Technical Briefing for WHO Member States at the 75th World Health Assembly on the Multi-Country monkeypox Outbreak

Friday, 27 May at 12.00 CEST

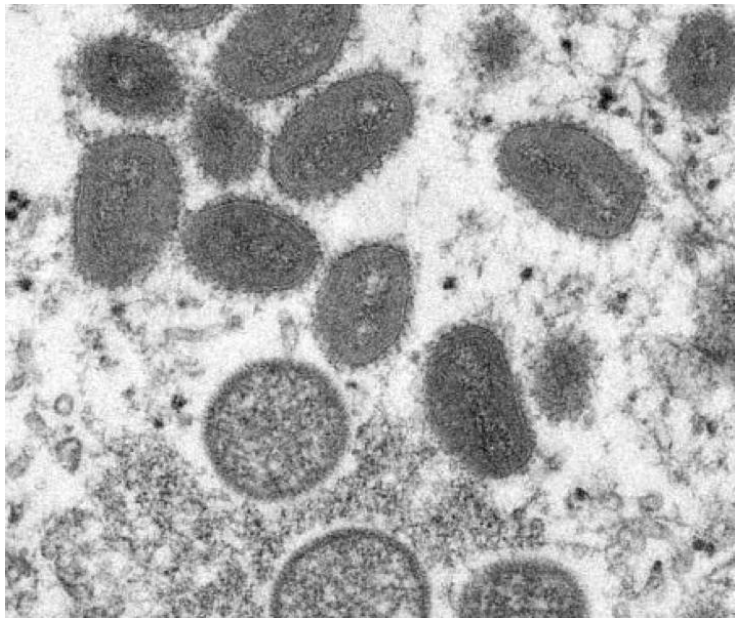

Photo: CDC

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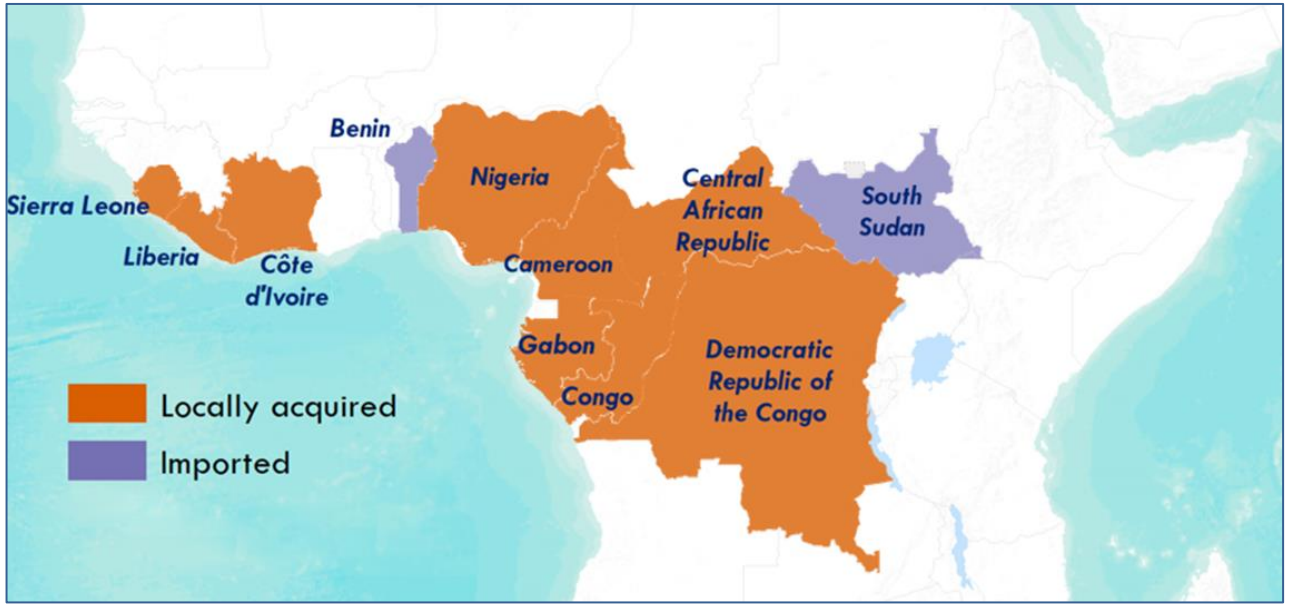
World Health Organization

