GRADE Table 2. What is the effectiveness of live attenuated JE vaccine in preventing JE disease in vaccinees living in JE-endemic areas?

**Population**: Immunocompetent individuals living in JE-endemic areas  
**Intervention**: One dose of live attenuated JE vaccine  
**Comparison**: Placebo/no vaccination/other JE vaccine  
**Outcome**: JE disease (immunogenicity accepted)

<table>
<thead>
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<th>What is the effectiveness of one dose of live attenuated JE vaccine in preventing JE disease in individuals living in JE-endemic areas?</th>
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**Final numerical rating of quality of evidence** | 4 |

**Statement on quality of evidence**

Evidence supports a high level of confidence that the true effect lies close to that of the estimate of effect on health outcome.

**Summary of Findings**

**Conclusion**

Live attenuated JE vaccines elicit seroprotective neutralizing antibody titres.  
*Based on a review of data on CD.JEVAX*

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<sup>1</sup>Four clinical studies with 1,256 participants receiving CD.JEVAX were assessed. Seroprotection rates at 28 days post-vaccination in the Philippines study were 92.1% (95% CI: 84.3-96.7) and 90.6 (95% CI: 85.3-94.4); the latter result was in the group administered measles vaccine one month prior (Victor 2014). The seroprotection rate was 97.3% (95% CI: 93.1-99.2) for the live attenuated vaccine when used as a control in a live recombinant JE vaccine RCT in children aged 9 months to 18 years in Thailand (Feroldi 2014). In a similar study in children 12-24 months in Korea, the seroprotection rate was 99.1% (Kim 2013).

<sup>2</sup>In a lot-to-lot consistency study in Bangladesh with vaccine from a new GMP-compliant facility, seroprotection rates ranged between 80.2% (95% CI: 74.0-85.2) to 86.3% (95% CI: 79.8-91.0) (Zaman 2014). Two lots were not equivalent with a seroprotection rate difference of -4.33 (-11.94-3.31). No clinical consequences have been established and it was determined not to downgrade.

<sup>3</sup>Clinical study outcomes are based on an accepted immunological correlate of protection (Hombach 2005).

<sup>4</sup>High seroprotection (>80%) rates post-vaccination, a defined threshold in the WHO Guidance for the Development of Evidence-Based Vaccine-Related Recommendations.

<sup>5</sup>Two effectiveness studies were done in the near-term after vaccination. A case control study in Nepal estimated vaccine effectiveness to be 99.3% (95% CI: 94.9-100) in the one week to one month time period post-vaccination (Bista 2001). A
second case-control study in India estimated vaccine effectiveness to be 94.5% (95% CI: 81.5-98.9) six months following vaccination (Kumar 2009).

Reference List

Clinical Studies in Endemic Settings


Kim DS, Houillon G. A randomized study of the immunogenicity and safety of Japanese encephalitis chimeric virus vaccine (JE-CV) in comparison with SA 14-14-2 vaccine in children in South Korea. 8th World Congress of the World Society for Pediatric Infectious Diseases (WSPID) - Nov. 19-22, 2013, Cape Town, South Africa.


Vaccine Effectiveness Studies (<12 months post-vaccination)


Other