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# Mpox: Challenges in the 2024/5 epidemic in Africa

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# Outline

- **Mpox – rising again in 2024 in Africa**
- **Challenges in the 2024/5 mpox epidemic in Africa**
- **Progression of the mpox 2024/5 epidemic in Africa**
- **Conclusion**

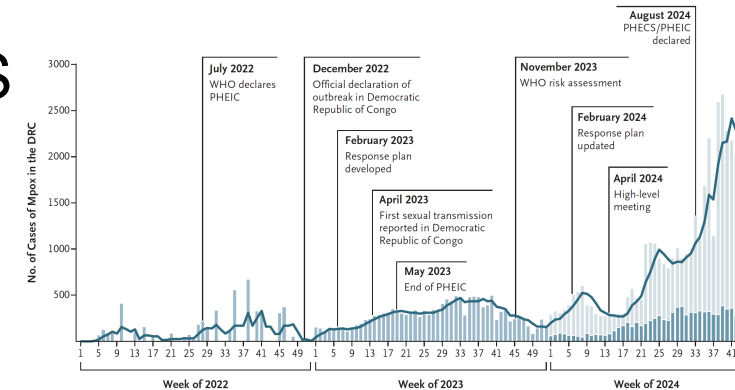
# Evolving Epidemiology of Mpox in Africa in 2024