HEALTH EMERGENCIES programme

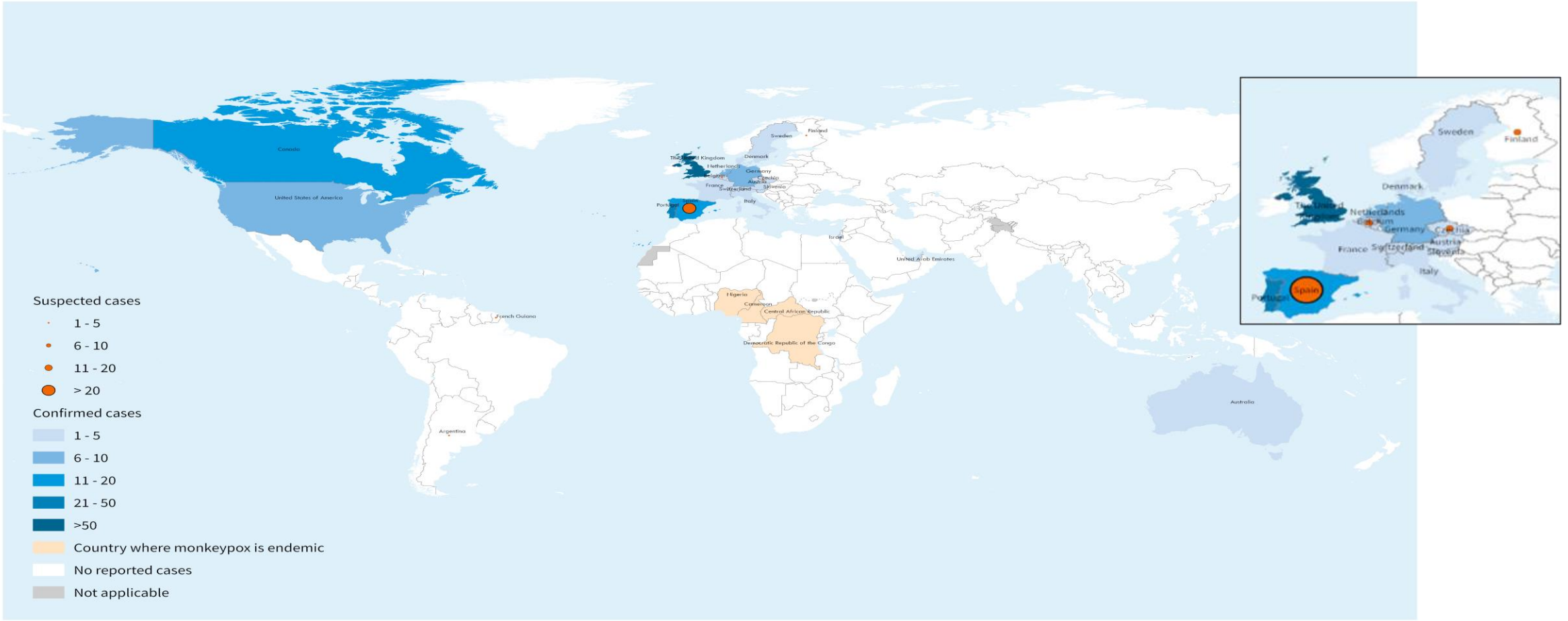
Monkeypox

- Monkeypox is a viral zoonotic disease
- Endemic in 9+ African countries
- *Orthopoxvirus* genus includes variola virus (smallpox), vaccinia virus (smallpox vaccine), and cowpox virus.
- Reservoir unknown
- Two clades – only Cameroon has both



Confirmed and suspected cases of monkeypox in non-endemic countries

(as of 25/05/2022 17:00 CEST)



