Nosocomial Transmission in a Mpox Virus Clade Ib Outbreak, August to October 2025

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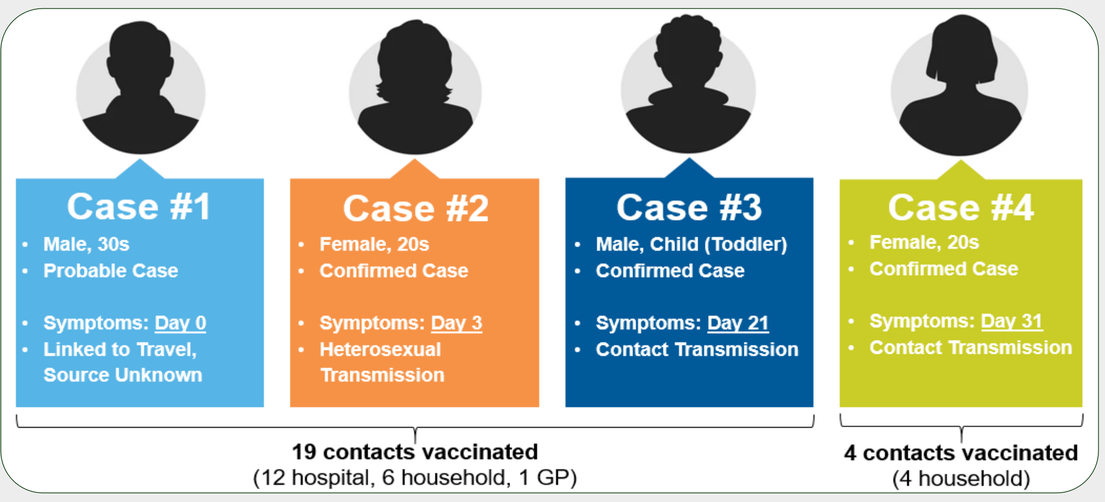
BACKGROUND

- **Monkeypox virus (MPXV) clade Ib** started a major outbreak in 2023 in the eastern part of the Democratic Republic of the Congo and is undergoing sustained human-to-human transmission in several countries [1].
- The ongoing rise of MPXV clade Ib importations in countries outside Middle Africa has recently been highlighted by both the ECDC and WHO [2,3].

- Here, we report the **first outbreak of mpox due to MPXV clade Ib** in Ireland alongside the **first reported nosocomial infection outside of the African continent**.



↑ Figure 1 (above): Summary of outbreak cases and contacts
↓ Figure 2 (below): Timeline of mpox clade Ib outbreak

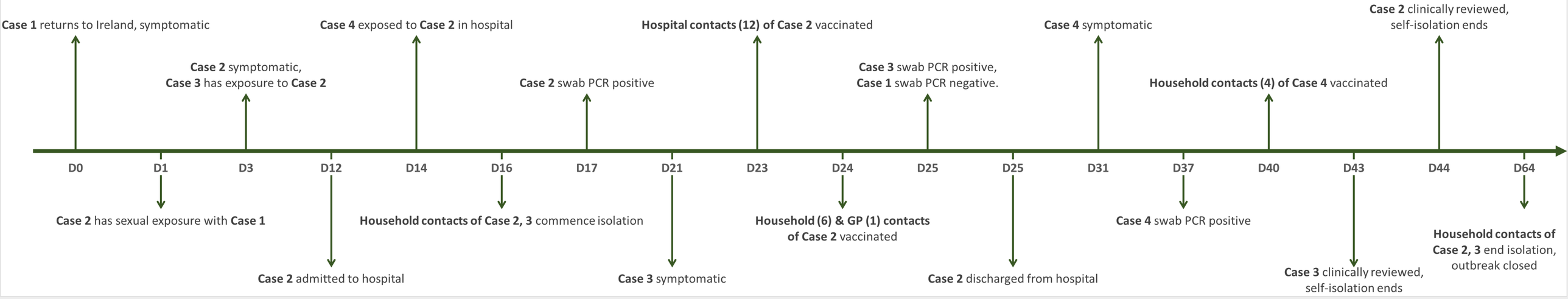
CASE DESCRIPTIONS

CASE 1 (Probable); Male, 30s, Primary Case
- Travel history to Pakistan, returning to Ireland via Dubai in August 2025.
- Initial influenza-like illness during transit to Ireland, progressed to penile pustular lesions.
- Attended GP on Day 4, no swab taken. Recovered within a week of symptom onset.
- Throat & penile swab on Day 25: negative. Source of infection unknown.

CASE 2 (PCR Confirmed, MPXV Clade Ib); Female, 20s, Index Case
- Sexual contact with Case 1 (partner) in August, developed a vulval rash two days after.
- Symptoms progressed to include pyrexia, sore throat, night sweats and vulval/perineal lesions.
- Required hospital admission in late August. Developed to a full-body rash with > 100 lesions.
- Diagnosis confirmed via PCR, Tecovirimat was initiated and continued for 14 days. Discharged after 11 inpatient days to complete recovery at home.

