To:       All North Carolina Clinicians and Laboratories  
From:     Zack Moore, MD, MPH, State Epidemiologist  
            Scott Shone, PhD, HCLD(ABB), Public Health Laboratory Director  
Re:       Person-to-Person Monkeypox Transmission in Multiple Countries  
Date:     September 7, 2022 (4 pages – replaces version dated July 12, 2022)

This memo is intended to provide an update regarding the prevention of monkeypox and the evaluation and response to possible cases. Key updates include expanded vaccination eligibility criteria and posting of new NC State Laboratory of Public Health (NCSLPH) specific Specimen Collection, Storage and Shipping Guidance that replaces prior requirement to contact the epidemiologist on call before submitting specimens to NCSLPH.

Background:

Since May 2022, monkeypox virus infections have been identified outside of endemic regions, including the United States, in individuals with no travel history to endemic regions. Cases have been identified predominantly in gay, bisexual or other men who have sex with men (MSM), although it’s important to note that monkeypox can affect anyone and infectious diseases do not tend to remain only within specific sexual or social networks. Information on monkeypox cases in North Carolina can be found here.

A toolkit with educational materials to for you to help our communities understand monkeypox is available at https://epi.dph.ncdhhs.gov/cd/diseases/monkeypox/toolkit.html.

Testing and Reporting:

The NC Division of Public Health (NCDPH) is available to assist with monkeypox evaluation and testing, and with implementation of public health interventions to prevent further spread. Testing can be performed through multiple commercial and hospital laboratories and through the NC State Laboratory of Public Health (NCSLPH). Testing at NCSLPH no longer requires approval through the epidemiologist on call.

North Carolina providers should consider monkeypox in all patients presenting with a clinically consistent picture. Testing for other diseases that can present with similar lesions such as herpes or varicella (chickenpox and shingles) should also be considered. Testing for syphilis, HIV, gonorrhea, and chlamydia should be considered in patients in whom a monkeypox diagnosis is suspected due to high coinfection rates seen in the outbreak to this point.
Suspicion for monkeypox should be heightened if the rash occurs in a person who reports any of the following in the 21 days prior to symptom onset:

1) Having contact with a person or people who have a similar appearing rash or received a diagnosis of confirmed or suspected monkeypox OR
2) Had close or intimate in-person contact with person(s) in a social network experiencing monkeypox infections. This currently includes MSM who meet partners through an online website, app, or social event OR
3) Has recently returned from travel to an endemic area.

Providers should carefully consider the need for testing patients, including children, who have no plausible risk of exposure and for whom there is low suspicion for monkeypox disease. False positive results have been reported and the likelihood is higher when testing is performed among people unlikely to have a condition.

Cases must be reported to your local public health department or NCDPH (919-733-3419) within 24 hours per the NC State Administrative Code.

Infection Prevention:

When monkeypox is suspected, healthcare workers should implement contact and enhanced droplet precautions, including wearing gloves, a protective gown, eye protection, and a NIOSH-approved N95 or higher-level respirator. Special air handling is generally not required, but patients should be placed in an airborne infection isolation room if aerosol-generating procedures (e.g., intubation/extubation) will be performed. Respirators should not be re-used between patients because fomite transmission is possible. For people with monkeypox who do not require hospitalization, home isolation is required during the infectious period. Cleaning processes for testing facilities are similar to standard cleaning after a standard patient visit. See: CDC Infection Control in Healthcare Settings.

Vaccination:

JYNNEOS vaccine is FDA approved to prevent monkeypox. Available JYNNEOS doses have been allocated to states from the Strategic National Stockpile to give to people with known or suspected exposure to monkeypox. Based on increased vaccine supply and the current epidemiology of the monkeypox outbreak in North Carolina, current vaccination criteria include:

1. Anyone who had close contact in the past two weeks with someone who has been diagnosed with monkeypox; or
2. Gay, bisexual, or other men who have sex with men, or transgender individuals, who are sexually active; or
3. People who have had sexual contact with gay, bisexual, or other men who have sex with men, or transgender individuals in the past 90 days; or
4. People living with HIV, or taking medication to prevent HIV (PrEP), or who were diagnosed with syphilis in the past 90 days.

The current list of JYNNEOS providers in North Carolina is available here.
Providers interested in receiving and administering JYNNEOS vaccines must enroll and agree to the terms of the program. Providers not currently enrolled should complete the Monkeypox Vaccine Enrollment and Capacity Survey to get started.