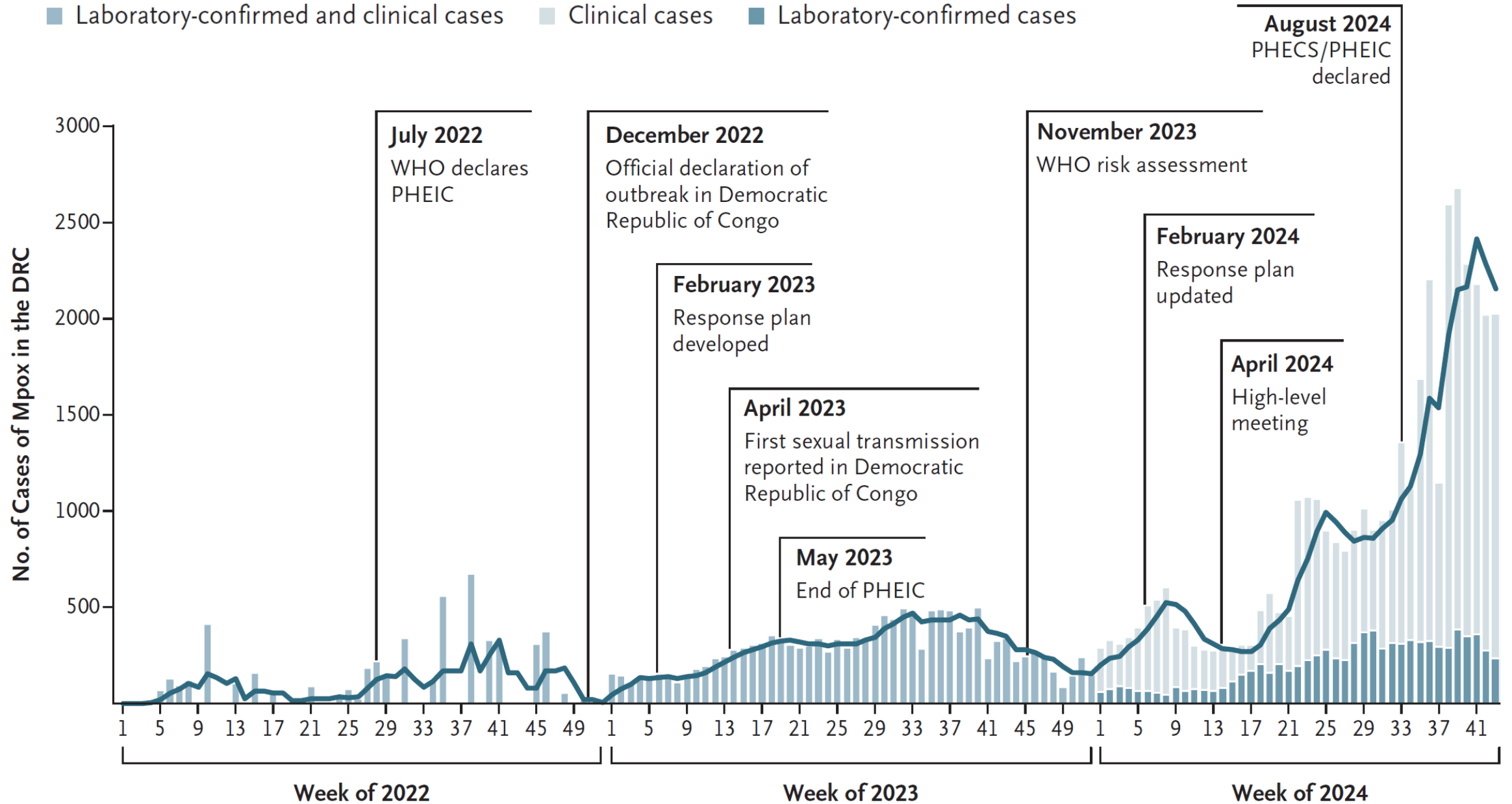
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Nicaise Ndembi, M.P.H., Ph.D.,<sup>1</sup> Morenike O. Folayan, Ph.D.,<sup>2</sup>  
Allan Komakech, M.D., M.P.H.,<sup>1</sup> Kyeng Mercy, Ph.D.,<sup>1</sup> Sofonias Tessema, Ph.D.,<sup>1</sup>  
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Ngashi Ngongo, M.D., M.P.H., Ph.D.,<sup>1</sup> Jean Kaseya, M.D., M.P.H.,<sup>1</sup>  
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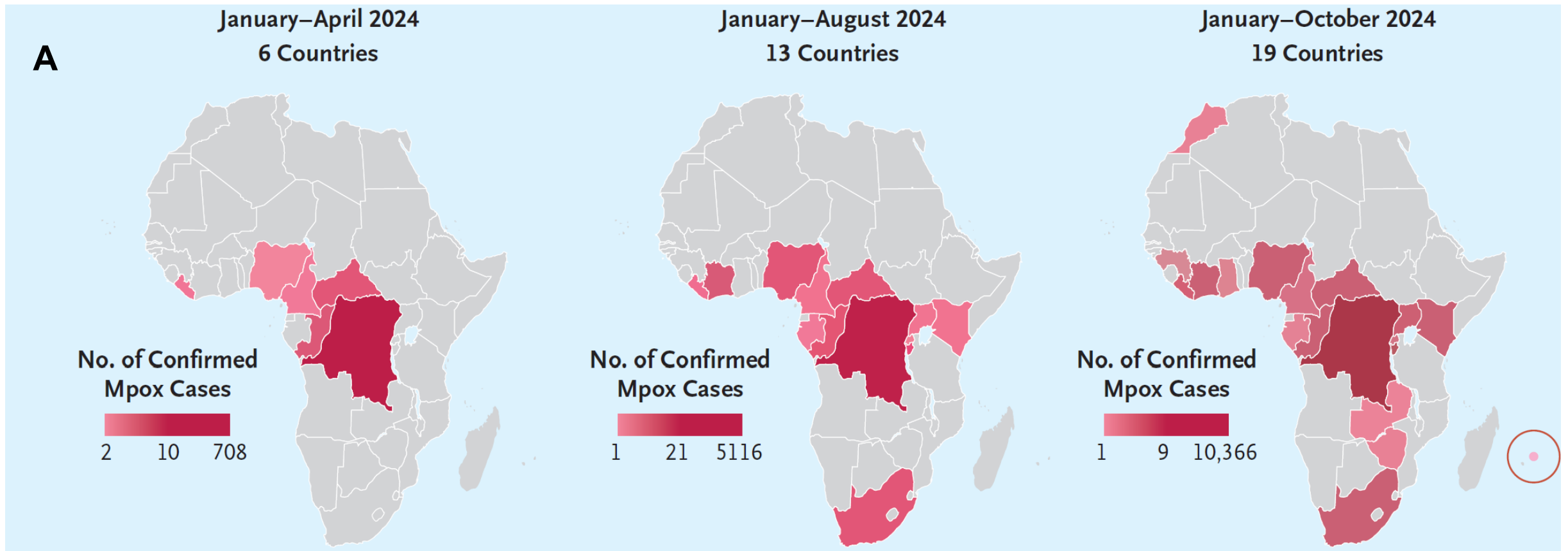
- Backdrop to the 2024 mpox PHEIC / PHECS
- WHO declares mpox PHEIC in July 2022
- WHO ends mpox PHEIC in May 2023
- DRC epidemic rising at that time
- Africa CDC declares mpox PHECS in August 2024
- 2 days later, WHO declares another mpox PHEIC in August 2024



■ Laboratory-confirmed and clinical cases   ■ Clinical cases   ■ Laboratory-confirmed cases



**Figure.** Weekly Mpox Cases Reported in the DRC (Jan 2022 – Aug 2024)



- **Mpxv cases and deaths reported to Africa CDC (1Jan2022-18Aug2024)**
  - 45,652 cases and 1492 deaths
  - Weekly lab-confirmed cases  $\uparrow$  2.8-fold; reported cases  $\uparrow$  4.3-fold



