PublicHealth
WELLINGTON-DUFFERIN-GUELPH
Stay Well.

ADVISORY

SUBJECT:	**Monkeypox Updates**
Date:	June 14, 2022
Pages:	8
To:	Physicians, Primary Care Providers, Hospitals, Emergency Departments
From:	Dr. Matthew Tenenbaum, Associate Medical Officer of Health

- Monkeypox cases (incl. suspect cases) remain reportable to Public Health Ontario (**647-260-7603**). Health care providers are also asked to report cases directly to WDGPH (**1-855-934-5463**).

- Monkeypox classically presents with a prodrome followed by a centrifugal rash. However, cases in the current outbreak have often presented atypically with lesions in the genital or perianal lesions. Consider monkeypox for any patient presenting with genital ulcer disease.

- If the patient has vesicular or pustular lesions, swab them as this is the most sensitive test. If not, collect other specimens (NP/throat swab and blood for serology).

- Monkeypox specimens can be collected in the community and transported to the lab under Category B requirements (see below). Specimen containers must be appropriately labelled.

- WDGPH will risk-assess any close contacts of a monkeypox case in our region. Depending on the risk, contacts may be offered a third-generation smallpox vaccine (Imvamune) as post-exposure prophylaxis, which would be administered by WDGPH.

Because any news of an infectious disease is highlighted due to COVID-19, the attention to monkeypox that has been given by health care providers, clinics, and hospitals is appreciated. This advisory is a follow up to May 26, 2022, to assist clinicians with the identification, testing and follow up of monkeypox cases.[1]

Clinical Presentation

Information regarding the clinical presentation of monkeypox was provided in the previous advisory (May 26, 2022). Classically, monkeypox presents with a prodrome (fever, malaise, myalgias), often accompanied by lymphadenopathy, and followed several days later by a disseminated rash that spreads centrifugally from the face. Lesions evolve through multiple stages over the course of days-weeks.[2]

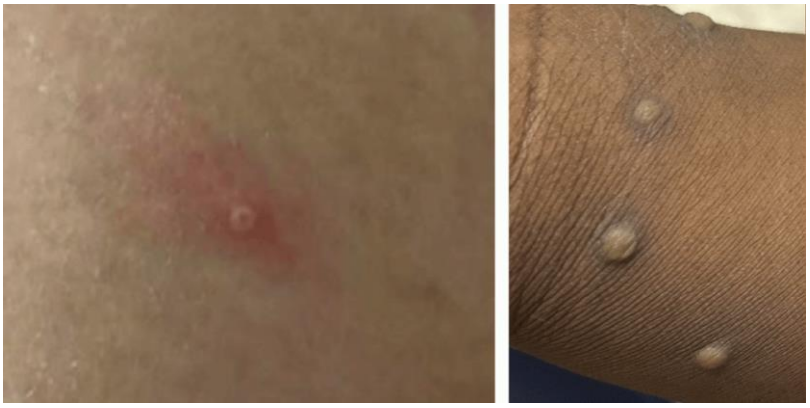
Characteristics of Monkeypox rash by stage (CDC)[3]

Stage	Stage Duration	Characteristics
Enanthem		• The first lesions to develop are on the tongue and in the mouth.
Macules	1-2 days	• Following the enanthem, a macular rash appears on the skin, starting on the face and spreading to the arms and legs and then to the hands and feet, including the palms and soles. • The rash typically spreads to all parts of the body within 24 hours becoming most concentrated on the face, arms, and legs (centrifugal distribution).
Papules	1-2 days	• By the third day of rash, lesions have progressed from macular (flat) to papular (raised).
Vesicles	1-2 days	• By the fourth to fifth day, lesions have become vesicular (raised and filled with clear fluid).
Pustules	5-7 days	• By the sixth to seventh day, lesions have become pustular (filled with opaque fluid) – sharply raised, usually round, and firm to the touch (deep seated). • Lesions will develop a depression in the center (umbilication). • The pustules will remain for approximately 5 to 7 days before beginning to crust.
Scabs	7-14 days	• By the end of the second week, pustules have crusted and scabbed over. • Scabs will remain for about a week before beginning to fall off.

