



UK Health
Security
Agency

Monkeypox Literature Digest – 28 July–04 August 2022

Dear all

Welcome to the UKHSA monkey pox (MPX) Literature Digest. This edition contains selected papers from 28 July – 4 August 2022.

This resource aims to highlight a small selection of recent MPX papers that are relevant to UK settings, contain new data, insights or emerging trends. The Digest includes both preprints, which should be treated with caution as they are NOT peer-reviewed and may be subject to change, and also research that has been subject to peer review and wider scrutiny. The Digest is very rapidly produced and does not claim to be a perfect product; the inclusion or omission of a publication should not be viewed as an endorsement or rejection by UKHSA. We do not accept responsibility for the availability, reliability or content of the items included in this resource.

Please contact us at: NICC68.LitDigest@ukhsa.gov.uk

Best wishes,

Nicola Pearce-Smith and Michael Cook
Knowledge and Library Services (KLS)

Publication Date	Title/URL	Journal / Article Type	Digest
27.02.2022	Early estimates on monkeypox incubation period, generation time and reproduction number in Italy, May-June 2022	arXiv (non-peer reviewed) / Article	<ul style="list-style-type: none">• Analysis of first 255 PCR-confirmed cases of Monkeypox in Italy in 2022• Preliminary estimates indicate: mean incubation period of 9.1 days); mean generation time of 12.5 day; and reproduction number in the MSM community of 2.43
03.08.2022	A distinct phylogenetic cluster of Monkeypox genomes suggests an early and cryptic spread of the virus	bioRxiv (non-peer reviewed) / Article	<ul style="list-style-type: none">• Describes a distinct phylogenetic cluster of monkeypox virus (lineage A.2) using genome sequences available on GISAID.• Lineage A.2 currently encompasses 9 genome sequences from 6

			viral isolates collected from 3 countries and is distinctly different from the predominant lineage B.1 which is linked to the large European outbreak.
28.07.2022	Clinical features and novel presentations of human monkeypox in a central London centre during the 2022 outbreak: descriptive case series	BMJ / Case Report	<ul style="list-style-type: none"> • This descriptive case series from a regional high consequences infectious disease centre in south London characterised the clinical features of MPX infection in humans between May and July 2022 • Of 197 patients (196 identified as gay, bisexual, or other men who have sex with men), all presented with mucocutaneous lesions, most commonly on the genitals (n=111 participants, 56.3%) or in the perianal area (n=82, 41.6%). 170 (86.3%) participants reported systemic illness • The cohort showed new clinical presentations of MPX infection, including rectal pain and penile oedema. These included a variable temporal association was observed between mucocutaneous and systemic features, and a biphasic appearance of lesions
02.08.2022	Monkeypox outbreak in Spain: clinical and epidemiological findings in a prospective cross-sectional study of 185 cases	British Journal of Dermatology / Article	<ul style="list-style-type: none"> • Spanish prospective cross-sectional study describing monkeypox cases in 2022 outbreak • 185 patients included in study – all patients male • Research concludes that physical contact as the infection route with localised initial papular lesions and a later eruption of vesiculopustular lesions.
29.07.2022	Antivirals with Activity Against Monkeypox: A Clinically Oriented Review	Clinical Infectious Diseases / Article	<ul style="list-style-type: none"> • This article examined three antiviral agents with activity against MPX: cidofovir, brincidofovir, and tecovirimat • Cidofovir has been used in humans to treat poxviruses. Both intravenous and topical formulations have been used, with successful reduction of skin lesions demonstrated • Brincidofovir taken orally (200 mg one a week) showed complete resolution of skin, deep soft tissue abscesses, conjunctivitis, and subungual lesion in three patients with MPXV • Tecovirimat administered to patients with infections caused by orthopoxviruses showed complete resolution of skin infection