## Evolving Epidemiology of Mpox in Africa in 2024

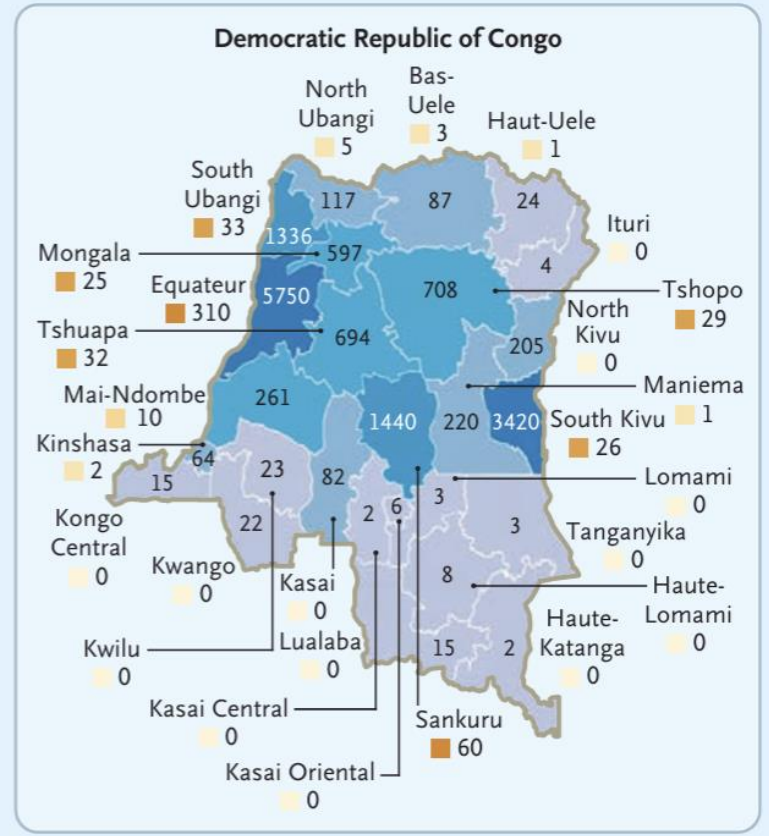
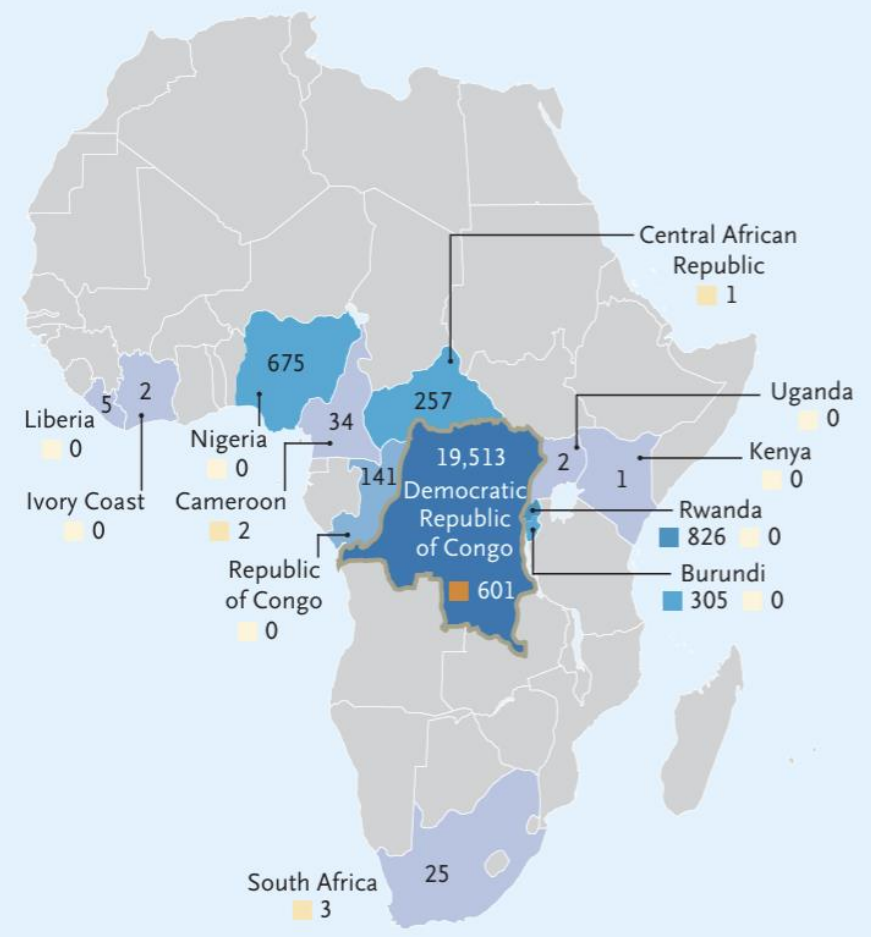
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- **Mpox cases & deaths (1 Jan 22 – 18 Aug 24)**
  - 45,652 cases
  - 1,492 deaths
  - Lab-based cases ↑ 2.8 X
  - reported cases ↑ 4.3 X
- **Mpox case fatality rate**
  - 2.6% (2022) →
  - 4.4% (2023) →
  - 2.8% (2024)

