Labstract – September 2014

Dengue Fever – Testing Update

To Health Care Providers:

This Labstract provides:

1. Notification of a change in the manufacturer of Dengue serology test kits and instrumentation
2. Specimen requirements for cases of suspected Dengue infection
3. Guidance on interpretation of Dengue serological test results

1. Change in the manufacturer of Dengue serology test kits and instrumentation

As of August 9, 2014, the PHO Laboratories (PHOL) will use Dengue serology test kits and instrumentation by Euroimmun Medical Diagnostics Canada Inc. There is no change to the testing method, enzyme-linked immunosorbent assay (ELISA) test results and interpretations. The algorithm remains unchanged, where all specimens submitted for Dengue serology are tested for both Dengue IgM and IgG antibodies.

2. Specimen Requirements

Serum is the preferred sample for Dengue IgM and IgG serology. Haemolysed, icteric, lipemic or microbially contaminated sera are not recommended for testing. Current serological tests have not been validated for cerebral spinal fluid (CSF) samples.

- 1 ml of serum is required
- Transport the specimen to the laboratory as soon as possible after collection. If this is not possible, the specimen should be refrigerated until the time of delivery.

3. Results Interpretation

Cross reactions may occur with other Flaviviruses such as St. Louis Encephalitis, West Nile, Japanese B Encephalitis, Powassan and Yellow Fever. Results should be interpreted in the context of the clinical and travel history of the patient.

Interpretation of Dengue Virus ELISA Test

IgM ELISA	IgG ELISA	Reported Results	Comment
Non-reactive	Non-reactive	No serological evidence of infection.	Advise a follow up in 7 – 14 days if clinically indicated
Indeterminate	Indeterminate	Antibody status inconclusive.	Advise a follow up in 7 – 14 days if clinically indicated
Non-reactive	Indeterminate	Antibody status inconclusive.	Advise a follow up in 7 – 14 days if clinically indicated
Reactive	Non-reactive or Indeterminate	May indicate recent infection.	Advise a follow up in 7 – 14 days if clinically indicated
Indeterminate	Non-reactive	Antibody status inconclusive.	Advise a follow up in 7 – 14 days if clinically indicated
Non-reactive	Reactive	No serological evidence of recent Dengue infection. Evidence of previous Flavivirus infection.	
Indeterminate	Reactive	Antibody status inconclusive.	Advise a follow up in 7 – 14 days if clinically indicated
Reactive	Reactive	Indicates recent primary infection.	

For further information:

- PHOL Dengue testing information
- Refer to Labstract (LAB-SD-037-000): Dengue Fever – Interpreting Serology Results (Updated)
- Contact the PHOL Customer Service Centre at 416-235-6556 or 1-877-604-4567 (toll-free), or by email at CustomerServiceCentre@oahpp.ca
- For previous Labstracts, refer to http://www.publichealthontario.ca/Labs
- The current version of the PHOL General Test Requisition and other forms are available at http://www.publichealthontario.ca/Requisitions
- To subscribe to future Labstracts, email labstracts@oahpp.ca
- To register for Autofax and receive laboratory reports by fax directly from our laboratory information system as soon as they are released, contact the PHOL Customer Service Centre.