EXECUTIVE SUMMARY

2017 PPS-PIDSP CLINICAL PRACTICE GUIDELINES ON DENGUE

Current World Health Organization estimates show that 50 to 100 million new dengue infections occur yearly. In affected regions such as Asia and Latin America, severe dengue is a leading cause of hospitalization and mortality particularly in children. While there is no specific treatment for dengue, prompt recognition and timely intervention affects prognosis.

This current evidence-based guideline updates the recommendations contained in the PPS 2008 Practice Guidelines on DF/DHF answering relevant questions in the care of a child with dengue illness. The intended users of this document include primary care physicians, family medicine physicians, pediatricians, and other healthcare workers involved in the diagnosis and management of dengue in children.

The eight priority questions identified and corresponding recommendations were developed by a 16-member group of experts composed of an Oversight Committee, a Guideline Writing Panel and a Technical Review Committee. Quality and strength of evidence was rated using the GRADE methodology. Draft recommendations presented in the table below were finalized after these were presented to and voted on by the members of the Stakeholders Panel.

No.	Recommendation	Strength of Recommendation	Quality of Evidence
1	***Clinical signs and symptoms that warrant admission***		
	Recommendation 1: Among patients with confirmed or presumptive diagnosis of dengue in the outpatient setting, patients with the following signs and symptoms should be admitted in a healthcare facility for closer monitoring and observation: • Shortness of breath • Irritability or drowsiness • Pleural effusion • Abdominal pain • Melena • Elevated hematocrit • Decreased or decreasing platelet count	Strong	Low and Very low
	Recommendation 2**:** Among patients with confirmed or presumptive diagnosis of dengue in the outpatient setting, there is insufficient evidence to say that vomiting is associated with more severe dengue. However, because patients with vomiting cannot tolerate oral rehydration fluids, consider admission	Strong	Very low

2	***Risk factors that are associated with mortality*** ***Recommendation 1*:** Patients with dengue who present with any one of the following clinical findings may be at increased risk for mortality. • Hypotension on admission • Narrow pulse pressure on admission • DHF stage 3 and 4 (severe dengue) • History of previous dengue • Prolonged shock • Respiratory failure • Liver failure (AST elevation > 200 u and INR > 1.3) • Renal failure (BUN >20 mg% and serum Creatinine >1.0mg %) • Significant bleeding including gastrointestinal bleeding • Severe plasma leakage in multiple sites (pleural effusion, pericardial effusion and ascites)	Strong	Moderate, low and very low
	***Recommendation 2*:** The presence of two or more of the following warning signs in patients with dengue may increase the risk for mortality: • severe abdominal pain • arterial hypotension • neurologic manifestation • painful hepatomegaly • hypovolemic shock • liver failure • myocarditis	Strong	Very low
	Recommendation 3: Patients with dengue who present with one or more of the following laboratory findings may be at increased risk for mortality and warrant hospital admission for close monitoring • Decline in Hgb by $\geq$ 20% • Thrombocytopenia, with APC $\leq$ 50,000/mm^3 • Hemoconcentration, with Hct > 40 % or 20% increase in lowest and highest hematocrit • Creatinine > 1 mg % • AST > 1000 u • Acidosis	Strong	Moderate, low and very low
	***Recommendation 4*:** Prothrombin time (PT) and Partial Prothrombin Time (PTT) do not differentiate those who may be at increased risk for mortality and are not recommended as routine tests for patients with dengue	Strong	Low
3	***Clinical signs and/or laboratory findings that indicate significant bleeding*** ***Recommendation 1*:** Among patients admitted because of dengue, the presence of one or more	Strong	Low to very low

	of the following clinical or laboratory findings may increase the risk of bleeding • Hypotension • Narrow pulse pressure • Platelet count < 50,000/mm^3 • WBC count < 5000/mm^3 • Hepatomegaly • Elevated ALT (> 3x the normal value)		
	Recommendation 2: Among patients admitted because of dengue, there is some evidence to suggest that the following signs and symptoms may be associated with significant bleeding. • Vomiting • Abdominal pain • Restlessness • Pleural effusion or ascites • Rash ***Recommendation 3***: Prothrombin Time (PT) and Partial Thromboplastin Time (PTT) were not shown to be significantly associated with bleeding and should not be routinely done in patient with dengue.	Strong Strong	Low to very low Very low
4	***Isotonic compared to hypotonic IVFs in reducing mortality among dengue patients without shock*** ***Recommendation:*** • There is insufficient evidence that the tonicity of the intravenous fluid has an effect on mortality in dengue patients without shock. • Isotonic fluids can be used as maintenance for dengue patients without shock. • The use of hypotonic IVF is associated with hyponatremia among hospitalized pediatric patients.	Strong	Low
5	***Colloids compared to crystalloids in reducing mortality among dengue patients with shock*** ***Recommendation*:** • In dengue patients with shock, either crystalloids or colloids may be used for fluid resuscitation. • There is insufficient evidence to say that the use of colloid IVF compared to crystalloids will have an effect on mortality. • The use of colloids may be associated with more adverse reactions (e.g. bleeding, allergic reactions) compared to crystalloids.	Strong	Low and very low
6	***Prophylactic platelet transfusion in improving platelet count, preventing hemorrhage and reducing mortality among patients with thrombocytopenia because of dengue***		

	***Recommendation*:** • There is insufficient evidence to say that prophylactic platelet transfusion in patients with minimal or no active bleeding will improve platelet counts, prevent hemorrhage and reduce mortality. • Children with dengue who have platelet count <50,000/mm^3 with minimal or no active bleeding should not be given prophylactic platelet transfusion.	Strong	Moderate to very low
7	***Plasma transfusion in controlling bleeding and reducing mortality among dengue patients with significant bleeding*** ***Recommendation*:** • Among dengue patients with significant bleeding, there is insufficient evidence that plasma transfusion has an effect on controlling bleeding and reducing mortality. • The effect of plasma transfusion on platelet count recovery is not significant in dengue patients with bleeding. • In children exhibiting signs of disseminated intravascular coagulopathy (DIC), plasma transfusion may be considered.	Strong	Low
8	***Citronella-based repellents compared to DEET-based repellents in reducing the incidence of Dengue*** ***Recommendation*:** There is insufficient evidence to say that use of citronella-based repellents is more effective than DEET-based repellents in reducing dengue transmission.	Strong	Very low

asping or apnea may also be features in hypotensive shock with cardiopulmonary failure.