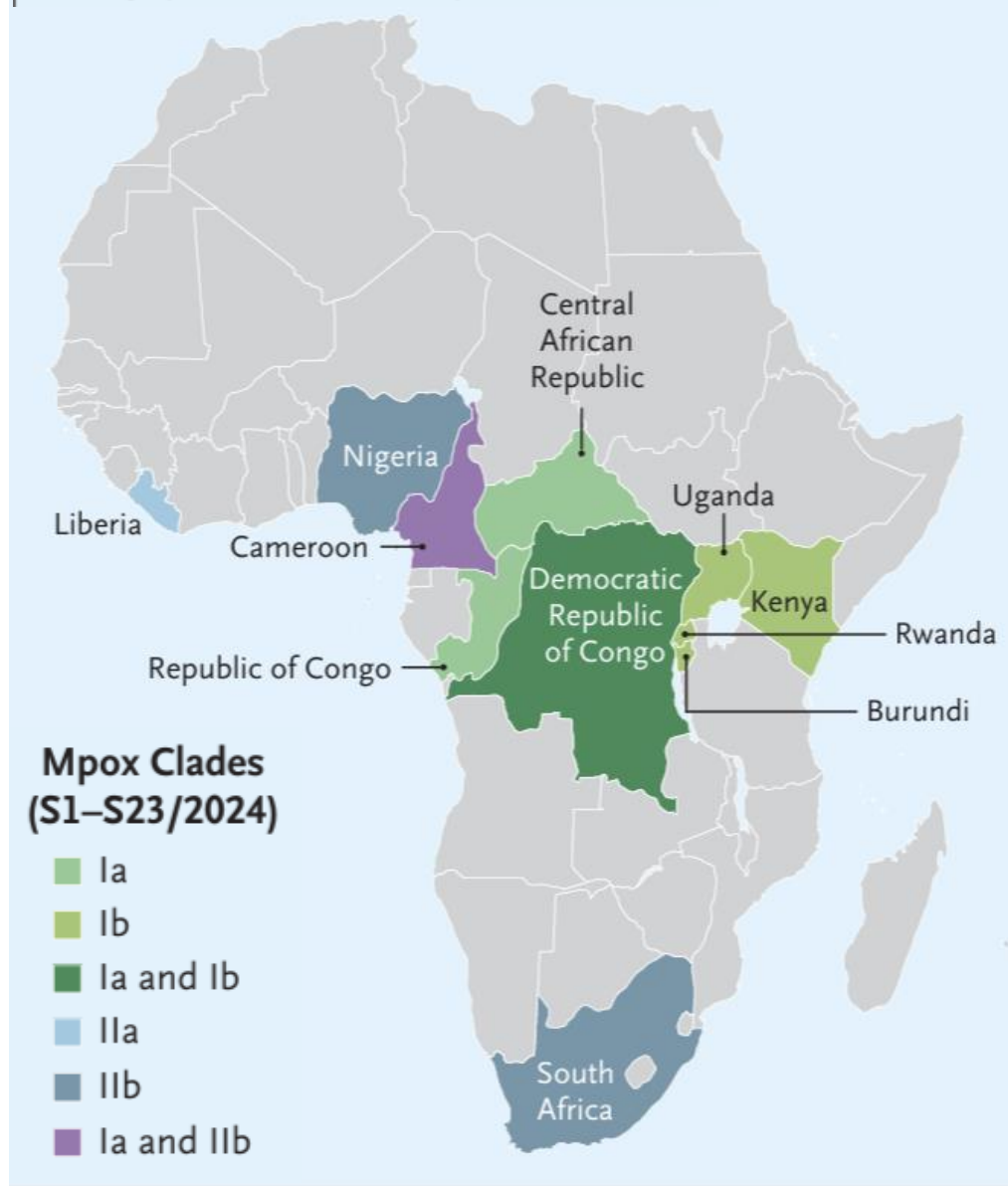


### A Geographic Distribution of Reported Mpox Cases and Deaths in Africa

No. of Cases of Mpox: 0 1-50 51-250 251-750 751-1750 1751 to 5233  
 No. of Deaths from Mpox: 0 1-5 6-10 11-50 51 to 535



## B Geographic Distribution of Mpox Clades in Africa



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## Evolving Epidemiology of Mpox in Africa in 2024

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- **1<sup>st</sup> mpox PHEIC –  
mainly clade Ib**
- **2<sup>nd</sup> mpox PHEIC –  
mixture of clades Ia & Ib**

# Responding to the mpox epidemic in Africa



## Mpox: an old disease poses a new threat

Nicaise Ndembi,<sup>a</sup> Moréniké Oluwátóyìn Foláyan<sup>b</sup> & Salim S Abdool Karim<sup>c</sup>

Science

## Africa aims to avert an mpox pandemic

Nicaise Ndembi & Salim S. Abdool Karim

nature  
communications

## Strengthening and expanding capacities in clinical trials: advancing pandemic prevention, preparedness and response in Africa

Nicaise Ndembi, Tadesse T. Mekonen, Morenike Oluwatoyin Folayan, Nebiyu Dereje, Glaudina Loots, Michael Makanga, Samba Sow, Salim Abdool Karim & John Nkengasong

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## Analysis of mpox in Angola conflates distinct timelines