Data Source: World Health Organization
Map Production: WHO Health Emergencies Programme
Map Date: 26 May 2022

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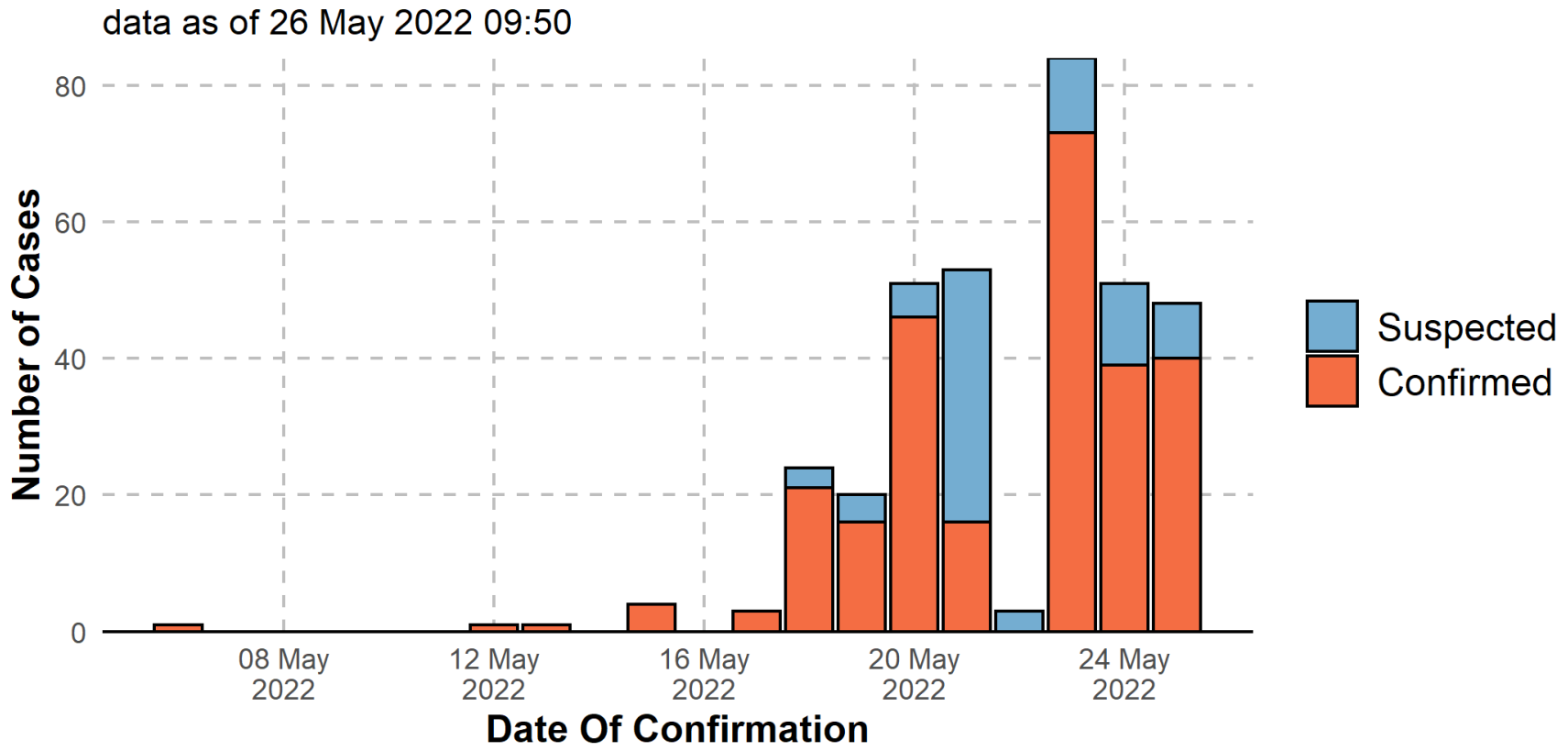
Global Epidemic Curve of monkeypox cases by date and diagnosis confirmation type



Source: global.health linelist
where dates are not available, showing date of database entry

