



UK Health
Security
Agency

Monkeypox Incident

UKHSA Investigation of recent cases

Isabel Oliver, Chief Scientific Officer

Meera Chand, Susan Hopkins, Obaghe Edeghere, IMT

2 June, 2022 (data up to 30 May 2022)

Epidemiological context

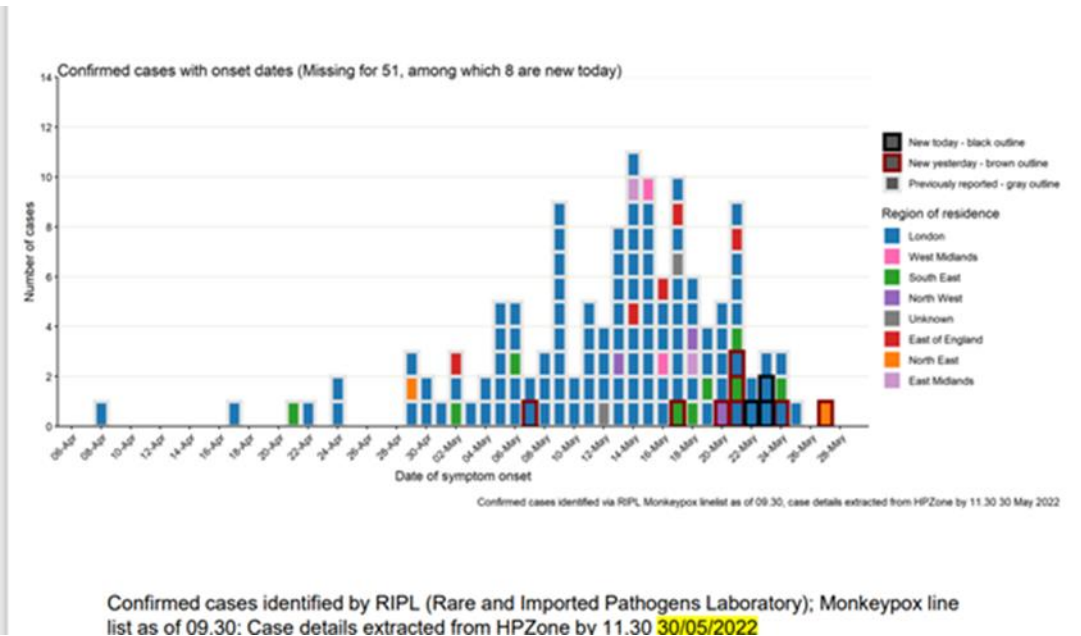
- Re-emerging zoonotic infection that occurs mostly in West and Central Africa.
- Previous cases in the United Kingdom (UK) had been either imported from countries where monkeypox is endemic or contacts with documented epidemiological links to imported cases.
- Between 2018 and 2021 there had been 7 cases of monkeypox in the UK, 4 of which were imported, 2 cases in household contacts, and 1 case in a health care worker involved in the care of an imported case.
- There was no documented community transmission in previous outbreaks.

Current outbreak

Description of current situation

- 3 distinct events:
 - Incident 1 - 1 imported travel associated case, unlinked to others, no secondary transmission
 - Incident 2- 2 confirmed and one possible case part of a family cluster, no travel and no identified links to other cases
 - Incident 3 - A large outbreak affecting primarily GBMSM community
- 190 confirmed cases in UK, 183 in England and high proportion with an address in London
- In the confirmed cases in England, symptoms have been reported as early as 08 April 2022. In the majority of cases, symptoms started in May 2022

