

Historical insights and lessons from the Nigerian epidemic of mpox

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and

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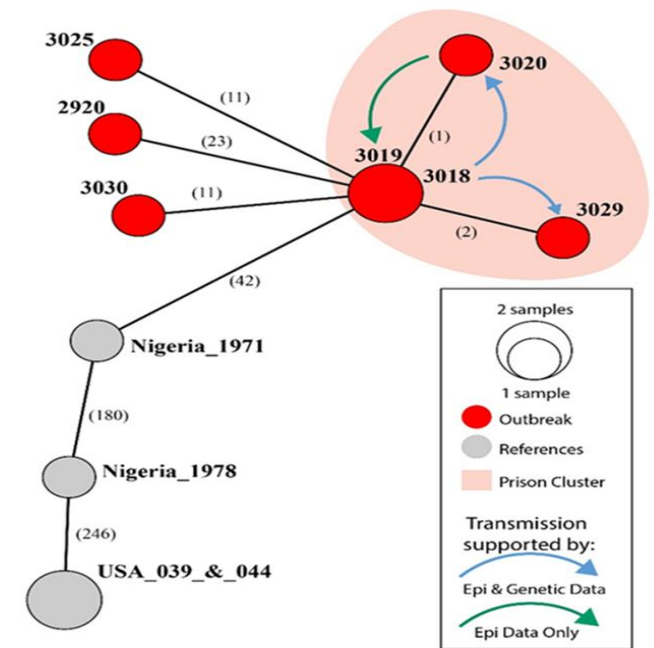
Nigeria mpox Outbreak

- 3 mpox cases documented in literature before 2017 September
 - 2-cases in 1971
 - 1 case in 1978
- **On 22 September 2017**, NCDC was notified of a suspected case of monkeypox(mpox)
- 11-year-old male patient:
 - Case was previously managed as Chicken pox in other health facilities
 - Similar but less severe lesion in family
- National awareness and surveillance for mpox commenced
- Reported suspected cases from other states
- Mpox outbreak confirmation in multiple states



Mpox in Nigeria 2017 -2020

- Evidence of human-to-human disease
- More cases in detected in urban settings
 - Cities and state capitals
- About 70% cases in men
- Household cluster, sexually active young adults, congenital infections, congregate setting
- HIV prevalence >29%
- High mortality in children and uncontrolled HIV infection
- Symptomatic management and medical isolation of cases and contract tracing
- One health Approach / animal studies
- No vaccine
- Confirmed MPXV clade IIb cases in travellers from Nigeria to other countries(4)



