

# Key Conclusions and Proposed Recommendations

*Does SAGE agree with the WG's 11 recommendations?*

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# Key Conclusions

- A. Japanese encephalitis is major public health problem in many countries in Asia.
- B. Safe, effective and WHO prequalified vaccines are available with opportunities to initiate/expand vaccination program
- C. JE vaccination programs have significant impact on JE cases and JE economic burden.
- D. Surveillance strengthening is needed to assess the burden, inform strategies, and monitor the impact.

## Proposed Recommendations (1/11)

1. JE vaccination should be extended to all areas where JE is recognized as a public health priority. Even if the number of JE-confirmed cases is low, vaccination should be considered where there is a suitable environment for JE transmission (i.e. presence of animal reservoirs, ecological conditions supportive of virus transmission, and proximity to other countries/regions with known JE transmission).

## Proposed Recommendations (2/11)

2. It is advisable that countries deciding on JE vaccine introduction have at least minimal local data on the burden of JE disease, such as information on confirmed cases collected through sentinel sites. More refined country-specific data are useful to identify target age groups and areas of highest risk. The latter is particularly important if a phased or only subnational vaccine introduction is considered. An absence of confirmed cases in the context of suboptimal surveillance and case detection should not be taken as sufficient to exclude the need for JE vaccination.

## Proposed Recommendations (3/11)

3. All JE-endemic countries should have at least sentinel surveillance with laboratory confirmation of JE. Acute encephalitis syndrome (AES) surveillance is an important tool for understanding all causes of encephalitis. Even in the absence of JE-confirmatory testing, reporting of AES cases can have value in demonstrating impact of vaccination programs. However, low impact on AES may reflect the burden of non-JE causes of AES.

## Proposed Recommendations (4/11)

4. The most effective immunization strategy in JE endemic settings is a onetime campaign in the primary target population, as defined by local epidemiology (typically children <15 years of age), followed by incorporation of the JE vaccine into the routine immunization program. This approach has a greater public health impact than either strategy separately. When possible, campaigns should be scheduled outside periods of high JE disease activity. Older age groups may be considered for vaccination if the disease burden in such groups is sufficiently high.

## Proposed Recommendations (5/11)

5. Due to the continued enzootic cycle of JE virus (and thus no herd immunity), sustained high-coverage vaccination programs are critical.

## Proposed Recommendations (6/11)

6. Vaccine dosing schedules/age of administration in **endemic settings. For all vaccines, the need for a booster dose in endemic settings has not been established.**

- Inactivated Vero cell vaccine: Primary series per manufacturer's recommendations (vary by product). Generally starting at  $\geq 6$  months of age in endemic settings
- Live attenuated vaccine: Single dose administered at  $\geq 8$  months of age
- Chimeric vaccine: Single dose administered at  $\geq 9$  months of age



## Proposed Recommendations (7/11)

7. Countries are strongly encouraged to **conduct rigorous vaccine failure monitoring** to assess the need for eventual booster doses.

## Proposed Recommendations (8/11)

8. Vaccine co-administration is a preferred programmatic approach. **There are some data on co-administration of JE vaccines with some other vaccines, particularly live attenuated measles vaccine.** However, many countries are already co-administering JE vaccines with vaccines not yet tested, such as combination measles-rubella vaccine. **While the possible impact of co-administration of JE vaccines with measles-rubella vaccine as well as other vaccines of the childhood immunization program has not been systematically studied, co-administration for programmatic reasons seems acceptable.** However, program monitoring and/or special studies are warranted to assess immunogenicity and/or effectiveness.

## Proposed Recommendations (9/11)

9. The value of reactive JE campaigns has not been studied. If an outbreak occurs in a country or region having not yet introduced JE vaccination, an assessment needs to be **made** about whether it is appropriate to implement an immediate vaccine response, including considerations such as size of outbreak, timeliness of the response, population affected, and programmatic capacity. Due to the need for rapid production of protective antibodies, single dose live attenuated or chimeric vaccines should be used. **When outbreak response immunization is conducted, planning for routine immunization should**

# Proposed Recommendations (10-1/11)

## 10. Special populations:

- Immunocompromised persons: Inactivated Vero cell JE vaccine can be used in HIV-infected and immunocompromised persons, but the immune response may be lower than in healthy persons. **Inactivated vaccines should be used preferentially over live or chimeric vaccines in immunocompromised persons.**
- Pregnant women: If JE risk is sufficient to vaccinate pregnant women, **inactivated vaccines should be used preferentially over live or chimeric vaccines based on the general precautionary principle against using any live attenuated vaccine in pregnant women. However, it is not necessary to do pregnancy testing before JE vaccination.**

# Proposed Recommendations (10-2/11)

## 10. Special populations:

- Travelers: As noted by WHO guidelines for International Travel and Health, “the risk varies according to season, destination, duration of travel and activities. **Vaccination is recommended for travelers with extensive outdoor exposure...during the transmission season.**”
- Health Care Workers: WHO defines health care workers as all persons involved in patient care such as health care professionals, residents, students, laboratory staff, administrative and service staff, as well as persons in public health acts such as field workers, epidemiologists, laboratory staff and community health workers. **Health care workers at high-risk in JE-endemic areas, e.g. those involved in vector control, should be vaccinated.**

## Proposed Recommendations (11/11)

11. Adjunctive (non-vaccine) interventions, in particular vector control, should not divert efforts from childhood JE vaccination.