United Nations Medical Directors

Dengue Risk Mitigation Plan and Recommendations for UN Personnel

26 March 2024

- The following occupational health recommendations are provided by the UN Medical Directors to all UN Organizations and apply to all UN personnel to reduce the risk of UN personnel acquiring dengue.
- Dengue is a viral infection caused by dengue virus and transmitted by the bite of the *Aedes aegypti* mosquito (and to lesser extent, *Aedes albopictus*) mosquitoes. While most cases are asymptomatic or mild, some individuals will develop severe dengue which can be life threatening. Dengue is managed with supportive care.
- There are four serotypes of dengue virus (DENV-1, 2, 3 and 4)
- For more information, please see WHO's website: https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue
- **Duty stations should take into account local host country/authorities' guidance and regulations when implementing these recommendations.**
- Contact dos-dhmosh-public-health@un.org for more information.

Risk Categories	UN Medical Directors' Recommendations

1 All UN personnel	• Familiarize yourself with dengue and be aware of the local risk of dengue in your local duty station.
	• Protect yourself from mosquito bites by wearing loose fitting clothing that minimizes skin exposure to mosquitoes, use of DEET (or equivalent) products (mosquito repellants) and ensuring windows have screens and bed nets are used.
	• UN personnel can also help prevent mosquito breeding grounds in their duty station by preventing mosquitoes from accessing egg-laying habitats, disposing of solid waste, reducing areas where water can collect and stagnate, and applying insecticides to outdoor water storage containers.
	• Be aware of signs and symptoms of dengue and severe dengue (see section 3).
	• NEW: The dengue vaccine (Dengvaxia®) is no longer in production. The live attenuated quadrivalent dengue vaccine Qdenga® (Takeda) has been approved by SAGE with the following recommendations:
	  ○ The vaccine be considered for introduction in settings with high dengue disease burden and high transmission intensity to maximize the public health impact and minimize any potential risk in seronegative persons.
	  ○ The vaccine be introduced to children aged 6 to 16 years of age. Within this age range, the vaccine should be introduced about 1-2 years prior to the age-specific peak incidence of dengue-related hospitalizations. The vaccine should be administered in a 2-dose schedule with a 3-month interval between doses.
	• To date, vaccination is not recommended for time-limited travel or stays in zones endemic with or experiencing outbreaks of dengue.

		• Note: the dengue vaccine Qdenga® (Takeda) is not currently available/accessible in all countries.
2	**UN managers who approve travel / UN personnel who are travelling or plan to travel**	• There are no recommendations for travel restrictions for those who have previously had dengue. However, since a secondary infection with another dengue serotype increases the risk of severe dengue, precautions outlined in risk category 1 should be followed strictly.
3	**UN health care workers (HCWs)**	• HCWs should be aware of the signs/symptoms of dengue: high fevers (40 degrees Celsius) accompanied by two or more of the following symptoms during the febrile phase (2-7 days): severe headache (retro-orbital), muscle and joint pains, nausea, vomiting, swollen lymph nodes, rash ("white in a sea of red"). If these individuals do not have warning signs, they can be managed as outpatients with supportive care. • HCWs should be aware of signs/symptoms of severe dengue: these occur about 3-7 day after illness onset and, during the 24 to 48-hour critical phase, a small proportion of patients may experience a sudden worsening of symptoms. • Warning signs of severe dengue include severe abdominal pain, persistent vomiting, rapid breathing, bleeding from gums/nose, fatigue, restlessness, liver enlargement and blood in vomit or stool. If these symptoms occur, the patient should be managed in the hospital/medical center for close observation over the next 24-48 hours as well as into the convalescent period. • HCWs can order diagnostic testing for dengue which include PCR and serological methods depending on week of illness. • Management of dengue and severe dengue is supportive care. Early detection of disease progression associated with severe dengue and access to proper medical care lowers fatality rates of severe dengue to below 1%. • Acetaminophen/paracetamol can be used for treatment but NSAIDS such as ibuprofen/aspirin should be avoided.
4	**UN personnel with confirmed Dengue**	• Infection with one serotype of dengue is believed to provide lifelong immunity against that serotype. However, cross-immunity to other serotypes is partial and temporary and subsequent infections with other serotypes increase the risk of severe dengue. • Treatment is supportive and those with warning signs/severe dengue should be managed in hospital as mentioned in section 3. • Mother to child-transmission of dengue is possible though rates appear low. If a mother has dengue infection during pregnancy, babies might be pre-term, have low birthweight, or experience fetal distress.

References:

- https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue
- https://www.who.int/news-room/questions-and-answers/item/dengue-and-severe-dengue