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Yellow fever outbreak emphasizes travel-related infections, prevention
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Yellow fever is an arthropod-borne flavivirus transmitted in urban outbreaks primarily by Aedes aegypti mosquitoes. In April 2016, a yellow fever outbreak was declared in the Democratic Republic of the Congo (DRC) (see map at bottom). From Jan. 4 to Aug. 18, 2016, 410 suspected cases of yellow fever including 42 deaths were reported from the Kongo Central Province, which borders Angola, where another outbreak had occurred five months prior. As a result, the DRC ministry of health initiated mass vaccination campaigns in the Kongo Central Province where approximately 1.5 million doses of yellow fever vaccine were administered. Of note, DRC requires proof of yellow fever vaccine in anyone 9 months of age and older upon entering the country.


Preventing travel-associated infections

Pediatricians and other health care professionals should be familiar with travel-associated infectious diseases, including arthropod-borne infections, and the areas in which they are endemic, especially as families embark on international travel this summer.

Yellow fever is one of the few vaccine-preventable arboviruses. Yellow fever vaccine confers life-long immunity, and patients are given a "Yellow Card" to show proof of vaccination. Practitioners should be comfortable with the indications and contraindications of yellow fever vaccine and other travel vaccines and know the availability of travel vaccines in their area (see resources). At time of publication, there was a shortage of yellow fever vaccine.

Public health and clinical applications of travel-related illness

Up to 60% of children will become ill during international travel, and up to 19% will require medical care. Medical planning for international travel requires six to eight weeks.

Pre-travel consultation with a primary care physician or in a travel clinic should include a review of the child's or adolescent's medications, allergies and prior vaccinations. Providers should ensure all routinely recommended immunizations are up to date with special consideration for vaccines that may be given earlier or on an accelerated schedule to infants, children or adolescents depending on place of travel. Specifically, measles-mumps-rubella vaccine should be administered to infants 6 through 12 months of age before international travel. Additional vaccines to prevent yellow fever, meningococcal disease, typhoid fever, rabies and Japanese encephalitis may be indicated depending on destination and type of travel.

Information on location-specific infection risks provided in the AAP Red Book and the CDC Yellow Book can further direct preventive measures (see resources). It is important to discuss planned activities to offer anticipatory guidance, such as infectious exposures related to water sports and spelunking, and to give tips related to food and water hygiene. Travel vaccines, malaria prophylaxis and self-treatment for traveler's diarrhea should be considered. Advice about mosquito bite prevention should be given, including using nets, screens and repellent.
Additionally, prescription renewals of medications (including epinephrine auto-injectors if appropriate) should be given accounting for additional quantity depending on length of travel. A brief letter explaining the medications could be helpful for overseas travelers who may be stopped by customs at their destinations.

Which of the following vaccines are available to prevent travel-related infections, depending on the destination of international travel?

A. Yellow fever vaccine  
B. Japanese encephalitis vaccine  
C. Rabies vaccine  
D. Typhoid vaccine  
E. All of the above

Answer: E

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Areas of recommended yellow fever vaccine (yellow), vaccine generally not recommended (dark green) and not recommended (light green). Courtesy of the CDC.
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Resources

- "AAP Red Book" section on international travel
- "CDC Yellow Book"
- Free CDC course on yellow fever vaccine with continuing education credit available
- CDC travel clinic search
- Information from the CDC's Advisory Committee on Immunization Practices on travel-related vaccines.
- Real-time infectious disease alerts by location
- CDC travel notices
- Information on the International Society for Travel Medicine certificate in travel health