\*Nicaise Ndembi, Kyeng Mercy, Morenike O Folayan, Salim S Abdool Karim

# Taking action in Africa...

- **Continental & country-level IMT (Incident Management Teams)**
- **Improving the quality and accuracy of data**
- **Increasing lab capacity for diagnosis**
- **Timely reports on the trajectory of mpox in-country**
- **Community health care worker deployment for community education and contact-tracing**
- **Screening of contacts**
- **Vaccination of contacts**
- **Clinical management protocols & health service capacity**

# Examples: Africa CDC – WHO support for countries

Country	Country specific gaps/TA needs	Planned activities
Liberia	Response coordination challenges	<ul style="list-style-type: none"> <li>• Deployment of high-level experts to meet with the new leadership, review national IMS structure and support alignment in Liberia</li> <li>• Deployment of Technical Experts and Training/Deployment of CHWs to support implementation of the post IAR Action Plan in Liberia (including funding for the deployed CHWs for 2 months)</li> <li>• Rapid community assessment in outbreak hotspot to assess community perceptions, including attitudes to vaccination (data collection complete)</li> <li>• Capacity building for laboratory sampling &amp; testing</li> </ul>
Ghana	Mpox vaccine implementation issues	<ul style="list-style-type: none"> <li>• Supportive Supervision by vaccination &amp; RCCE experts to troubleshoot bottlenecks and accelerate implementation</li> <li>• DRC: Rapid community assessment in Tshopo around community perceptions of mpox (data collection completed)</li> <li>• DRC: Contract renewal for epidemiologist and CHWs to support Mpox and Cholera response in hotspots</li> </ul>

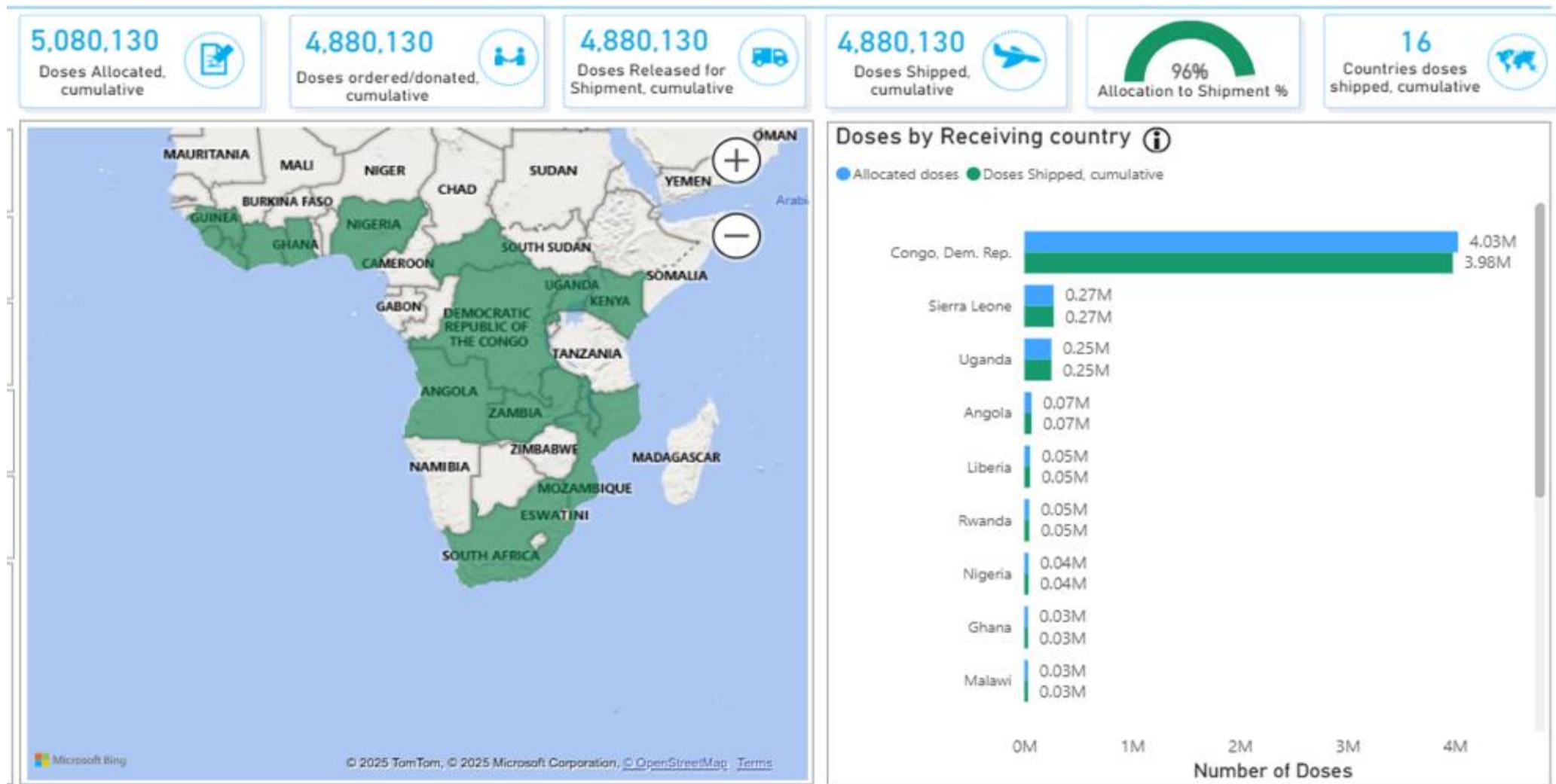
# Mpox interventions:

## ↑ Laboratory capacity across countries

Country	No of Labs in August 2024	No of Labs as of 26 August 2025	Types of new labs built in-country
<b>DRC</b>	<b>2</b>	<b>29</b>	26 GeneXpert, 3 PCR & 1 Radi One Lab
<b>Burundi</b>	<b>1</b>	<b>57</b>	54 GeneXpert, 2 PCR lab & 1 mobiles
<b>Sierra Leone</b>	<b>3</b>	<b>10</b>	5 PCR labs
<b>Uganda</b>	<b>3</b>	<b>5</b>	5 PCR labs with 2 mobiles labs

- All affected Member States have laboratory capacity for mpox
- Testing capacity ↑ in DRC, Burundi, Sierra Leone, Zambia, Malawi, Uganda & Congo
- Decentralization of testing in Burundi remains one of the key successes for Burundi

# Vaccine delivery and implementation status



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# Reduced % population with smallpox vaccination ↑ likelihood of acquiring or spreading mpox

- African outbreaks - smaller % protected by smallpox vaccine
- In DRC – 70% of population under 40 years (no vaccination)



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## Effectiveness of Smallpox Vaccination to Prevent Mpox in Military Personnel

Boghuma K. Titanji, Angelia Eick-Cost, Vincent C. Marconi, and Others

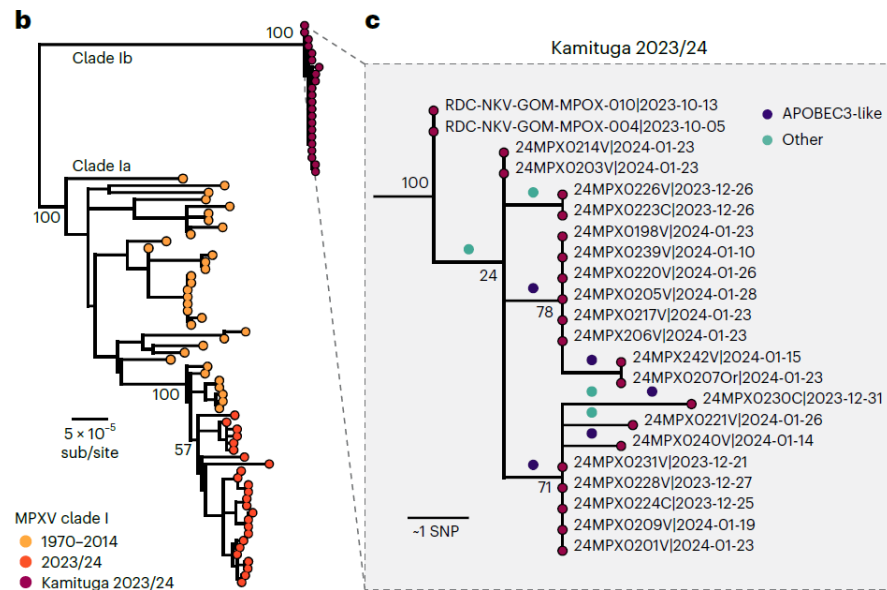
- Participants in retrospective study (N = 1,014): Those with smallpox vaccination less likely to test positive for mpox
- Vaccine efficacy: 72% for Dryvax; 75% for ACAM2000

# New monkeypox virus variant – clade Ib

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medicine

## Sustained human outbreak of a new MPXV clade I lineage in eastern Democratic Republic of the Congo

Emmanuel Hasivirwe Vakaniaki<sup>1,2,28</sup>, Cris Kacita<sup>3,28</sup>, Eddy Kinganda-Lusamaki<sup>1,4,5</sup>, Áine O'Toole<sup>6</sup>, Tony Wawina-Bokalanga<sup>1,2,4</sup>, Daniel Mukadi-Bamuleka<sup>1,4,7</sup>, Adrienne Amuri-Aziza<sup>1</sup>, Nadine Malyamungu-Bubala<sup>8</sup>, Franklin Mwashi-Kumbana<sup>8</sup>, I Sandra Mutimhwa-Mambo<sup>9</sup>, Freddy Relesi-Siangali<sup>10</sup>, Yves Muilu<sup>1</sup>, Edyth Parker<sup>11</sup>



- Mining region in eastern DRC: clade Ib
- Viruses from Sep 2023 to Jan 2024 - genomic analysis: clade I lineage divergent from previously circulating DRC strains
- 108 PCR-confirmed mpox cases
  - median age: 22 years
  - 51.9% female and 29% sex workers

Fig 1. Phylogenetic map of reported mpox cases (DRC)