Challenges and concerns

- **Unusual situation** (high number of cases in many countries in few days) **raising many questions** (is it due to virus change? human behavior change?)
- Many unknowns and **uncertainty** about the future: **extent** of the current disease spread in non-endemic countries and the evolution, animal reservoir, modes of transmission
- Risk of spread in the community is difficult to assess.
- **Medical countermeasures** exist but are in limited quantities and few are licensed

Recognizing monkeypox

- Monkeypox is usually a self-limited disease and typically lasts 2 to 4 weeks
- It may be severe in children, pregnant women or persons with immune suppression due to other health conditions
- Incubation period is usually 6 to 13 days and can range from 5 to 21 days
- Typical symptoms include fever, headache, muscle aches, backache, lack of energy, swollen lymph nodes and a skin rash or lesions
- Swelling of the lymph nodes is a distinctive feature of monkeypox compared to other diseases that may initially appear similar (chickenpox, measles)
- The skin eruption begins within 1 to 3 days after fever onset. The rash often begins on the face, then spreads to other parts of the body
- The rash evolves from macules (lesions with a flat base) to papules (slightly raised firm lesions), vesicles (lesions filled with clear fluid), pustules (lesions filled with yellowish fluid), and crusts which dry up and fall off
- The case fatality ratio is around 3-6%, with most deaths occurring in younger age groups

Laboratory Diagnostics for monkeypox

- Nucleic acid amplification testing (e.g. PCR) should be used to confirm *monkeypoxvirus* infection.
- Optimal diagnostic samples for monkeypox are from skin lesions, the roof or fluid from vesicles and pustules and dry crusts
- Lesion samples must be stored in a dry, sterile tube and kept cold
- There are validated lab-developed protocols (WHO can share)
- As well, there are a handful of commercially available kits (WHO HQ and RO can provide more details)

Monkeypox: Treatment

Specific antiviral treatment - tecovirimat

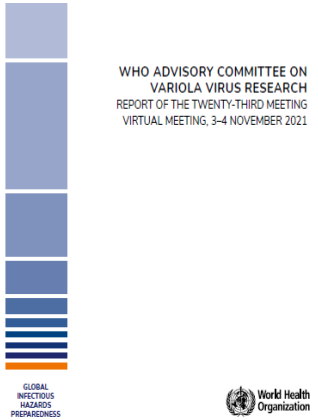
- Approved for treatment of smallpox (FDA 2018)
- Approved for monkeypox (EMA, 2022)
- Adults: 600 mg twice daily for 14 days
- WHO emergency stockpile
- Studies for treatment of monkeypox
  - CAR – feasibility case series (Oxford)
  - DRC – RCT, n=550, 5 years (US NIH)

Specific antiviral treatment – NIOCH-14

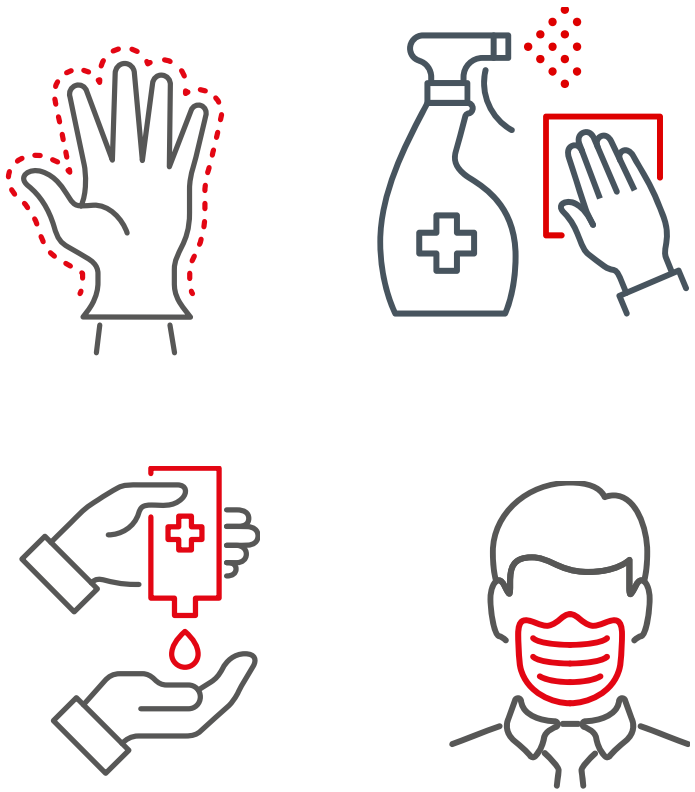
https://www.siga.com/wp-content/themes/sigahba/TPOXX-Fact-Sheet.pdf
https://www.accessdata.fda.gov/drugsatfda_docs/label/2018/208627s000lbl.pdf
Tecovirimat | European Medicines Agency (europa.eu)

