Nightmare on Chestnut St: Monkeypox in a HCP

Sarah Haessler MD, MS, FSHEA
SHEA Town Hall
July 17, 2022
9pm Phone Call

• Received a call from a supervisor that a HCP (in training) with direct patient contact had monkeypox
• Had worked with patients and was in close quarters with multiple other types of HCP daily while symptomatic for 2 weeks
• Had also sought care as a patient multiple times in two of our ED’s and our employee health department while symptomatic
Decision point #1: Launch exposure investigation in the middle of the night or wait until morning?
Decision 1: Both

• Immediate 3-way call with the HCP and training program supervisor
  • Obtained thorough history from HCP: exactly where was he and what did he do at work since symptom onset?
• Immediately notified Chief Physician Executive, Hospital President and Medical Director of Employee Health
• Put infrastructure in place for emergency work group using modified incident command structure to perform massive exposure work up with plans to launch at 6 am
Details....Where was he? What did he do?

- 6/28-HCP is notified that swab of skin lesion is positive for orthopox

----------→ going backward in time:

- 6/12: MSM Sexual exposure (receptive) while on a weekend away

- 6/14: Back to work
  - Worked with patients, care teams, nurses, physicians, other people in training program daily for subsequent two weeks
  - Always wore a mask (mandatory), ate alone
  - Has one roommate who is also a HCP in training

- 6/14 - 6/23 sore throat minimal with peritonsillar erythema and no cervical lymphadenopathy

- 6/16 –fever and chills: employee health visit, testing for COVID-19 (-), cleared to RTW

- 6/16 – 1st lesion, lower abdomen

- 6/17 – Sought care in our ED for testicular swelling: underwent ultrasound and physical examination

- 6/19- Returned to ED: assessed by triage nurse, underwent vitals and COVID testing (negative) left due to long wait time

- 6/20 - Sought care in another of our ED’s: underwent ultrasound and physical examination

- 6/23 – 2nd & 3rd lesions noted at Left thigh and Left infra-areolar region; covered by clothing. Developed Rectal pain

- 6/24 – Rash/lesions progressed: more lesions at abdomen/trunk; covered by clothing; Proctitis worsened with mucous per rectum.

- 6/25 – Walked through ED, decided wait was too long so left without being seen and went to sleep on a couch in a breakroom-no use of blankets or pillows. Lesions all covered by clothing

- 6/26 – Developed hand and forearm lesions. Day off from work. Received text from sex partner notifying him of monkeypox exposure

- 6/27 -- Covered exposed lesions on hands with Band-Aids, came to work, left at noon to get testing for Monkeypox

- 6/28-received positive result
How bad is this?

- HCP in training who had direct contact with patients & coworkers, and was a patient himself
- Two weeks of potential exposures
- Three separate considerations:
  - Were patients exposed?
  - Were coworkers exposed?
  - Were HCP who cared for him in the ED and EHS exposed?
- Need to protect privacy of HCP
  - Vulnerable position
  - Stigmatizing disease
Next Steps: Establish Modified incident command response team

• Get the right people in the room:
  • EHS, Hospital Epi, Infection Prevention, supervisor, DPH by conf call
  • Determine tasks, assign duties

• Get the right people on the phone:
  • Hospital leadership
  • Public Affairs/communications
  • IT to help pull data and activate employee symptom monitoring app
  • Pharmacy for vaccine management
  • EVS-clean common areas
Decision Point # 2: Determine exact exposure definition

• Define what constitutes an exposure
  • CDC Definition: “Direct contact with lesion material or from exposure to respiratory secretions”¹
  • Exactly what does that mean?
    • Patients, coworkers, HCP’s, the couch and other workspaces, the roommate?
    • Droplet, contact, fomites?
  • CDC definition: Lesions are contagious “until all lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed”¹
    • Exactly what does that mean?
      • If the skin under the separated scabs is still pink, is it still contagious?
      • Does contact with a HCP whose lesions are covered count towards exposures?

¹. https://www.cdc.gov/poxvirus/monkeypox/clinicians/infection-control-healthcare.html
Next Steps continued

• Prepare to generate lists of exposed people
• There could be hundreds...Where do you find that information?
  • Patient lists: Patient assignment lists, notes in EHR vs. all patients on a unit
  • Employee schedules: coworkers who worked with the source
  • ED and EHS HCP who cared for him: EHR notes
• Prepare scripts for exposure notifications
• Prepare talking points for managers
• Prepare to mitigate fallout/panic
White board to track process
Decision point #3: Who is considered exposed?

