



衛生防護中心
Centre for Health Protection

**Scientific Committee on Vaccine Preventable Diseases and
Scientific Committee on Vector-borne Diseases**

**Updated Recommendation on
Japanese Encephalitis Vaccination**

(November 2016)

In 2011, the Scientific Committee on Vaccine Preventable Diseases (SCVPD) and the Scientific Committee on Vector-borne Diseases (SCVBD) updated the recommendations on Japanese encephalitis (JE) vaccination for travellers who plan to stay one month or longer in endemic areas during the JE transmission season, and for short-term (less than one month) travellers if they plan to have significant extensive outdoor or night-time exposure in rural areas during the transmission season. In view of the change in availability of JE vaccine and the latest local epidemiology, the SCVPD and SCVBD joint meeting was convened.

2. Currently, there are a number of JE vaccines available globally. These include:

- (a) A Vero cell culture-derived inactivated vaccine based on the SA14-14-2 strain (JE-VC);
- (b) A cell-culture-derived (primary hamster kidney) live attenuated vaccine based on the SA14-14-2 strain manufactured in China;
- (c) A live attenuated chimeric vaccine based on a YF17D backbone combined with Vero cell propagated SA14-14-2 strain (JE-CV); and
- (d) A Vero cell culture-derived inactivated vaccine based on the Beijing-1 strain manufactured for local use in Japan.



3. Both JE-VC and JE-CV are registered in Hong Kong. The cell-culture-derived live attenuated SA14-14-2 vaccine can be obtained on a named-patient basis.

4. Having reviewed the local epidemiology of JE, the efficacy and safety profile of available vaccines, and overseas experience, the SCVDP and the SCVBD maintain their JE vaccination recommendation for travellers, i.e., they recommend JE vaccination for travellers who plan to stay one month or longer in endemic areas during the JE transmission season, and for short-term (less than one month) travellers if they plan to have significant extensive outdoor or night-time exposure in rural areas during the transmission season. JE vaccination is not recommended for the general public.

5. Recommendations relevant to the two JE vaccines registered in Hong Kong, based on their respective registered package inserts in Hong Kong, are as follows:

(a) Vero cell culture-derived inactivated vaccine based on the SA14-14-2 strain (JE-VC):

- i. This vaccine is registered in Hong Kong for use in adults, adolescents, children, and infants aged two months and above. The dosage for adults, adolescents, and children aged three years and above is different from the dosage for infants and children aged two months to less than three years of age. Reference should be made to the manufacturer's recommendations.
- ii. Adopt a two-dose schedule (days 0 and 28) for primary immunisation.
- iii. The primary immunisation should be completed at least one week prior to potential JE virus (JEV) exposure.
- iv. For adults, a booster dose may be given within the second year (i.e. 12-24 months) after the first dose of the recommended primary immunisation, if ongoing or re-exposure to JEV is expected. Currently the manufacturer has no paediatric booster dose recommendation.
- v. Contraindications to JE-VC include:
 - Allergic reaction to a previous dose of the vaccine or any of the vaccine components.
 - Acute severe febrile conditions.
- vi. There are limited amount of data from the use of JE-VC in pregnant or breast-feeding women. As a precautionary measure, the use of JE-VC should be avoided unless the risk of acquiring Japanese encephalitis is judged to be significantly higher than the risk associated with the use of this inactivated vaccine.
- vii. Special precaution should be observed in some groups including the followings:
 - Persons with immunodeficiency;
 - Persons with bleeding disorders; and

- Persons with known allergies.
- (b) Live attenuated chimeric vaccine based on a YF17D backbone combined with Vero cell propagated SA14-14-2 strain (JE-CV):
- i. Currently, this vaccine is registered in Hong Kong for use in individuals from *12 months of age and above. [*Note: According to the latest information from the vaccine company, the vaccine would be approved for use in individuals from 9 months of age and above *with effect from 16 Nov 2016*]
 - ii. Adopt a one-dose schedule for primary immunisation.
 - iii. A seroprotective level of antibodies is generally reached 14 and 28 days after vaccination for adult and paediatric populations, respectively, thus immunisation should be given at least 14 days before travel in adults and at least 28 days before travel in children.
 - iv. For adults aged 18 years and above, there is no need for a booster dose up to five years after the administration of a single dose of JE-CV. For paediatric population up to aged 17 years inclusive, a booster dose is recommended by the manufacturer between 12-24 months after primary vaccination.
 - v. Contraindications to JE-CV include:
 - History of severe allergic reaction to any component of the vaccine or after previous administration of the vaccine or a vaccine containing the same components or constituents;
 - Febrile or acute disease;
 - Congenital or acquired immune deficiency impairing cellular immunity, including immunosuppressive therapies such as chemotherapy, high doses of systemic corticosteroids given generally for ≥ 14 days;
 - Symptomatic HIV infection or asymptomatic HIV infection when accompanied by evidence of impaired immune function; and
 - Pregnancy and breastfeeding.
 - vi. Precaution:
 - For patients following a treatment with high doses of systemic corticosteroids given for 14 days or more, it is advisable to wait for at least one month or more following the interruption of therapy before carrying out the vaccination until immune function has recovered.

6. Moreover, having considered a number of factors, including incidence and mortality rates, vaccine safety and efficacy, cost-effectiveness, the acceptance of the vaccines by the public, the availability of other preventive measures and the administrative arrangement for vaccination, the joint meeting recommended that currently JE vaccination would not be incorporated into Hong Kong Childhood Immunisation Programme, or to be provided to the general population or any targeted population other than travellers to endemic

areas. The Centre for Health Protection of Department of Health will continue to monitor the latest situation in vaccine development and local epidemiology, and update this recommendation as appropriate.

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