# Heterosexual transmission of mpox clade I

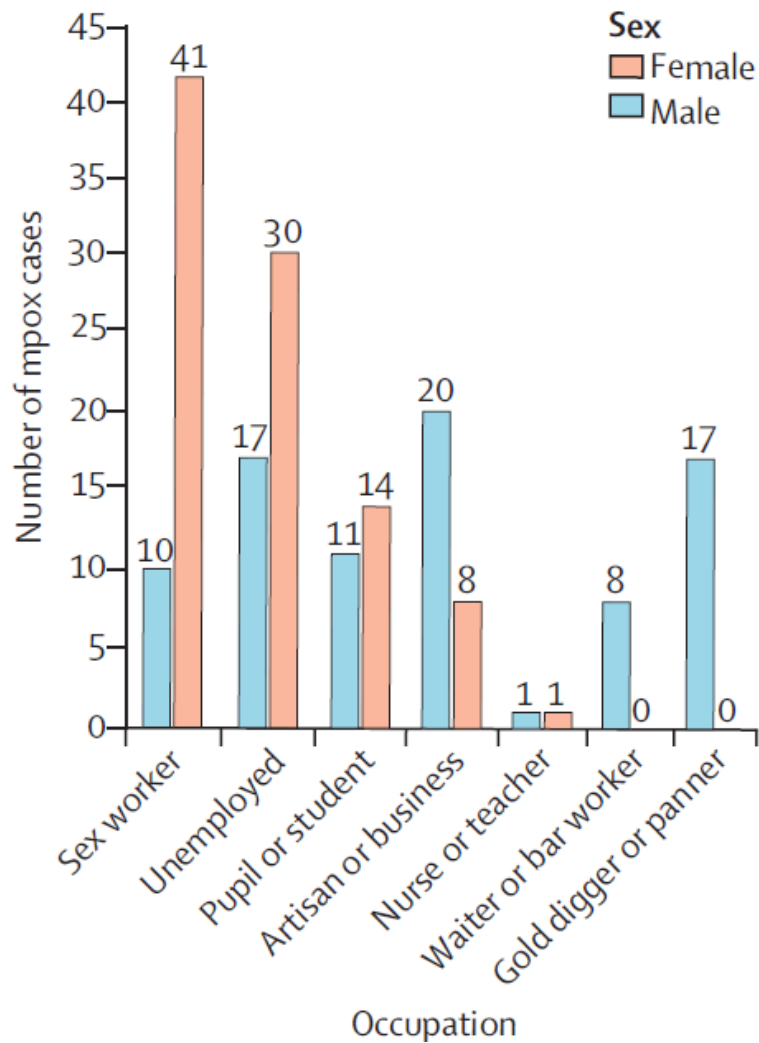


Figure. Distribution of mpox cases by occupation and sex (n=178)

## Shifting transmission patterns of human mpox in South Kivu, DR Congo

Patrick Dmc Katoto <sup>1</sup>, Winters Muttamba <sup>2</sup>, Esto Bahizire <sup>3</sup>, Espoir Bwenge Malembaka <sup>4</sup>, Henry Kyobe Bosa <sup>5</sup>, Dieudonné Mwamba Kazadi <sup>6</sup>, Gaston Lubambo <sup>7</sup>, Freddy Belesi Siangoli <sup>7</sup>, Barnabas Bakamutumaho <sup>8</sup>, Misaki Wavengera <sup>9</sup>, Don Iethro Mavungu Landu <sup>10</sup>