Healio News

July 11, 2019 | 4 min read

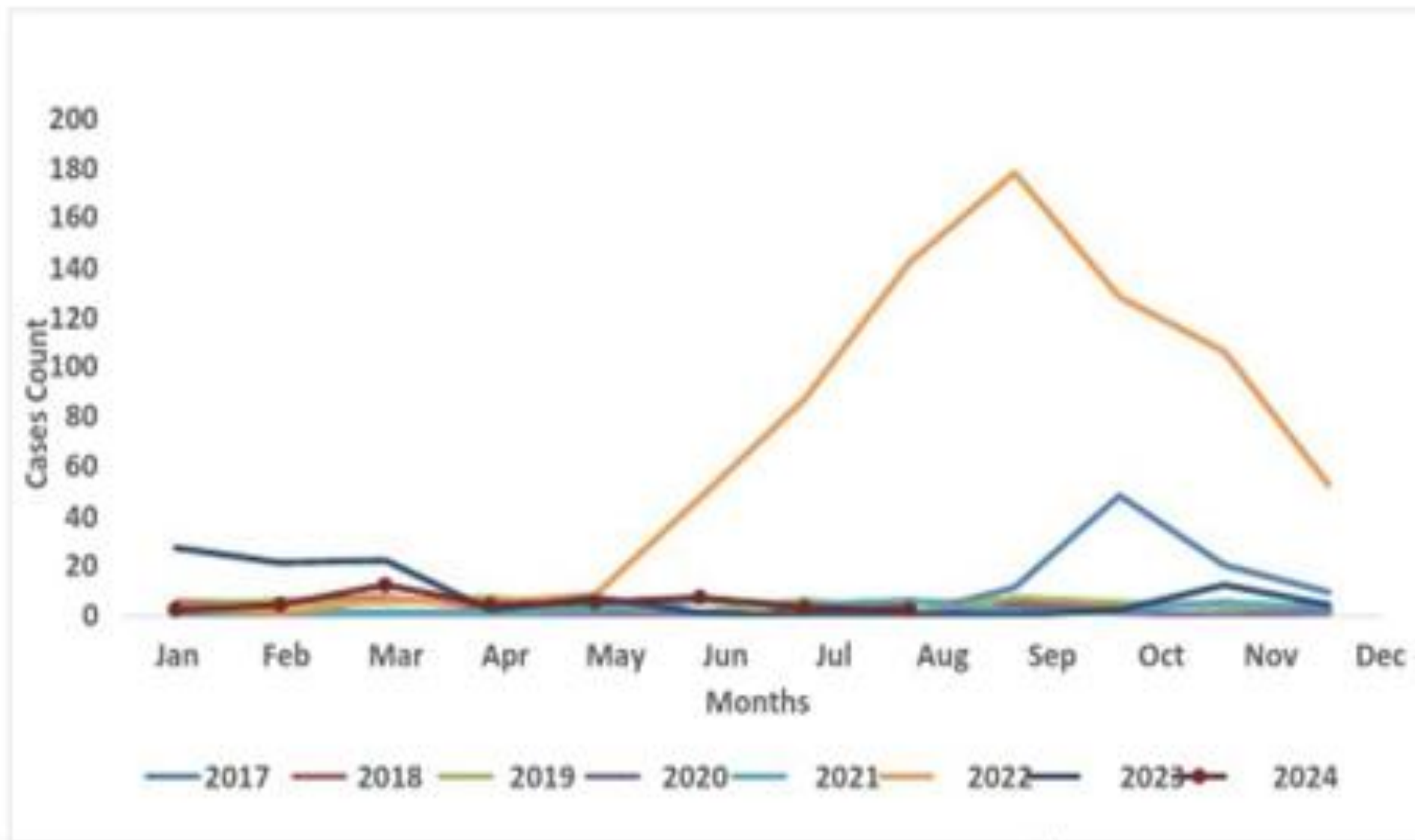
Nigeria monkeypox outbreak shows evidence of human-to-human transmission

Perspective from [Thomas Yuill, PhD](#)

[+ Source/Disclosures](#)