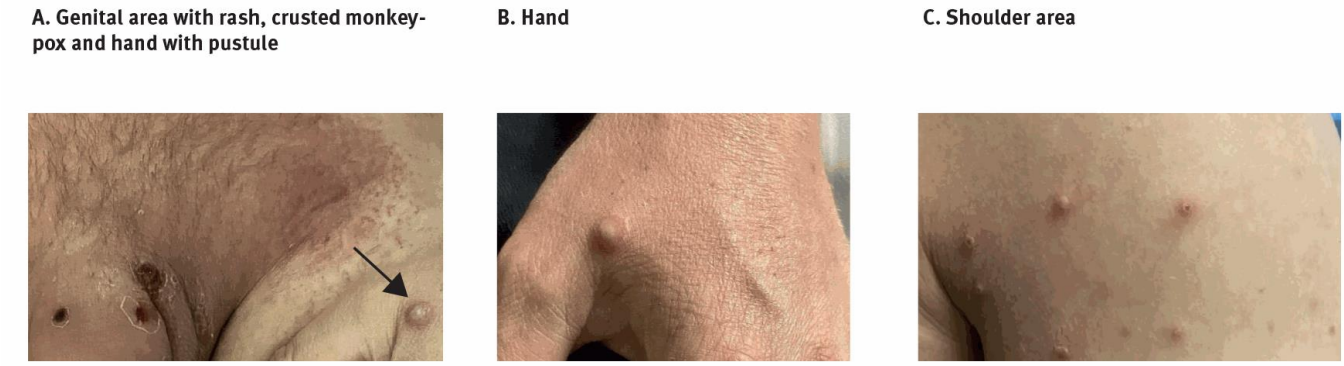
Emerging case reports and case series from the current multijurisdictional monkeypox outbreak, have noted that many monkeypox cases have presented **atypically**, with lesions first noted in the **genital and/or perianal areas**.[4] From there, the rash may **disseminate** to areas such as the arms, trunk, legs, and face. In a case series of 17 cases identified in the USA, one third of cases **did not report symptoms prior to rash onset**.[5]

The frequent presence of genital and/or perianal lesions among cases suggests that transmission likely occurred through close physical contact during sexual activities.[6,7] While monkeypox is not considered a sexually transmitted infection (STI) it should be considered as a possible cause of genital ulcer disease alongside other conditions such as HSV, chancroid, LGV, or syphilis.

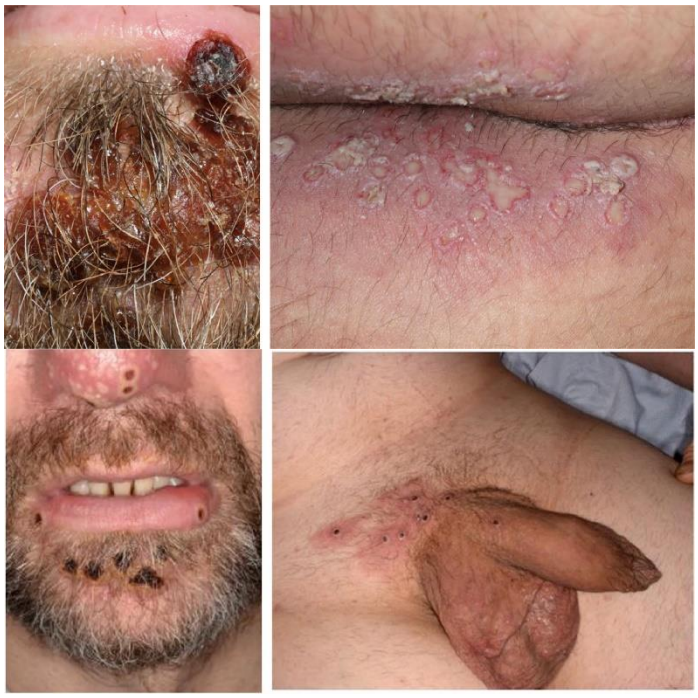
To assist with clinical recognition, additional images of monkeypox lesions are included below. All images are of cases from the current multijurisdictional outbreak and reflect their clinical presentations.