Monkeypox: Vaccine

- Vaccination with “smallpox” vaccines protect against monkeypox - VE 85%
- 1st , 2nd and 3rd generation of vaccine: LC16m8, Microgene, ACAM2000
- Adverse effects especially in people with immuno-suppresion, heart problems, skin problems pregnant women kids <yo)
- Modified Vaccinia Virus Ankara (MVA) vaccine approved for smallpox (2013) and monkeypox (2019)
- VACdelta6 to be licensed (Russian Federation, 2022)



Monkeypox protective measures



Protect yourself and others

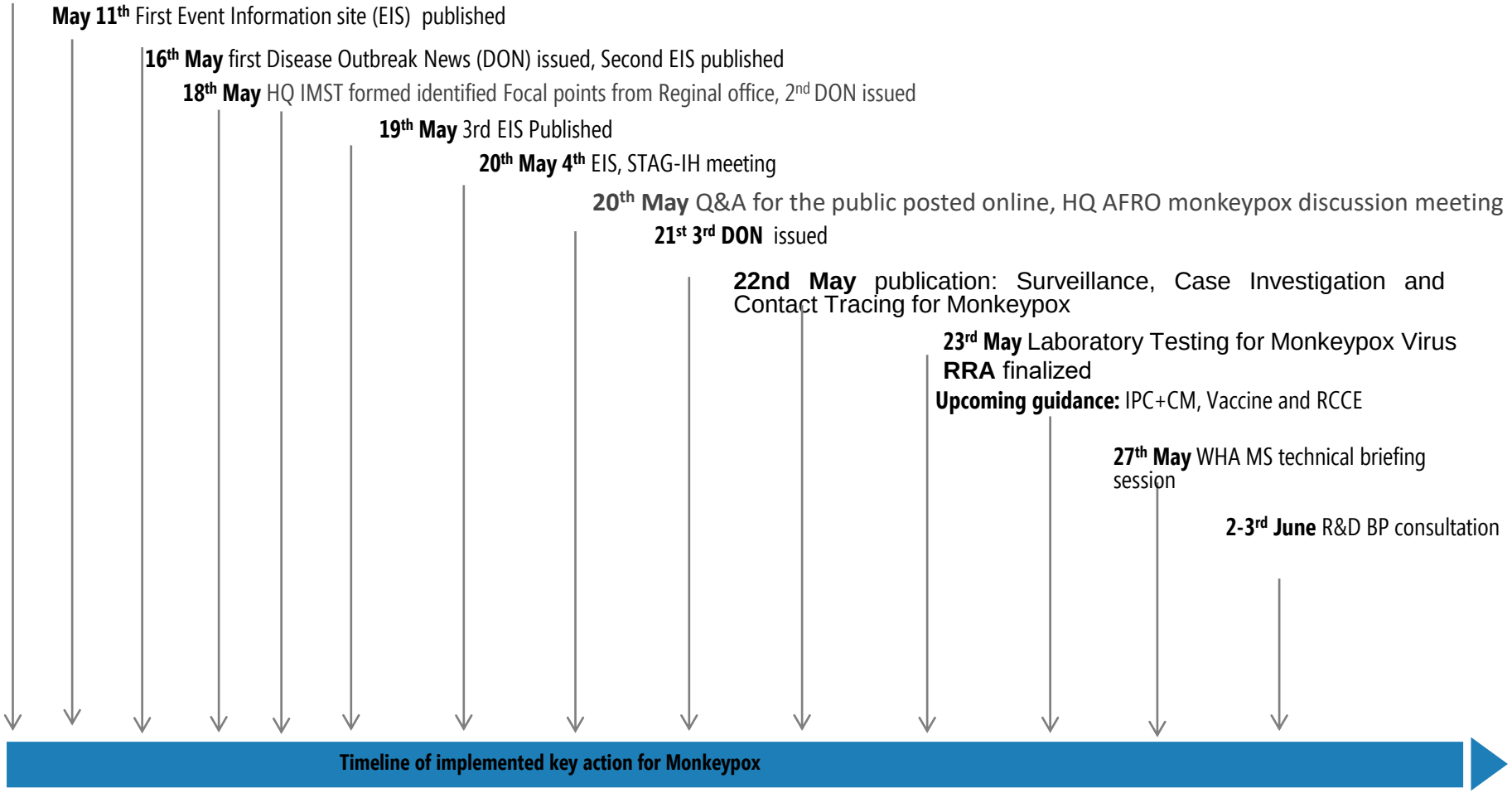
- Avoid close contact with people who have suspected or confirmed monkeypox