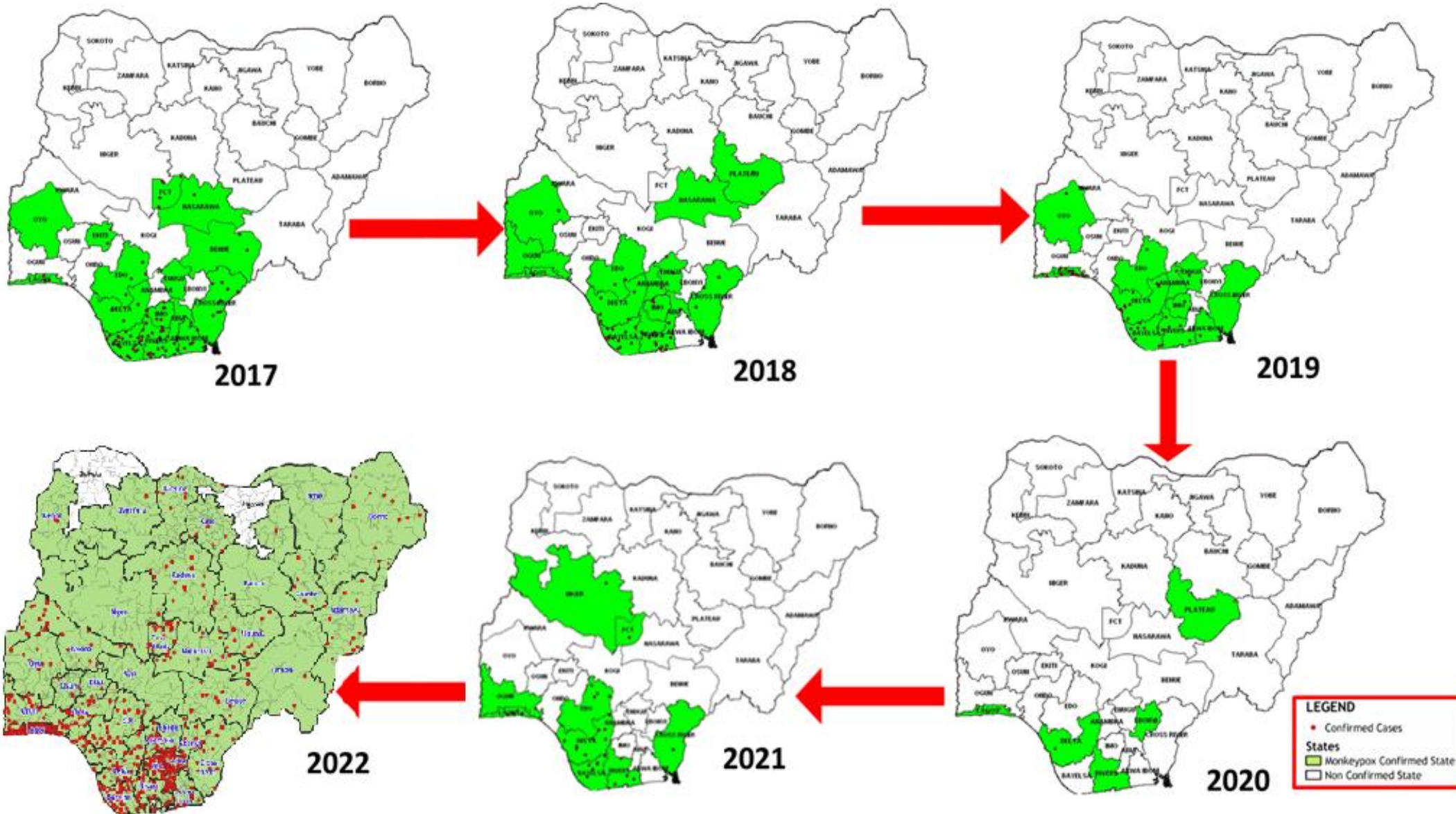
**Adesola Yinka-** Since 2017, Nigeria has been experiencing the largest documented outbreak of human monkeypox caused by the West African clade of the virus, with