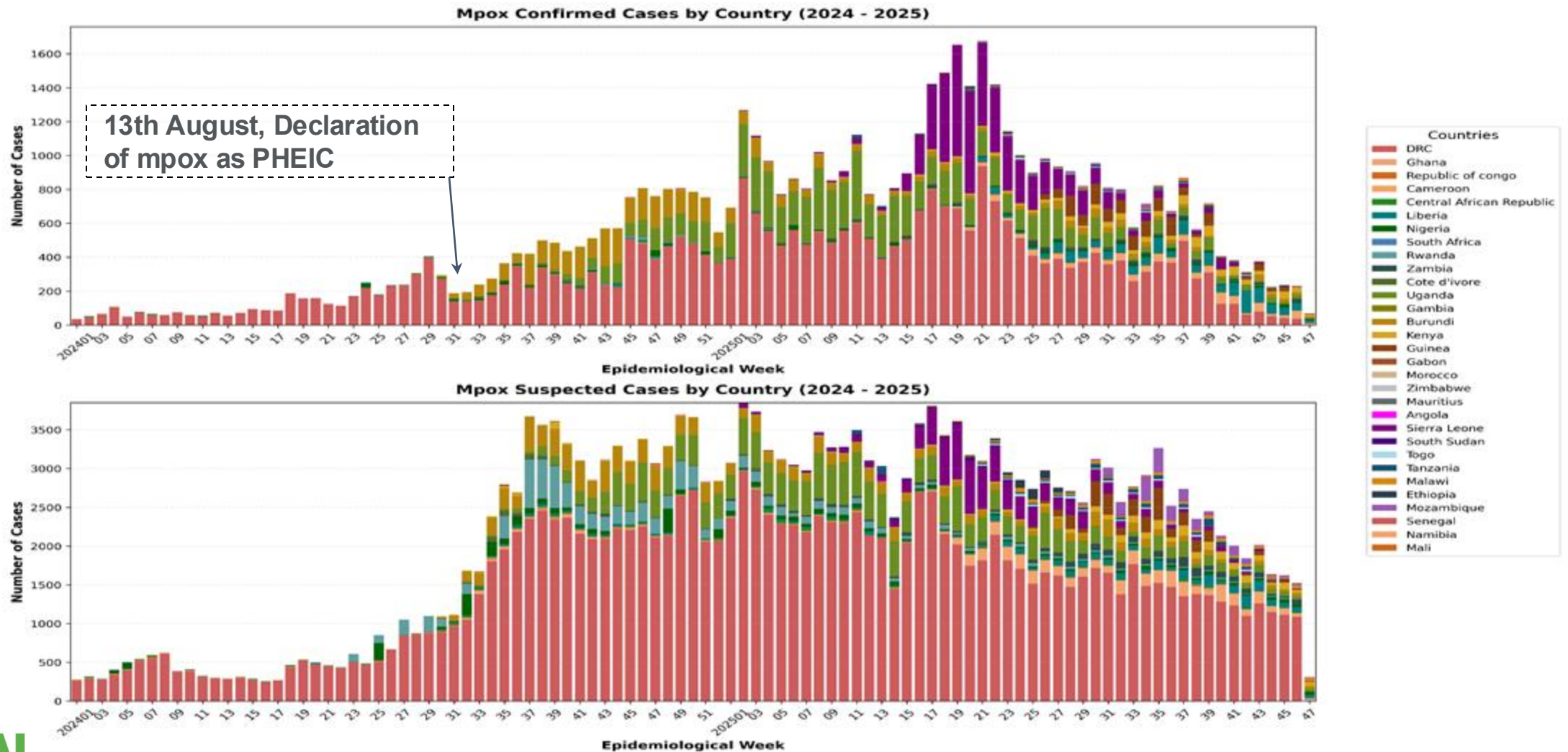
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- 226 suspected mpox cases: Sep 2023–Mar 2024
  - Clade I
  - 53.8% of cases in women
  - 92% heterosexual transmission in this region
  - 59% of cases between 15-29 years
- Most common symptoms: skin eruption (100%), fever (59%) & lymphadenopathy (40%)

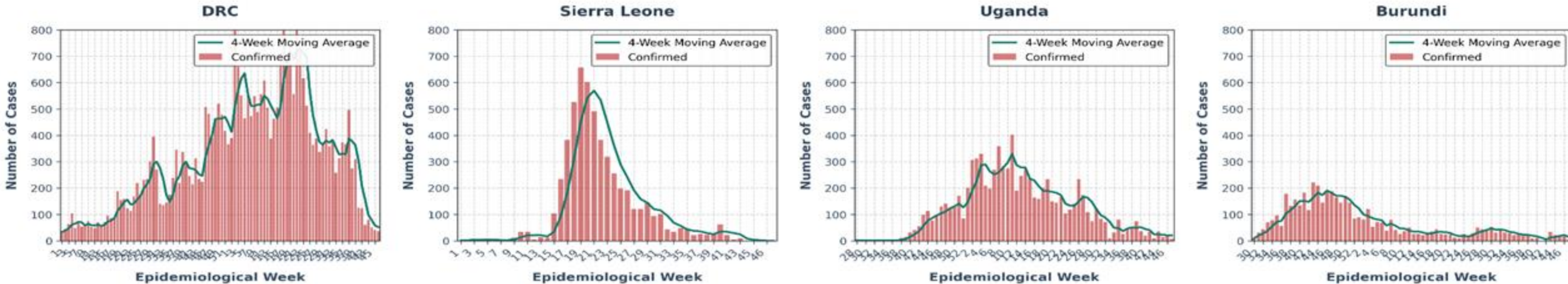
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# Weekly mpox cases by country in Africa (by epi week in 2024 & 2025)



# Trends in Top 4 previously high burden countries (Confirmed cases Jan 2024 - Nov 2025)



- **DRC** decrease from a peak of **879** cases to **37** cases; a decline of **~96%**
- **Uganda** seeing a **~98%** decrease from a peak of **402** cases to **7** cases
- **Sierra Leone** a **100%** decline from a peak of **658** cases to **0** cases
- **Burundi** a **~97%** reduction from a peak of **222** cases to **6** cases.

# Importance of mutual interdependence & shared responsibility



“The AIDS movement demonstrates that with a shared vision, shared responsibility and through global solidarity... ..we can change the course of history.”

– UNAIDS 2015

- **Global solidarity** – essential for access to life-saving medication, e.g. Global Fund & PEPFAR
- **Shared responsibility:** Countries where individuals see caring for fellow citizens as important do better than those where individuals focus on themselves first
- **No-one is safe from mpox until everyone is safe!**