Epicurve



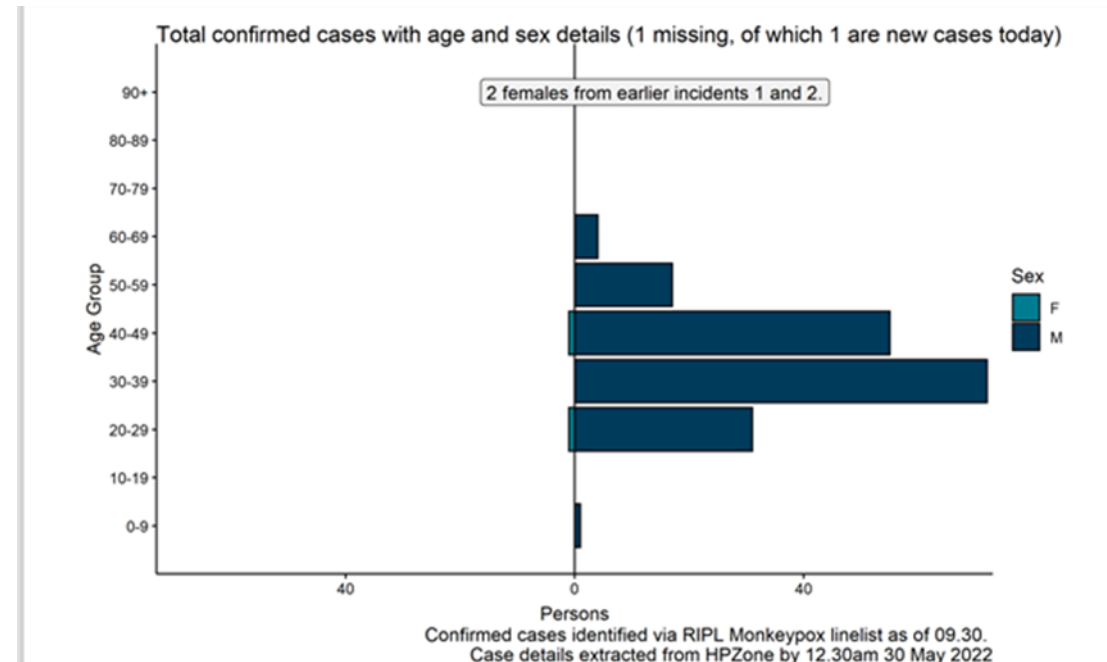
Descriptive epidemiology

Summary

Focus on incident 3:

- All males mostly aged 20-49
- 110 cases known to be GBMSM (59%);
- 33 cases with recorded travel history within 21 days prior to symptom onset (18%) majority within Europe
- Most confirmed cases are mild and are being managed at home.
- Likely multiple parallel importations from GBMSM returning from other countries in Europe with domestic transmission
- Acquisition from close skin to skin contact during sexual relationships

Age and sex distribution



Response

- Enhanced incident response
- Diagnosis (<https://www.gov.uk/guidance/monkeypox-diagnostic-testing>)
 - Increasing diagnostic capacity and guidance
- Case finding (<https://www.gov.uk/guidance/monkeypox-case-definitions>)
 - Case definitions agreed
 - Testing pathways developed
 - Advice to clinicians - clinical telephone helpline
- Clinical and public health guidance (<https://www.gov.uk/government/collections/monkeypox-guidance>)
 - IPC, decontamination, clinical management, discharge and deisolation, setting-specific guidance
- Contact tracing and management (<https://www.gov.uk/government/publications/monkeypox-contact-tracing>)
 - Contacts categorised and managed according to exposure. Highest risks contacts are isolated, actively monitored and offered post-exposure prophylaxis with vaccine
 - Significant numbers of untraceable contacts
- Public communications and work with affected communities
- Identification of research needs and priorities and work with research funding bodies to address them

Overview of research needs and priorities

Surveillance	Seroepidemiology	How much undiagnosed disease is there? What is the level of asymptomatic infection? How many cases could have been missed due to a presumption of a different cause, e.g. syphilis, herpes?
	Wastewater	Wastewater surveillance
Transmission dynamics	Contact tracing	What proportion of cases are infected in UK? What is the infectious period? What is the incubation period?
	Risk to contacts	Risk of transmission to different groups on the population and contact categories. Risk of transmission in flights What is the serial interval?
		Is there pre-symptomatic or prodromal transmission? How much transmission is asymptomatic / presymptomatic / symptomatic? Viral presence in semen What information can we gain about intrinsic transmissibility of West African clade monkeypox?
	Mode of transmission	What are the likely modes of transmission, including is there evidence of airborne transmission? Fomites. Role of large droplets / aerosols/steam rooms Decontamination & mitigations – what is effective and needed in different settings
	Whole genome sequencing +/- phenotypic Virology	Is there any evidence that this is a new clade or that there has been any biologically significant change compared to previously described West African monkeypox? Can phylogeny provide any information on transmission? In host variation Viral dynamics
Clinical characterisation	Case data and ISARIC CCP	What are the symptoms and should the case definition be refined? Does the current syndrome differ from the classical description of WA monkeypox? Is more severe disease experienced by any population subgroup? What are the risks in pregnancy?
Vaccine response and immunology		What is the duration of the serological response to Imvanex after 1 or 2 doses What are the immune responses & vaccination immune response? What are the immunological correlates of protection including cell mediated immunity after vaccination, protection from smallpox vaccine
Therapeutics	Being commissioned	Does early treatment reduce the risk of transmission? Impact on disease progression Does tecovirimat help with reducing isolation period?
Diagnostics & Evaluation		Best site to test, which site goes positive first What would enable home / POC sampling and testing including self-testing? Development of serology test Evaluation of swabs with inactivating buffer to enable community testing
Evaluation of other interventions		What is the effectiveness of contact tracing and activation? How do interventions act synergistically to reduce onward transmission?
Behavioural & other social sciences and equalities considerations		<ul style="list-style-type: none"> - How are the public and affected groups perceiving the risk from Monkeypox? - What is the public understanding of the disease and what actions they need to take? - What proportion of symptomatic cases seek care? - Vaccine acceptability and intended / actual uptake. - What are current levels of adherence to self-isolation?