Nigeria MPX cases : 2017-2024



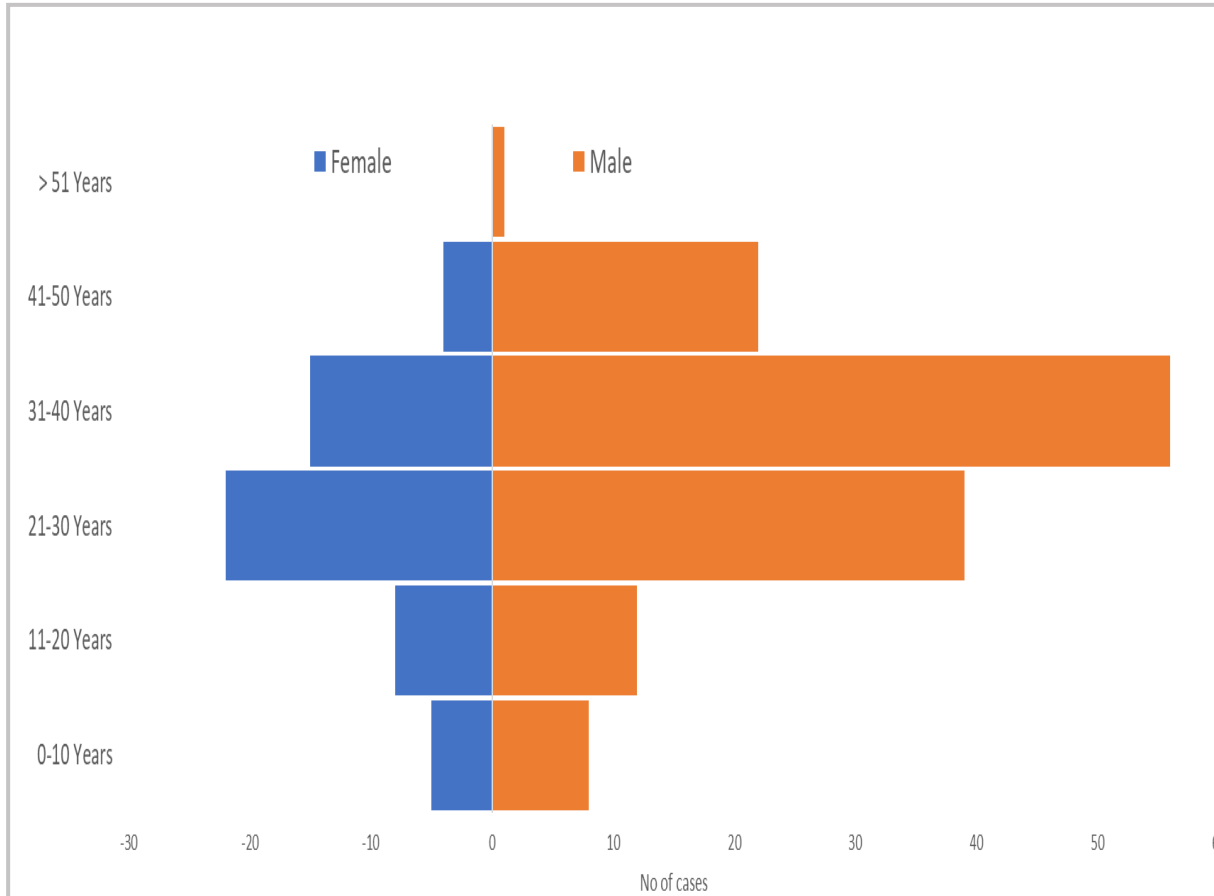
Nigeria confirmed Mpox cases by the year of incidence- September 2017 to August 2024

Mpox in Nigeria, 2017 - 2022



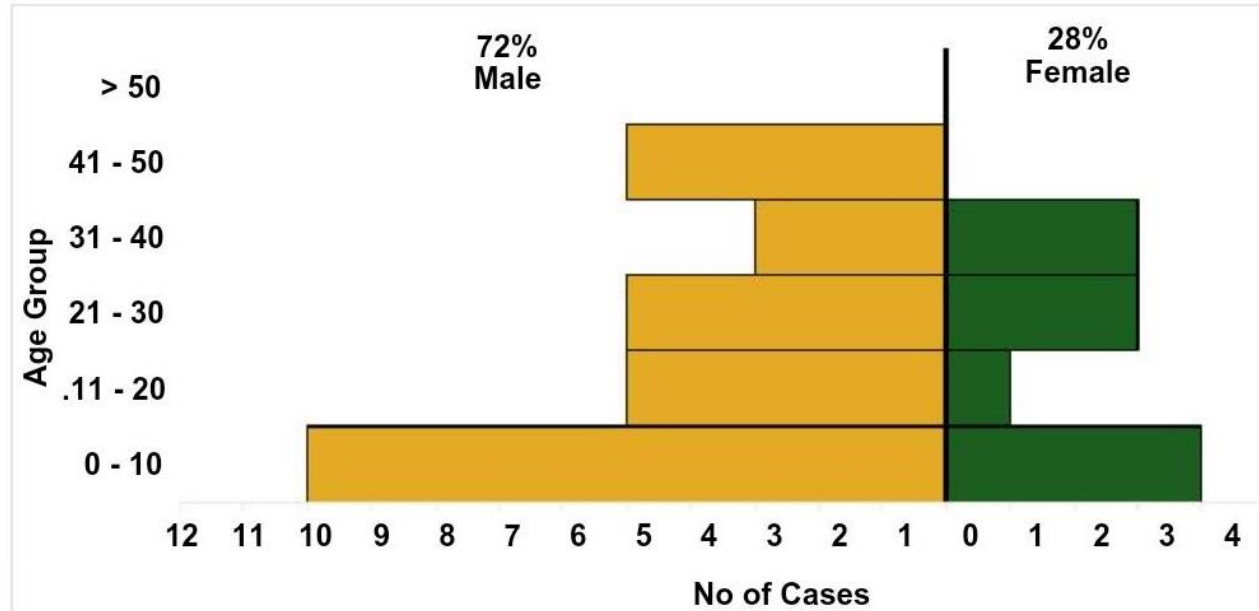
- Cases confirmed in 34 of 36 states and FCT of 2022

