pediatrics vs. family practice) and whether the physician stocked the combined tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) in their offices, wrote Dr. Amanda F. Dempsey of the University of Michigan, Ann Arbor, and her colleagues.

In March 2006, the CDC's Advisory Committee on Immunization Practices (ACIP) issued recommendations on replacing the adolescent tetanus and diphtheria toxoids (Td) with Tdap. The committee suggested age 11-12 years as the preferred age for Tdap vaccination, and recommended the catch-up vaccination of adolescents aged 13-18 years.

The study involved a mail-based survey of a national sample of 725 pediatricians and 725 family physicians drawn randomly from the American Medical Association's Physician Masterfile. The survey was conducted between January and March 2007. The response rates were 68% for pediatricians and 53% for family physicians, Dr. Dempsey reported in a poster presentation at the joint meeting of the Pediatric Academic Societies and the Asian Society for Pediatric Research.

Survey results showed that 68% of pediatricians were significantly more likely than were family physicians to have adolescent patient volumes above 25%, although most respondents reported that at least 10% of their patients were adolescents.

On the question of Tdap recommendation patterns for 11- to 12-year-old patients, 96% of pediatricians said that they routinely issued such recommendations, 3% said that they sometimes did, and 1% said that they rarely or never did. In contrast, 75% of family physicians said that they routinely recommended the vaccine for their 11- to 12-year-old patients, 12% said they sometimes did, and 13% said that they rarely or never did. These differences were statistically significant.

The results were similar regarding recommendations for Tdap boosters for 13- to 18-year-old patients without a previous Td booster. Among pediatricians, 96% routinely recommended this booster, 3% sometimes did, and 1% rarely or never did. Among family physicians, 80% routinely

recommended the booster, 10% sometimes did, and 10% rarely or never did. Once again, the differences were statistically significant.

A lack of adolescent visits was the most frequently cited barrier to administering the Tdap vaccine, with about 33% of physicians citing this as a major barrier and 38% citing it as a minor barrier. The majority of physicians surveyed said that they found no barriers with regard to Tdap supply, reimbursement, record keeping, or the problem of other priorities during visits.

"Specialty-based differences in immunization practices suggest an ongoing need for provider education, particularly among [family physicians]," the investigators wrote. They also suggested that a reduction in practice-level barriers for purchasing vaccine may improve adolescent Tdap vaccination rates.

The study was funded by the CDC, and Dr. Dempsey reported that she had no conflicts of interest related to her presentation. ■

Unwanted Souvenirs Can Plague International Travelers

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

SAN FRANCISCO — Adventure tourists, international volunteers, and people visiting their families in underdeveloped countries are the travelers most likely to bring home unwanted souvenirs, from malaria to schistosomiasis.

"You're not going to see these things in businessmen who are staying in Hiltons and eating Western food when they go overseas," Dr. Sukhjit Takhar said at the 12th International Conference on Emergency Medicine. "These are diseases that people contract when they are traveling for longer than a couple of weeks, or when they are really getting immersed in the local culture or eating the local food."

Taking a good travel history is the first step in diagnosing an internationally acquired disease, said Dr. Takhar, an emergency physician at University of California San Francisco-Fresno.

"Find out where they went, and what they did. Were they staying in a hotel or out in the jungle dissecting monkeys? How long have they been back? This will give you an idea of the incubation period," Dr. Takhar said.

Also ask them if they took any medicine when they began to feel ill. Many travelers self-medicate with antibiotics, which can quell symptoms but not fully cure the illness.

Managing Malaria

Apart from acute diarrhea, systemic febrile illnesses are the most common syndromes among returning travelers. Most of those will be either malaria or dengue fever.

Among all travelers, 35% will have malaria, which causes about 150 fatalities in returned travelers each year; and 10% will have dengue. More than 60% of travelers with a systemic febrile illness coming from Africa will have malaria, Dr. Takhar added. About 30% of ill travelers returning from Southeast Asia will have dengue fever.

