SUBJECT: Guidance on the use of Japanese Encephalitis Vaccine

Japanese Encephalitis (JE) virus is a mosquito-borne flavivirus and the most common vaccine-preventable cause of encephalitis in Asia. JE occurs throughout most of Asia and parts of the western Pacific. More than 99 percent of all JE infections are subclinical. Those with clinically evident disease have a 20 percent to 30 percent fatality rate, and 30 percent to 50 percent of survivors have significant neurologic or psychiatric sequelae.

The Centers for Disease Control and Prevention Advisory Committee on Immunization Practices (ACIP) developed recommendations for the use of JE vaccine (Japanese Encephalitis Vaccines, Morbidity and Mortality Weekly Report, 12, 2010; Vol 59, No RR-1). These recommendations are based on broad geographic risk determinations and not local conditions. In most temperate areas of Asia, JE transmission is seasonal, and substantial epidemics can occur, usually peaking in summer and fall. In the subtropics and tropics, transmission can occur year-round, often intensifying during the rainy season. The risk of infection is dependent on the proximity to rural agricultural areas, usually associated with rice production and flooding irrigation, where large numbers of vector mosquitoes breed in proximity to pigs and wading birds. Overall risk is reduced by the use of countermeasures, such as insect repellent, permethrin-treated clothing, and vector avoidance. Risk determination, therefore, must take into account human activities and the proximity of high-risk areas rather than broad geographic risk determinations. The following guidelines should be used for administration of the JE vaccine:

1. Individuals deploying to areas in Pacific Command (PACOM) should be administered the JE vaccine in accordance with the latest PACOM Force Health Protection Guidance.

2. We advise and highly recommend JE vaccine for Service members, Department of Defense civilians, and beneficiaries who are, or will be, stationed or visiting for more than 30 days in...
endemic areas. This includes those who would be based in urban areas, but likely to visit endemic rural or agricultural areas during a high-risk period of JE transmission. Administer booster dose after 1 year according to the ACIP recommendations if risk of exposure continues. Timing of additional booster doses has not yet been determined.

3. We advise recommendation of JE vaccine for the following Service members and beneficiaries:

- Short-term (<1 month) travelers to endemic areas during the JE transmission season if they plan to travel outside of an urban area and have an increased risk for JE exposure. Examples of higher-risk activities or itineraries include:
  1. spending substantial time outdoors in rural or agricultural areas, especially during the evening or night;
  2. participating in extensive outdoor activities (e.g., camping, hiking, trekking, biking, fishing, hunting, or farming); and
  3. staying in accommodations without air conditioning, screens, or bed nets.
- Travelers to an area with an ongoing JE outbreak;
- Travelers to endemic areas who are uncertain of specific destinations, activities, or duration of travel; and
- Laboratory workers with potential exposure to infectious JE virus.

4. JE vaccine is not recommended for travelers whose visit will be short (<1 month) and restricted to urban areas or periods outside of a well-defined JE transmission season.

- JE vaccine is licensed only for individuals 17 years of age and older. A pediatric vaccine may become available in late 2013 or 2014. Once approved for pediatric use, the JE vaccine should be administered in accordance with ACIP recommendations and the above guidelines.

- Until an approved pediatric vaccine is available, providers must be knowledgeable in the management of JE prevention for children who may be at risk during travel in endemic areas. Examples of appropriate prevention steps include using insect repellent, wearing proper clothing to reduce mosquito bites, and reducing exposure to mosquitoes by using bed nets and minimizing outdoor activity during peak mosquito biting hours. Information on available options prior to the U.S. Food and Drug Administration (FDA)-approval of a pediatric JE vaccine can be found at http://www.cdc.gov/japaneseencephalitis/vaccine/vaccineChildren.html. A brief clinical review for providers to adequately counsel families on vaccination options during the non-availability of FDA-licensed pediatric vaccine can be found at http://vhcinfo.org/documents/JEV_Information_Paper.pdf.
Due to the risk of hypersensitivity reactions following administration of vaccines, appropriate screening for prior episodes of hypersensitivity reactions following any vaccination must be completed before JE vaccine administration. For those individuals with a history of hypersensitivity reactions, the risk of vaccine-related adverse events and the risk of disease should be considered. If the vaccine is administered, appropriate measures need to be in place to monitor for hypersensitivity reactions and facilitate intervention should a reaction occur. Service-specific guidelines regarding restrictions following JE vaccine administration will be based on the most current objective clinical evidence.

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