Age and sex distribution of Nigeria mpox cases



Age distribution of reported Monkeypox cases in Nigeria from 2024

Epidemic curve of reported mpox cases since January 2024 till date.



Age and sex distribution of Nigeria confirmed mpox cases from January 2024 till date

Age distribution of reported Monkeypox cases in Nigeria from 2024 (NCDC SITREP August 2024)

LESSONS LEARNT

- Human to human transmission rather than zoonotic transmission driving transmission for decades
- Mpox is established in human population
- Complex epidemiology and multiple modes of transmission
- HIV infection and high-risk sexual behaviour play major
- Accessible and affordable clinical care improves surveillance in low-income settings
- Coordinated global response is required
 - Vaccines access is critical



UK Health
Security
Agency

Changing mpox infection landscape in the UK

21 August 2024, EACS

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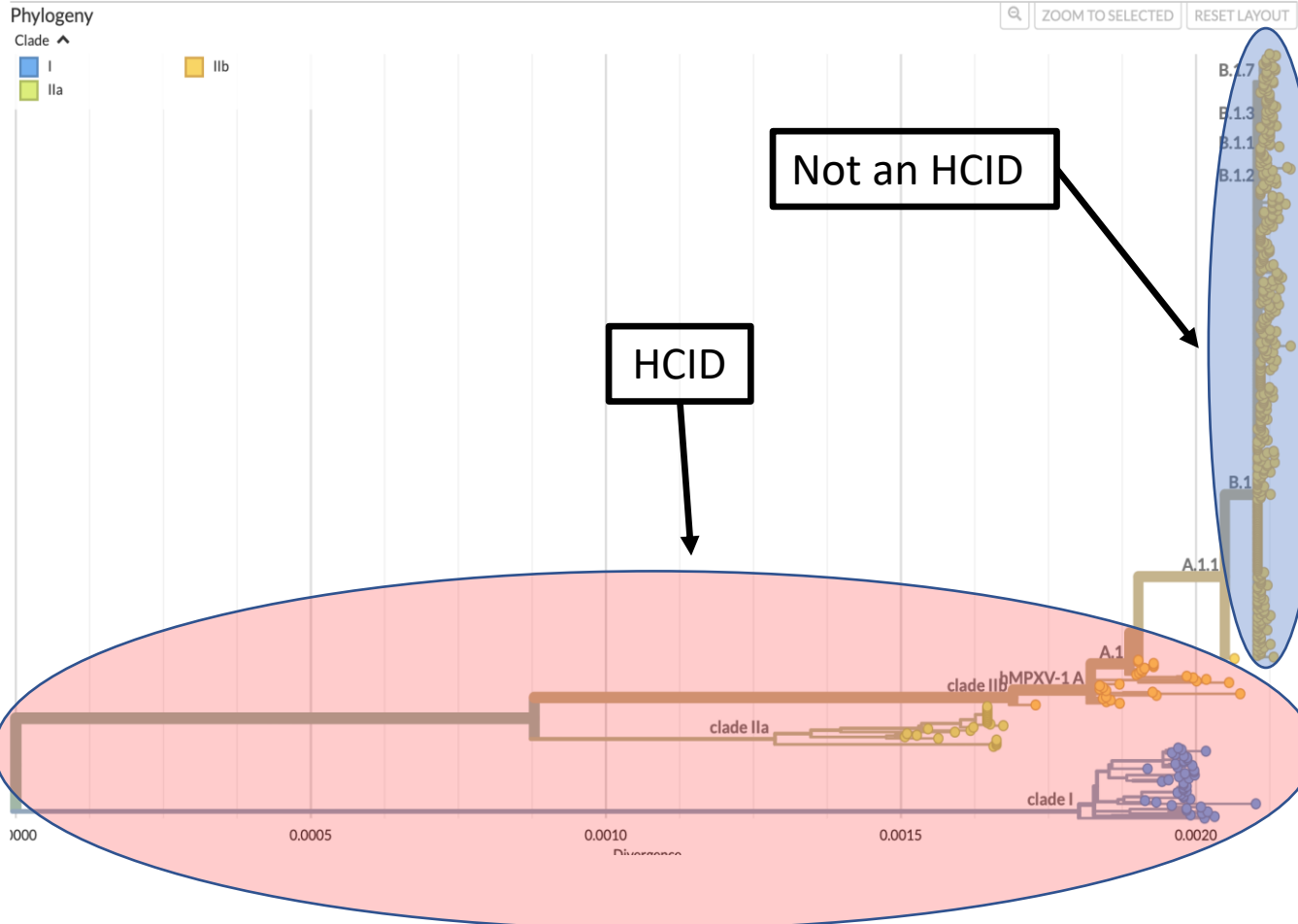
Deputy Director, Clinical and Emerging Infections (Head of AMR & Sepsis), UK Health Security Agency
Attending Physician in Infectious Diseases & Medical Microbiology, Royal Free Hospital
Director of United Kingdom WHO Collaborating Centre for Reference & Research on AMR & HCAI
Lead for Imperial College London NIHR Health Protection Research Unit in HCAI & AMR