United States – Characteristic monkeypox lesions (published in *MMWR*)[8]



Australia – Monkeypox lesions on day 11 post symptom onset (published in *Eurosurveillance*)[9]



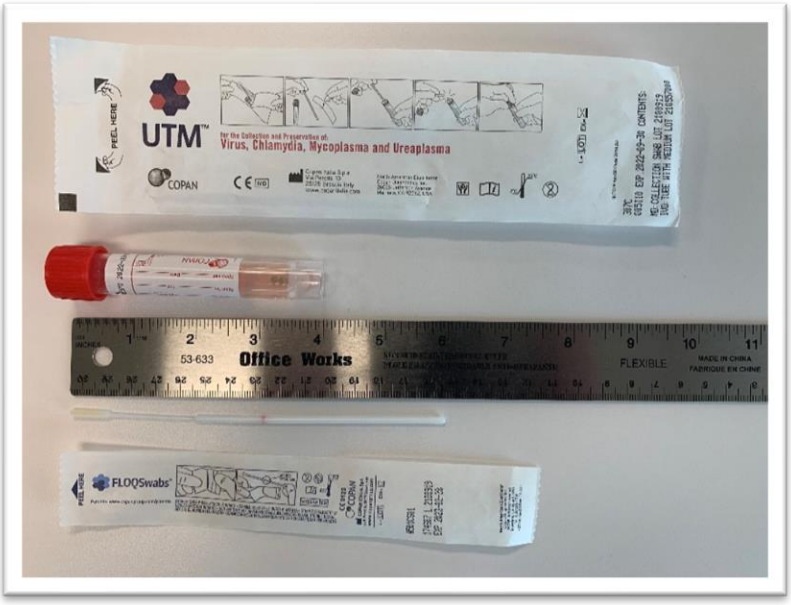
United Kingdom – Genital, perioral, and perianal lesions on two patients with monkeypox (published in *Journal of Infection*).[10]

Specimen Collection

Patients with compatible signs/symptoms who are suspected of having monkeypox should be tested. Appropriate test specimens are outlined in Public Health Ontario's Test Information Sheet, and include swabs of the lesion, nasopharyngeal swabs, serum, and other specimens.[11]

Lesion swabs are likely most sensitive for a patient with vesicles or pustules. If a patient presents without a rash or a macular/papular rash, collect an NP/throat swab and blood for serology.[11] For questions about appropriate specimen collection, contact PHO at 1-877-604-4567 (after hours 416-605-3113).

Swab samples can be collected as a dry swab or added to minimum volume (e.g. 1 mL) of transport media to reduce dilution of the sample.[11] A virus culture collection kit (#390081 – swab in pink universal transport medium) may be used. This is the same swab that would be used for swabbing other viral lesions such as those caused by HSV or varicella.