Because of the prevalence, morbidity, and mortality of malaria, especially that caused by the *Plasmodium falciparum* parasite, patients who appear to have the disease should receive immediate treatment, even if they don't present acutely ill to the ED. "Malaria symptoms are cyclical, so up to 40% of patients will be afebrile when you see them in the ED," Dr. Takhar said.

Falciparum malaria is the most dangerous form, pro-

voking a flulike illness followed by paroxysmal fevers that last 8-12 hours and culminate in a drenching sweat. After that, the patient may feel well. The less common vivax malaria is also a less serious illness but causes similar symptoms.

The time since onset of symptoms is a clue to the type of malaria, Dr. Takhar said. The incubation period for falciparum malaria is about 10-14 days, while that of vivax malaria may be longer.

A blood smear will diagnose either form, with the parasites appearing in the erythrocytes. If the index of suspicion for malaria is high, however, and the patient reports travel to endemic areas, consider treating presumptively, Dr. Takhar advised. "They can look well and then decompensate very quickly, so don't wait around for a consult from a specialist."

The treatment of choice in the United States is now quinidine. "Chloroquines don't work very well any more, because the parasites have become resistant," he said, and the most potent antimalarial, artemether—an extract of the wormwood plant—isn't readily available in the United States.

A negative smear doesn't eliminate the possibility of malaria. "You can have a negative smear and still have it. The patient might have taken some doxycycline or azithromycin when he started feeling bad. Both of these have some antimalarial properties," Dr. Takhar said. "If you don't see the parasites, get another smear in 12-24 hours."

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Diagnosing Dengue Fever

The prevalence of dengue has grown dramatically in recent decades. It's now found in more than 100 countries in Africa, Central and South America, the Caribbean, Asia, Southeast Asia, and even around the Mediterranean. The illness affects up to 100 million people annually, with about 25,000 deaths. "Travelers who don't protect themselves from mosquitoes in these areas will very likely come down with this illness," Dr. Takhar said.



The dengue virus causes a severe flulike illness with high fever, headache, retro-orbital pain, and a myalgia so painful that dengue is nicknamed "breakbone fever," Dr. Takhar said.

While most cases are self-limiting and require only supportive care, the hemorrhagic form can be deadly. In addition to petechiae, patients may have plasma leakage leading to pleural effusion, dropping platelets, rising hematocrit, and ascites. "These symptoms can be deadly," Dr. Takhar cautioned.

Again, treatment is supportive. "You need to give IV fluids, but because these patients leak plasma, you should also put in a central line to measure central venous pressure," he said. Don't give any aspirin or ibuprofen for the pain, because those agents can exacerbate bleeding.

Assessing Tick Bites and Flatworms

Rickettsial diseases are sometimes seen in those who travel to Africa during tick season (April-November). Fever, myalgia, and headache characterize the illnesses; an eschar at the site of the tick bite is another clue. Most rickettsial infections respond very quickly to a course of doxycycline.

African travelers who swam in lakes may bring home a load of schistosomes. The parasitic flatworms live in freshwater snails, which release the larvae into the water. The larvae burrow into a swimmer's skin and take up residence in the liver. After maturing (up to 10 mm long), the worms mate and move into the rectal and mesenteric veins, where they release their eggs. The eggs pass into the intestine, bladder, or rectum, and are excreted.

The worms live up to 4 years, so natives of endemic areas can have huge loads that create chronic disease. However, travelers usually come down with an acute case, called Katayama fever. Symptoms include abdominal pain, cough, diarrhea, eosinophilia, fever, fatigue, and hepatosplenomegaly. Early in the course, the patient may have urticaria and a rash where the larvae penetrated the skin.

Diagnosis is by fecal smear or urinalysis positive for the flatworm's eggs. Schistosomal antibodies can also be positive. Praziquantel is the usual treatment, Dr. Takhar said. It should probably be prescribed by an infectious disease specialist who can provide adequate follow-up. ■

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