• Key definitions needed to determine who to consider exposed
  • Thank you to MA DPH for the following definitions:

  1) Respiratory exposure=
     • >3 hrs unmasked <6 feet apart

  2) Contact exposure=
     • Direct contact with lesion fluid or mucous membranes while not wearing full PPE
       • Defined as eye protection, N95, gown & gloves
       • Lesions covered by clothing, bandages or gloves= no exposures

  3) Fomites= couch, workspaces/computers are not exposures
Were patients exposed?

- The HCP wore a mask consistently with patients
- All lesions were covered by clothing
- The day that lesions were present on hands, he did not examine patients

- THEREFORE: NO PATIENTS WERE EXPOSED

- whew
Were coworkers exposed?

- The HCP wore a mask consistently while in the hospital and with colleagues in shared work spaces
- The HCP ate alone
- Fomites such as the couch, computers and phones were not considered to be sources of exposures
- All lesions were covered at all times

THEREFORE: NO COLLEAGUES WERE CONSIDERED EXPOSURES

Whew...
Were HCP who cared for him exposed?

- 3 ED visits, 2 EHS visits

<table>
<thead>
<tr>
<th>Degree of Exposure: High</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PEP – Recommended</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree of Exposure: Intermediate</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PEP– Informed clinical decision making recommended on an individual basis to determine whether benefits of PEP outweigh risks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree of Exposure: Low/Uncertain</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PEP– None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree of Exposure: No Risk</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PEP – None</td>
</tr>
</tbody>
</table>

[link to CDC guidelines](https://www.cdc.gov/poxvirus/monkeypox/clinicians/monitoring.html)
Were HCP who cared for him exposed?

- HCP who examined or performed and ultrasound on his genitals while not wearing appropriate PPE were classified as **High risk exposures**
- HCP who did **not** examine or perform an ultrasound on his genitals while not wearing appropriate PPE were classified as **low risk exposures**
- All other people in the ED or EHS (patients, HCP not involved in his care) were classified as **no risk**

- Total exposures:
  - 5 High risk
  - 19 low risk
Management of exposed HCP

• 5 high risk HCP plus roommate were offered Jynneos vaccine if within 14 days of exposure
  • 4 HCP plus roommate accepted vaccine
  • Shipped from DPH to our pharmacy (both doses in the series)

• All: Twice daily symptom check
  • Repurposed our employee COVID-19 app to enable Monkeypox symptom self-attestation through day 21 after exposure

• Tracked by EHS

• Defined non-compliant as missing two attestations
  • Employee contacted by EHS
  • Taken off schedule until compliant

• Worried well during follow up period: examined HCP with pimples and poison ivy
• Exposure period is over: no HCP or roommate Monkeypox transmissions
Communications & messaging

• Tough decision: Communication to the whole organization or only to involved departments?
  • Worked with senior leadership to determine that sensitive case required targeted communication to ED staff only
  • Communication also included education on clinical presentation and to increase index of suspicion

• RCA-missed diagnosis, learning opportunity
  • ID now fielding many calls to evaluate rashes in ED
Return to work

• What exactly does “crusts have separated, and a fresh layer of healthy skin has formed” mean?
  • Worked with DPH for more precise definition
    • This means that all scabs have fallen off and no open skin remains. Pink skin underneath is OK/not contagious
  • EHS and an Associate Hospital Epi Assessed HCP in controlled setting last week
    • All lesions completely healed
    • Returned to work
Lessons Learned

• We were guarding the front door, but our first case was already in the house:
  • Ensure EHS is prepared with tools to manage HCP exposures, follow up, ability to vaccinate, messaging about presenteeism
• Monkeypox symptoms are non-specific until rash appears. Presenting as STI in current outbreak. EPIDEMIOLOGIC RISK is very important.
• Educate, Educate, Educate: ED, Urgent Care, Primary Care, Sexual health clinics. What to look for, what to do
• COVID-19 mandatory mask policy saved us from a massive monkeypox exposure!!
• DPH-key partner for determining exposures and management