HCID status of mpox - UK

Genomic epidemiology of monkeypox virus

Built with nextstrain/monkeypox. Maintained by Nextstrain team. Enabled by data from GenBank.

Showing 480 of 480 genomes.



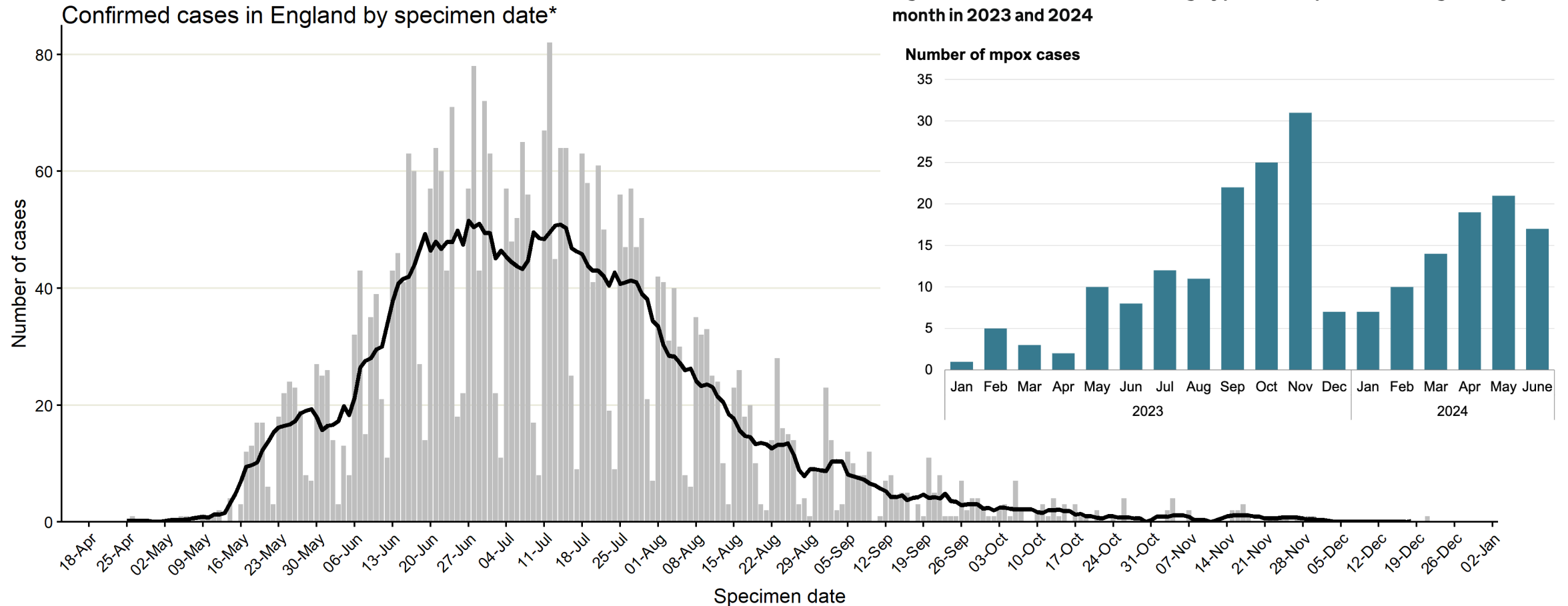
When lineage **is not** known and:

- travel history to known endemic country, or link to a traveller and/or
- link to a case known to be outside Clade IIb, B.1 lineage and/or
- the case results from a new zoonotic jump in any country or setting

When lineage **is** known:

WHO clade classification	HCID*?
Clade I (all)	Yes
Clade IIa (all)	Yes
Clade IIb (B.1 lineage)	No
Clade IIb (non-B.1 lineages)	Yes

mpox – clade IIb UK matched global epidemiology



Whilst data cleaning is carried out routinely, quality assurance samples may have been included from laboratory surveillance systems which will be corrected in subsequent reports.

Black line represents 7-day rolling average of cases detected in England.

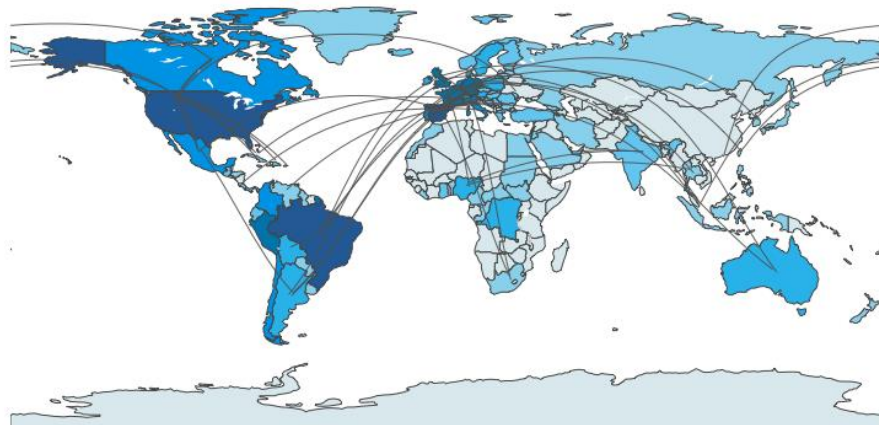
The case with a retrospective specimen date in March 2022 has been omitted from this chart. The cases of MPX presented include HCID cases.

*Where specimen date is missing, date the lab received the specimen is used. Where both are missing (mainly among early cases), date added to the linelist is used (5 / 3553).

mpox – challenges with differentiation from Nigeria

- three distinct clusters in 2022
 - **imported case:** 7 May 2022, a single mpox case identified in the UK, in an individual with recent travel history to Nigeria
 - Rash on 29 April. Departed Nigeria 3rd May. Arrived in the UK & presented hospital. Early suspicion MPXV. Case was isolated immediately and managed as HCID
 - **household cluster:** 14 May 2022, 2 further cases were reported in individuals from the same household, no links to the index case and no travel history
 - **predominantly GBMSM cluster:** next week, beginning of unrelated global cluster, no identified links to household cluster (>90,000 cases globally), PHIEC 2022-23

A. Confirmed monkeypox cases



Cases 0 or no data 1 - 9 10 - 100 101 - 500 501 - 2000 2001 - 5000 5001 - 50000

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Press release

Latest mpox cases a reminder that the infection has not gone away

The UK Health Security Agency (UKHSA) urges people to remain vigilant as a further 10 cases of mpox (monkeypox) have been diagnosed in the UK.