Information for the public about vaccine eligibility and access is available here.

**Treatment:**

At this time, there are no specific treatments approved for monkeypox infection. Tecovirimat (TPOXX), vaccinia immune globulin (VIG), and cidofovir can be considered and are available from the Strategic National Stockpile. Providers can request therapeutics using this NC DHHS Monkeypox Medical Countermeasures Request Form. Particular consideration for these options should be taken if the patient has immunocompromising conditions, lesions in the throat, eyes, or perirectal area, or the patient is a pregnant person or child: Treatment Information for Healthcare Professionals | Monkeypox | Poxvirus | CDC

**NCSLPH Monkeypox Specimen Collection, Storage, and Shipping Guidance:**
This guidance applies only to specimens being tested at NCSLPH. If sending specimens to other laboratories, please follow the specific guidance for the laboratory to which you are sending specimens.

**State Testing Employed**
The NCSLPH Bioterrorism and Emerging Pathogens (BTEP) Unit has validated the CDC’s Non-variola Orthopoxvirus, Orthopoxvirus and Variola virus real-time PCR (RT-PCR) assays.

- Estimated turn-around time for initial results at NCSLPH is 6 to 72 hours from time of specimen receipt but may vary depending on the number of specimens received.

- **USE STANDARD, CONTACT, AND DROPLET PRECAUTIONS WHEN COLLECTING SPECIMENS FOR MONKEYPOX TESTING:** [https://www.cdc.gov/poxvirus/monkeypox/clinicians/prep-collection-specimens.html](https://www.cdc.gov/poxvirus/monkeypox/clinicians/prep-collection-specimens.html)

- Duplicate specimens (i.e. swabs of lesion fluid) must be collected simultaneously and sent to NCSLPH. One specimen from each set will be used for testing at NCSLPH; if positive, the second specimen may be sent to CDC for DNA characterization that includes monkeypox specific testing.

**NCSLPH Monkeypox Specimen Collection**
- Place each specimen in individual collection tubes (i.e., one tube per swab).
- Label each specimen tube separately with:
  - **Specimen site / type**
  - Patient name
  - Date of birth
  - Date of collection
Swab collection – sterile nylon, polyester, or Dacron swabs with a plastic, wood, or thin aluminum shaft. Do not use cotton or other types of swabs. Dry swabs will be processed for molecular detection; do not add transport media. Unroofing the lesion is not recommended:

1. Taking TWO sterile polyester or Dacron swabs, simultaneously use both to vigorously swab the base of the lesion.
2. Break off the end of each swab separately into screw-capped plastic aliquot tubes without any preservative. DO NOT ADD ANY TRANSPORT MEDIA.

NCSLPH Monkeypox Specimen Storage and Shipping Guidance

- Within one hour of collection, place all specimens in a 2-8°C refrigerator or a freezer at -20°C or colder.
- Refrigerated (2-8°C) samples are acceptable for testing up to 7 days after collection. Frozen samples (-20°C or lower) are acceptable for testing for up to 1 month after collection.
- Shipment to NCSLPH – If shipment is to be received at NCSLPH within 5 days of collection, specimens must be received cold (2-8°C, packaged with frozen cold packs) to be acceptable for testing. For delays exceeding 5 days, freeze specimens at -20°C or lower & ship on dry ice to be received at NCSLPH frozen (-20°C or lower).
- Packages should be shipped to NCSLPH as Category B. Category B shipping instructions can be found here: Cat B Poster_v3 (dot.gov). If you have questions regarding Category B shipping, please contact the BTEP Unit using the information below.
- The following supplies are necessary for Cat B shipping: a rigid package with insulation, frozen ice packs, appropriate Category B labels, and a leakproof container specimens can be placed into (this can be a larger sample container or a specimen bag).

All specimen submissions must have a completed BTEP Specimen Submission Form

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<tr>
<th>For State Courier:</th>
<th>For UPS, FEDEX, and other courier services:*</th>
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<tbody>
<tr>
<td>North Carolina State Laboratory of Public Health ATTN: Bioterrorism &amp; Emerging Pathogens Unit 1918 Mail Service Center Raleigh, NC 27699-1918</td>
<td>North Carolina State Laboratory of Public Health ATTN: Bioterrorism &amp; Emerging Pathogens Unit 4312 District Drive Raleigh, NC 27607</td>
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*Ship overnight delivery. You must specify Saturday delivery if shipping on Friday.

Contact the BTEP unit (919-807-8600) only if you have submission questions.