

**Government of West Bengal**  
**Directorate of Health Services**  
**PH & CD Branch**  
**Swasthya Bhawan (Wing-B, 1<sup>st</sup> Floor)**  
**Block-GN, No.-29, Sector-V, Salt Lake, Kolkata-700 091**

Memo. No.HPH/9M-21/2020/168

Dated- Kolkata, 28.07.2020

**To**

**The Medical Superintendent cum Vice Principal, .....[all Medical College & Hospitals];**

**The Chief Medical officer Health, .....[all Districts]**

Enclosed, please find herewith the two guidelines, viz. [1] Dengue and Covid-19: Differentiation and Co-infection and [2] attending a fever case in the OPD or ER, which would speak for itself. The documents have been developed keeping covid-19 & dengue scenario in the mind.

You are requested to circulate the same among all the Superintendents, MO-s and concerned Officers under your jurisdiction/all concerned in the Medical College & Hospital for necessary action.

It may be specially noted that whenever a case of dengue & covid-19 co-infection is detected in any hospital, the same has to be separately reported through e-mail to the State headquarter (as mentioned in the attached guideline). The findings and the advices have to be recorded regularly in details in the BHT and Top Sheet for consultation and future reference.

  
**Director of Medical Education**  
**Govt. of West Bengal**

  
**Director of Health Services**  
**Govt. of West Bengal**

Memo. No.HPH/9M-21/2020/168/1(3)

Dated- Kolkata, 28.07.2020

Copy forwarded for information and necessary action to-

- 1.Dy.D.H.S[Admin],Swasthya Bhawan--He is requested to circulate to all the Superintendent of Decentralised Hospitals within Kolkata.
2. Chief Municipal Health Officer, KMC
- 3.Dy.C.M.O.H-II-----[all Districts]

  
**Dy. Director of Health Services**  
**[PH], West Bengal**

## Dengue and Covid-19: Differentiation and Co-infection

Dengue fever and COVID-19 are difficult to distinguish because they share clinical and laboratory findings. Though initial symptoms are similar, the distinction can be made as the disease progresses.

1. Headache, joint pain, skin rash and vomiting/ nausea are more common in Dengue whereas fever, dry cough, anosmia, sore throat are common in Covid-19.
2. These two diseases can be differentiated by the fact that in dengue, there is a decrease in the number of leukocytes with the higher-than-normal amount of lymphocytes (relative lymphocytosis) with low blood platelet count. In the case of Covid19, one will have normal/ slightly decreased WBC with absolute lymphopenia and normal platelet count in most of the patients.
3. Rapid Diagnostic Test for Dengue is not recommended under NVBDCP. In case of Dengue, ELISA based antigendetection test (NS1) is recommend to diagnose the cases from the 1st day of fever onwards and antibody detection test IgM capture ELISA (MAC-ELISA) for diagnosing the cases from 5th day of onset of disease. Covid-19 should be confirmed as per existing Govt guideline. False positivity for dengue IgM (by using RDT kit) may happen in Covid-19 infected patients.
4. Test for dengue should be especially pursued in the following situations, apart from all other cases clinically matching with dengue:
  - a. Cases of acute febrile illness (AFI) tested negative for Covid-19, particularly in absence of respiratory symptoms.
  - b. Cases of AFI showing features of vital organ involvement (i.e. consider expanded dengue syndrome).
5. Combination of Severe Dengue with Severe COVID-19 poses a therapeutic challenge with both overlapping and contradictory pathophysiological effects on different organ systems.
6. Special considerations in dengue-Covid-19 co-infection should be done in terms of use of steroids and anti-coagulation. Steroid is not contraindicated in co-infection. Anticoagulation can be given but INR should be monitored and should be <2.5.
7. Cases of severe dengue with severe Covid19 should be expeditiously referred to a specialized center with capability of advanced hemodynamic, hematologic, neurologic and respiratory monitoring and support.
8. If patient's condition does not favour transferring him/ her, a team of senior clinicians should monitor few parameters (haematological, organ function, haemodynamic status etc.) frequently and regularly in these patients.
9. Severe Covid-19 usually requires respiratory support with high flow oxygen and if failing, invasive mechanical ventilation. When associated with dengue infection, it requires some special precautions during airway management and ventilation on account of added risks e.g. risk of hemorrhage etc.

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10. In Dengue due to capillary leak the intravascular volume should be replaced as per guidelines to maintain organ perfusion. On the other hand in COVID-19, Surviving Sepsis Guidelines recommend cautious fluid resuscitation to avoid worsening hypoxemia. Thus a balanced approach, using the monitoring techniques should be judiciously used to avoid both over and under resuscitation. Hemodynamic and volume assessment can be done by using bedside clinical examination, simple laboratory parameters (e.g. repeated PCV) and non-invasive methods like ultrasonography for inferior vena cava collapsibility, evidence of left ventricular and right ventricular dysfunction (commonly seen in Covid-19).
11. Whenever a case of dengue & covid-19 co-infection is detected in any hospital, the same must be separately reported through e-mail to the State headquarter in [ncovrep.wb@gmail.com](mailto:ncovrep.wb@gmail.com) and [ddhsph.wb.2017@gmail.com](mailto:ddhsph.wb.2017@gmail.com) with the subject heading of "Dengue & Covid-19 coinfection". The details of the findings, monitoring parameters and the advices may please be recorded with special care in the BHT and Top Sheet for consultation and future reference.

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## Attending a fever case in the OPD or ER, keeping covid-19 & dengue scenario in the mind

