

Guidelines for management of adults diagnosed with dengue fever in the Emergency Department



Minority progress to severe dengue: triphasic illness

- Initial febrile phase
- Critical (vascular leak) phase : usually 24–48hrs post defervescence: ie day 4–6: lasting 48–72hrs
 - Macrophage activation syndrome
 - Reversible capillary leak syndrome with progressive thrombocytopaenia/ complex coagulopathy, rising haematocrit (> 10% from baseline), shock +/- respiratory distress/ARDS +/- MOF +/- clinically significant bleeding
 - Haemophagocytic syndrome sometimes seen
- Recovery phase over second week

Risk factors for severe dengue are not well understood.

Majority of patients have non-severe, self-limiting illness

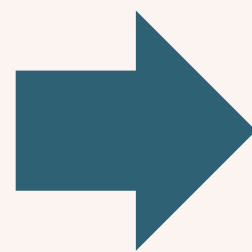
- Break bone' fever/retrorbital headache/myalgia are common symptoms
- Macular rash in 50% patients, some have petechiae
- Thrombocytopaenia, leucopaenia (neutropaenia) and transaminitis typical (CRP relatively low)
- 2– 7 days febrile course with viral clearance with defervescence



Spectrum of syndromes and treatment

1. Probable dengue (Group A)

- Endemic area
- Fever PLUS 2 of the following
 - Nausea, vomiting
 - Rash
 - Aches & pains
 - Tourniquet test positive
 - Leukopaenia

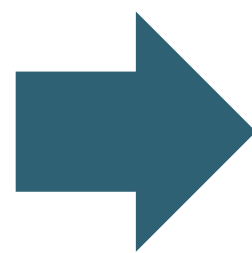


Group A: No warning signs, can tolerate adequate oral fluids and pass urine every 6 hours, with near normal blood counts.

- Can be managed at home.
- Follow up by own GP OR in the ID outpatient clinic (Referral should be sent only after discussion with the oncall ID Registrar or Consultant).
- Discharge letter to include any treatments given or started and follow up requirements

2. Dengue with warning signs (Group B)

- Abdominal pain
- Persistent vomiting
- Clinically fluid overloaded
- Mucosal bleeding
- Lethargy, restlessness
- Liver enlargement > 2 cm
- Increased in Hct concurrent with rapid decrease in platelet count



Group B: developing **warning signs, risk-factors** (diabetes, obesity, pregnancy, renal failure), **poor social support, increasing haematocrit or rapidly declining platelets.**

- Should be admitted to hospital (MAU) for observation.
- Supportive treatment
- Careful fluid replacement in view of risk of capillary leak syndrome in severe dengue.

3. Severe dengue (Group C)

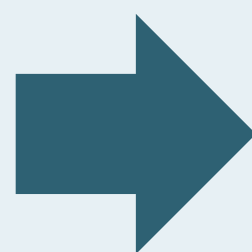
Severe plasma leakage

- Shock
- Fluid accumulation with respiratory distress

Severe bleeding

Severe organ involvement

- Liver: AST or ALT \geq 1000
- Altered mental state
- Other organ failure



Group C: severe dengue: plasma leakage with shock +/- fluid accumulation causing respiratory distress; severe bleeding; severe organ impairment.

- Require emergency treatment with access to ICU and blood products – refer to ICU early.
- Supportive treatment
- Careful fluid replacement in severe dengue in view of risk of capillary leak syndrome.

References:

1. Infectious Diseases / Returned Traveller section Emergency Care Institute [Returned Traveller | Emergency Care Institute \(nsw.gov.au\)](https://www.nsw.gov.au/returned-traveller) (Accessed April 2023)
 2. Gherardin A, Sisson J. Assessing fever in the returned traveller. Aust Prescr 2012; 35: 10 – 14
 3. Thwaites GE, Day NP. Approach to fever in the returning traveler. The New England Journal of Medicine 2017; 376(6): 548–560
- Guideline designed by Dr Ioana Vlad (ED) and Dr Darren Rebello (ED) in collaboration with Dr Thomas Gliddon (ID) May 2023