03.08.2022	Joint ECDC-WHO Regional Office for Europe Monkeypox Surveillance Bulletin 3 Aug Update	ECDC-WHO / Bulletin	<ul style="list-style-type: none"> • This report provides an overview of the total number of cases of monkeypox identified by ECDC and WHO through the European Surveillance System (TESSy) up to 2 August 2022 • The first summary table describes the number of cases identified through the different platforms; the figures and tables describe national case-based data for surveillance of monkeypox reported in TESSy from all the countries and areas of the WHO European Region, including the 27 countries of the European Union <p>A total of 15926 cases of monkeypox have been identified through IHR mechanisms and official public resources up to 2 August 2022, 14:00, from 38 countries and areas throughout the European region. Case-based data were reported for 15624 cases from 32 countries and areas to ECDC and the WHO Regional Office for Europe through The European Surveillance System (TESSy), up to 2 August 2022, 10:00</p>
29.07.2022	Monkeypox infection among men who have sex with men: PCR testing on seminal fluids	Journal of Infection / Correspondence	<ul style="list-style-type: none"> • Italian Case Series (36 patients) examining monkeypox virus testing on seminal fluids • In 61% cases, seminal fluids tested positive for monkeypox
29.07.2022	Genomic Annotation and Molecular Evolution of Monkeypox Virus Outbreak in 2022	Journal of Medical Virology / Article	<ul style="list-style-type: none"> • In this study, a full-genome phylogenetic analysis using the sequenced MPXV strains from 1958 to 2022 was performed to better understand the genomic evolution of MPXV-2022 • 46 common mutations among the MPXV-2022 were identified. These strains affected at least 20 proteins, and results showed that OPG105 and OPG210 have nucleotide substitutions in the 2022 outbreak strain (4 and 3 respectively)
31.07.2022	The roles of unrecognized monkeypox cases, contact isolation and vaccination in determining epidemic size in Belgium. A modelling study	medRxiv (non-peer reviewed) / Article	<ul style="list-style-type: none"> • A network modelling study which simulates a monkeypox epidemic among men who have sex with men based on behavioural data from Belgian MSM. • This modelling study shows the importance of contact tracing to manage/reduce impact of the epidemic and that pre-contact vaccination may be more effective than post-contact vaccination

31.07.2022	Monkeypox self-diagnosis abilities, determinants of vaccination intention and self-isolation intention after diagnosis among MSM in the Netherlands	medRxiv (non-peer reviewed) / Article	<ul style="list-style-type: none"> • Dutch cohort study (n=394) examining participants ability to self-diagnose (52.3%), vaccination intention (70% high intention) and self-isolation after monkeypox diagnosis intention (44% high intention) • Cohort study examined socio-demographic, behavioural, and psycho-social determinants behind vaccination and self-isolation intention
03.08.2022	Brief report: Determinants of potential sexual activity reduction in the face of the Monkeypox epidemic	medRxiv (non-peer reviewed) / Article	<ul style="list-style-type: none"> • Dutch Cohort study (394 participants) which examined the determinants of reduced sexual activity and sexual partners in men who have sex with men • Determinant analysis revealed that dating/open relationship status was a positive predictor, vaccination intentions did not predict sexual behaviour change; those not on PrEP were more likely to change their sexual behaviour. • 78% of participants had probable/definite intentions to have less sex, and 69% had probable/definite intentions to reduce number of sexual partners
29.07.2022	The human host response to monkeypox infection: a proteomic case series study	medRxiv (non-peer reviewed) / Article	<ul style="list-style-type: none"> • A case series which examines the plasma proteome of a group of MPX patients with a similar infection history/clinical severity typical for the current outbreak and also versus healthy volunteers and COVID-19 patients • Study found monkeypox is associated with a strong and characteristic plasma proteomic response and reports a correlation between plasma protein markers and disease severity, approximated by the degree of skin manifestation.
27.07.2022	Tecovirimat for the treatment of human monkeypox: an initial series from Massachusetts, United States	Open Forum Infectious Diseases / Articles	<ul style="list-style-type: none"> • A case series of 3 cases of patients hospitalised with monkeypox • All 3 patients treated with tecovirimat, a pan-Orthopoxvirus inhibitor • Numbers too small to make any claims on effectiveness at time of publication
02.08.2022	Risk Assessment of Human Monkeypox Infections for Vaccine Prioritization	Research Square (non-peer reviewed) / Article	<ul style="list-style-type: none"> • Cohort Study from Israel examining risk factors for human Monkeypox infection

			<ul style="list-style-type: none"> • Of 8089 eligible participants – 54 contacted monkeypox • Study highlights 5 main risk groups with highest risk group being males with HIV-PrEP use or positive rectal STI-PCR or erectile dysfunction medication use (within the study cohort) but study has several limitations
02.08.2022	Monkeypox outbreak: epidemiological overview, 2 August 2022	UKHSA / Data	<ul style="list-style-type: none"> • Up to 1 August 2022 there were 2,672 confirmed and 87 highly probable monkeypox cases in the UK: 2,759 in total. Of these, 65 were in Scotland, 24 were in Northern Ireland, 32 were in Wales and 2,638 were in England.