2023/24:
239 UK
cases, at
least 76
acquired
abroad

mpox – multiple established strains in Nigeria

Several established lineages circulating within Nigeria:

- lack of genomic data between 2018, when virus exportations from Nigeria were first recorded, and 2022, when the global mpox outbreak began
- 18 genomes from across southern Nigeria in 2019-2020 reveal multiple lineages of MPXV co-circulated in humans for several years before 2022; progressive accumulation of mutations consistent with APOBEC3 activity
- study identified Nigerian A.2 lineage isolates, confirming that the lineage that has been multiply exported to North America independently of the 2022 outbreak originated in Nigeria, and that it has persisted by human-to-human transmission in Nigeria for more than 2 years before its latest exportation.

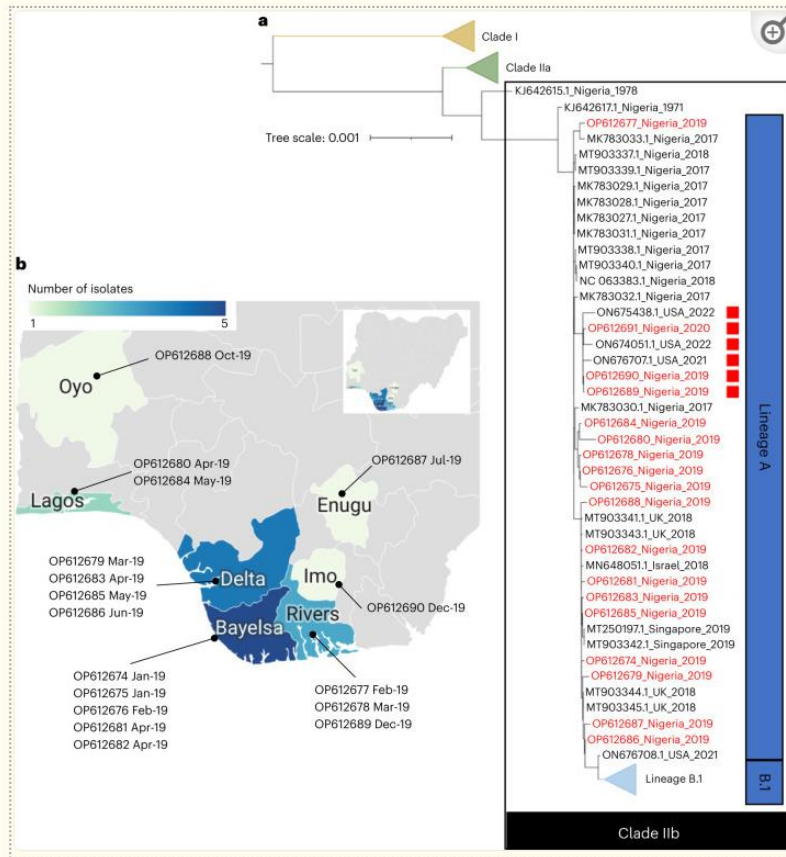


Fig. 1

Phylogenetic analysis and geographic distribution MPXV genomes.

Ndodo N et al. Distinct mpox virus lineages co-circulating in humans before 2022. *Nat Med* 2023;29(9):2317-2324

mpox – management differs by HCID status

- <10 importations from Nigeria of HCID mpox clade, several other importations of Clade IIb, different management approaches when confirmed positive



VS



Images - <https://www.hcid-training.co.uk/> & <https://twitter.com/SCAS999/status/1239200434956402688/photo/1>