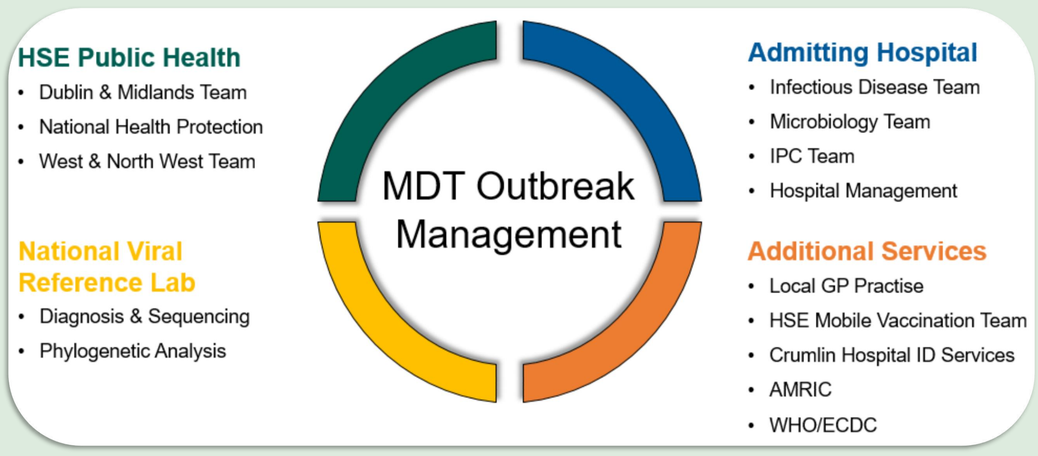
CASE 3 (PCR Confirmed, MPXV Clade Ib); Male, Toddler
- Household contact of Cases 1 and 2. Symptomatic early September with pyrexia, coryza and widespread vesicular rash. Started antiviral treatment without inpatient admission.

CASE 4 (PCR Confirmed, MPXV Clade Ib); Female, 20s
- Healthcare worker who attended Case 2 during her inpatient admission before the inclusion of mpox as a differential diagnosis.
- Case 4 reported a rash on their arm in September which developed into five lesions on their arm, hand, elbow, leg and back.
- No high-risk activities were reported, adhered to personal protective equipment (PPE) recommendations.



DISCUSSION

- Multidisciplinary response, involving multiple local, regional, national and international colleagues and organisations.



- **HSE Public Health** responsible for contact tracing of all confirmed cases, dissemination of relevant information and organising post-exposure vaccination.
- Vaccine hesitancy within family of Case 1-3 overcome through advocacy, including liaising and working alongside trusted family doctor.

- **Hospital Infection Prevention & Control** reviewed in context of nosocomial transmission, involving incident management team and HSE Antimicrobial Resistance and Infection Control (AMRIC) team.
- Conclusion: Transmission from Case 2 to Case 4 was either direct contact of the healthcare worker arm with a skin lesion of the patient or direct contact of the healthcare worker arm with the contaminated patient environment.

- **Phylogenetic Analysis** noted the closest link to this cluster was an international sequence collected in Eastern Mediterranean region (Oman) from February 2025.
- This region is not reporting community transmission, hinting at possible hidden transmission in this region.

CONCLUSION

- This outbreak investigation offers insight to the **transmission pathways and outbreak potential of MPXV clade Ib** in the context of Ireland's first outbreak of the pathogen with associated nosocomial transmission.
- It highlights the **threat that MPXV clade Ib represents**, as recently emphasised by both ECDC and WHO, while also demonstrating the importance of a multi-organisation, multidisciplinary response to such an outbreak.
- Aspects such as **prompt case identification** in healthcare settings, **comprehensive molecular diagnostics** and an **adaptable public health system** all proved themselves essential in identifying, understanding and preventing onward transmission of the disease.
- These findings are relevant both **nationally** in the context of refining Ireland's public health response to MPXV clade Ib cases, and **globally** in the context of the ongoing transmission of MPXV clade Ib internationally.

For further information, please refer to our Eurosurveillance Publication:
***"Nosocomial transmission in a monkeypox virus clade Ib outbreak, Ireland, August to October 2025"*, Published 18/12/2025**

References:
1. *Broader transmission of mpox due to clade Ib MPXV – Global situation. Accessed February 22, 2026. https://www.who.int/emergencies/disease-outbreak-news/item/2025-DON587*
2. *European Centre for Disease Prevention and Control (ECDC). Threat Assessment Brief: Detection of autochthonous transmission of monkeypox virus clade Ib in the EU/EEA. Stockholm: ECDC; 24 Oct 2025.*
3. *World Health Organisation (WHO). Broader transmission of mpox due to clade Ib MPXV – Global situation. Geneva:WHO; 5 Dec 2025.*

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