Wellington-Dufferin-Guelph Public Health photo, June 2022

Specimen Transportation

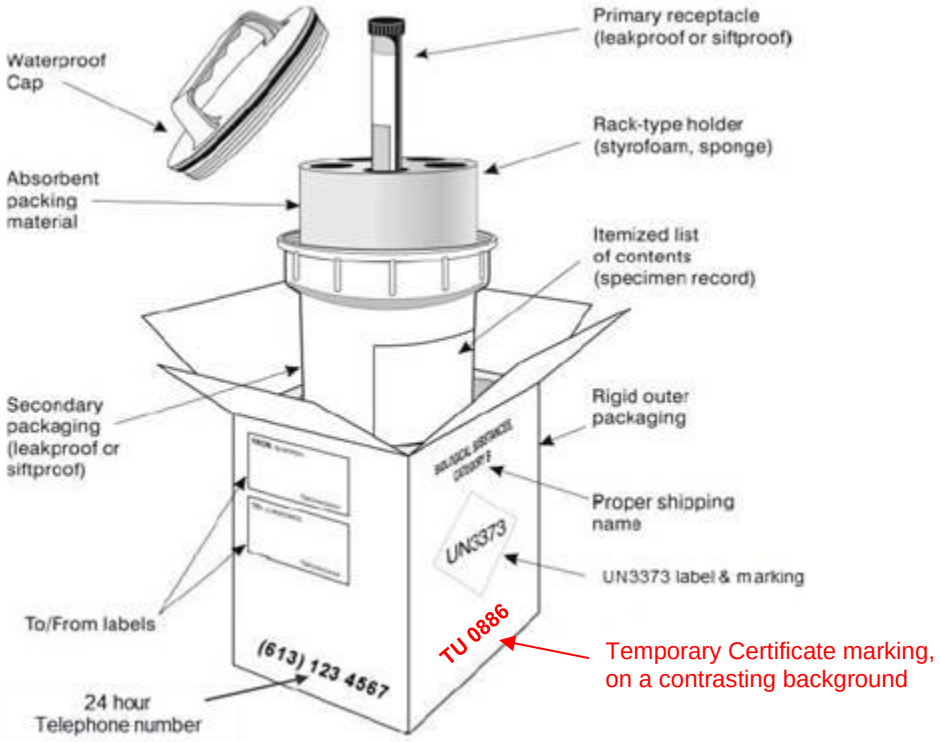
Clinical specimens for monkeypox **can** be sent to the lab from community/outpatient settings provided that packaging and transportation requirements are followed.

Transportation of clinical specimens is governed by Transport Canada under the *Transportation of Dangerous Goods (TDG)* regulations. Infectious substances regulated by the *TDG* regulations are classified as Category A or Category B which have associated transportation and labelling requirements.[12] Prior to June 2, monkeypox was classified as Category A.

As of June 2, 2022, specimens for monkeypox testing have been temporarily reclassified as **UN3373 Biological Substance, Category B** for land transport.[13] In addition to the routine Category B requirements, the outer packaging must be marked, on a contrasting background, with:

TU 0886 or **Temporary Certificate – TU 0886** or **Certificat Temporaire – TU 0886**

For full details on packaging and transporting, refer to guidance from Transport Canada[12] and the temporary certificate[13] specific to monkeypox.



Transport Canada, modifications to photo in red (by WDG Public Health)

Post-Exposure Immunization

On May 28, 2022, the Ministry of Health issued interim recommendations regarding the use of smallpox vaccine (Imvamune) as post-exposure prophylaxis (PEP) for monkeypox. PEP is recommended for contacts depending on their risk of exposure, as determined by the guidance from Public Health Ontario.[14]

Ministry of Health Recommendations for Post-Exposure Prophylaxis (PEP)[15]

Risk of Exposure	PEP Recommendation
High	Recommended
Intermediate	May be recommended based on the PHU's assessment of risks and benefits
Low	Not recommended
No/Very Low	Not recommended

Where PEP is recommended, a single dose should be administered **within 4 days of exposure** (up to a maximum of 14 days).[15] WDGPH will contact eligible individuals directly and, if they consent to receiving the vaccine, it will be administered by WDGPH staff at one of our office locations. **If you think your patient may be eligible, contact WDGPH at: 1-800-265-7293 ext. 7006.**

Imvamune is a live, attenuated, non-replicating smallpox vaccine. Compared to earlier smallpox vaccines, Imvamune has fewer contraindications, no risk for autoinoculation, and is associated with fewer serious adverse events.[16] It is administered subcutaneously, similar to the measles-mumps-rubella (MMR) or varicella vaccines.

Comparison of Second- and Third-Generation Smallpox Vaccine Products[16]

	ACAM2000 (second-generation vaccine)	**Imvamune (*aka* JYNNEOS)** (third-generation vaccine)
Vaccine virus	Replication-competent vaccinia virus	Replication-deficient modified vaccinia Ankara
"Take" following vaccination	Yes	No
Risk for inadvertent inoculation and autoinoculation	Yes	No
Risk for serious adverse event	Yes	No significant events identified during clinical trials
Administration	Percutaneously using a bifurcated needle by multiple puncture (scarification) technique	Subcutaneously

Further guidance regarding the use of Imvamune for pre-exposure prophylaxis (PrEP) of at-risk groups is expected shortly from the Ministry of Health.

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