

PHSA Laboratories

BCCDC Public Health Laboratory

June 16, 2022

RE: Monkeypox virus Laboratory Testing Updates

Testing at BCCDC PHL

The BCCDC Public Health Laboratory (PHL) now offers an in-house Monkeypox virus nucleic acid test (NAT) with an approximate turnaround time of 24 hours from specimen receipt. This assay is specific for monkeypox viruses and can detect both Western and Central African clades. This assay is currently partially validated; negative results are considered final while positive results are considered preliminary and require confirmation by sequencing and/or NAT testing at the National Microbiology Laboratory. As such, positive results will be reported as “presumptive positive” until the assay is fully validated. All positive and indeterminate results will be reported to public health as a Reportable Communicable Disease. Indeterminate results can occur when the result is beyond the validated range and/or not reproducible.

Indications for testing

Any individual meeting the suspect or probable monkeypox case definitions (<http://www.bccdc.ca/health-professionals/clinical-resources/case-definitions/monkeypox>) should be offered testing. Given the epidemiology of the cases confirmed thus far in Europe and North America, clinicians should be aware of the differential diagnosis as lesions associated with monkeypox can resemble several other infections, including:

- Herpesviruses (e.g. herpes simplex virus, varicella zoster virus [i.e. shingles and chicken pox])
- Enterovirus (e.g. hand foot and mouth disease)
- Syphilis (*Treponema pallidum*)
- Bacterial skin infections
- Medication-associated allergies
- Other poxviruses (e.g. molluscum contagiosum)

Features of monkeypox virus infection may overlap with sexually transmitted infections (STI), and co-infections are possible. For each individual, consider risk-informed STI testing.

Specimen Collection and Testing Guidelines

Detailed information on sample types and containers can be found on the Monkeypox virus NAT page on eLabhandbook (<http://www.elabhandbook.info/phsa/>).

Please consult with the Microbiologist on call at BCCDC PHL (604-661-7033) or at a local hospital for submitting samples other than lesion material.

- **Illness Stage: prodromal**

Oropharyngeal swabs, nasopharyngeal swabs, EDTA blood and urine can be considered for testing following a consultation.

- **Illness Stage: rash/lesion**

The preferred sample type is **skin lesion material**. Collect lesion material (roofs, crusts, aspirate, exudate, tissue), including dry swabs or swabs in Universal Transport Medium (UTM). Samples should be shipped refrigerated. A consultation is not required.

Transport and Requisition Requirements

Collected specimens should be stored and shipped refrigerated. Monkeypox virus is a Risk Group 3 pathogen. Samples from suspect cases can be shipped by ground to laboratories as Transportation of Dangerous Goods (TDG) Category B (temporary Transport Canada certificate) but need to be shipped as TDG Category A, UN2814 “infectious substance, affecting humans” by air.

Please complete the BCCDC PHL [Virology Requisition](#) and indicate “Monkeypox” under the PATIENT STATUS/TRAVEL HISTORY/EXPOSURE box (Figure 1).

 Public Health Laboratory 655 West 12th Avenue, Vancouver, BC V5Z 4R4 www.bccdc.ca/publichealthlab			
Virology Requisition			
Section 1 - Patient/Provider Information <i>(Two matching unique patient identifiers on sample container and requisition are required for sample processing)</i>			
PERSONAL HEALTH NUMBER (or out of province Health Number and province)		ORDERING PRACTITIONER Name and MSC#	
PATIENT SURNAME		Address of report delivery	
PATIENT FIRST AND MIDDLE NAME		☐ I do not require a copy of the report ☐ I am a Locum?	
DOB (DD/MM/YYYY)		If Locum, include name of Practitioner you are covering for	
SEX ☐ M ☐ F ☐ X ☐ U (Unk)		ADDITIONAL COPIES TO PRACTITIONER / CLINIC: (Name, Address / MSC# / PHSA Client#) (Limit of 3 copies available)	
PATIENT ADDRESS		1.	
CITY		2.	
PROVINCE		3.	
POSTAL CODE		LABORATORY USE ONLY	
		OUTBREAK ID	
		SAMPLE REF. NO.	
		DATE COLLECTED (DD/MM/YYYY)	
		TIME COLLECTED (HH:MM)	
Section 2 - Test(s) Requested			
RESPIRATORY PATHOGENS ☐ Influenza A, Influenza B, RSV ☐ COVID-19 ☐ MERS (Approval and travel history required*) ☐ Enterovirus D68 (Seasonal; when outside season, approval required) ☐ Other, specify: _____		For other available tests and sample collection information, consult the Public Health Laboratory's eLab Handbook: www.elabhandbook.info/PHSA/Default.aspx	
Indicate sample site: ☐ Nasopharynx ☐ Nares		PATIENT STATUS / TRAVEL HISTORY* / EXPOSURE (Please provide travel history where indicated)	
		Monkeypox	
		OUTBREAK LOCATION / INFORMATION	
		HERPES SIMPLEX 1,2 / VARICELLA ZOSTER VIRUSES ☐ Genital lesion swab ☐ Non-genital lesion swab ☐ Skin swab ☐ Other, specify: _____	
		GASTROINTESTINAL VIRUSES Feces** for: ☐ Gastrointestinal Panel (Norovirus, Adenovirus, Astrovirus, Rotavirus, Sapovirus)	

Figure 1. BCCDC PHL Virology Requisition with Monkeypox testing indicated.

Surveillance Testing

To mitigate undetected transmission, the BCCDC PHL will be performing point prevalence surveillance testing. Monkeypox virus NAT will be automatically added to samples such as lesion swabs submitted for testing in the near future. Clinicians will be seeing the results of this test added to their reports if surveillance testing is performed. All positive results will be followed up with a verbal report to the most responsible physician when surveillance monkeypox testing is performed but not requested.

Sincerely,



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