When caring for a person with monkeypox:

- Encourage the person to cover any lesions with a light bandage or clothing if possible
- Wear a medical mask as well as the person infected with monkeypox
- Avoid skin-to-skin contact and use disposable gloves
- Clean hands regularly with soap and water or alcohol-based hand rub, especially after contact with the patient or contaminated materials such as bedding, clothing or eating utensils
- Wash clothes, towels, bedsheets and eating utensils with warm water and detergent
- Wear a mask when handling any clothes or bedding
- Clean and disinfect any contaminated surfaces and dispose of contaminated waste

Timeline of WHO key actions

7 May 2022, WHO was informed of a confirmed case of monkeypox.



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Key Priorities

1. **CONTAIN**: At present the outbreak in non-endemic countries is still containable. WHO encourages countries to
   - Raise awareness
   - Detect cases : enhance clinical recognition of the disease to ensure early detection of cases and isolation of patients
   - Stop chains of transmission : intensified surveillance in certain population groups, cluster investigation and contact tracing
   - Protect Health care workers and prevent transmission in health care settings (PPE, Infection prevention and control)

   To do:

   - *adapt and strengthen existing surveillance systems, laboratory and testing capacities*
   - *Utilize the **Case Reporting Form** (CRF) once published to better understand the clinical characterization across regions*
   - *If using **therapeutics** : collect standardized data or use clinical trial protocols to understand effectiveness*
   - *Use, adapt and strengthen **care pathways** with appropriate **IPC measures** to prevent onwards transmission and access to **symptomatic care** elements such as good primary care, pain control and skin care.*

Key Priorities continued…

2. Ensure effective communication strategies to **avoid stigmatisation** of certain population groups and reduce impact on societies, travel and trade. Continue to communicate what we know, what is being done to respond and continue to update and publish products as data becomes available.

3. Risk based strategies: Utilize countermeasures and Public health interventions based on **need, risk and benefit** including basic public health interventions **(**therapeutics, vaccines, testing, diagnostics and sequencing)
Apply measures **commensurate to the risk** (for instance promote safe gatherings)

4. **Global Collaboration**

- Continue sharing information, diagnostic resources and data. Use standardised protocols to enable comparison of data between countries
- Support the development of global mechanisms to ensure equitable access to countermeasures (vaccine, therapeutics, diagnostics) based on public health needs . WHO virtual stockpile
- Accelerate the research agenda for monkeypox

5. Strengthen One Health approach in endemic countries

Accelerate research agenda : WHO R&D Blueprint Consultation (2-3 June 2022)

OBJECTIVES

Global experts will review the available evidence in terms of:

- Our understanding the dynamics of monkeypox transmission and epidemiology and the clinical characteristics of the disease.
- Available evidence regarding therapeutics, diagnostics and vaccines licensed and under development.
- Novel approaches for evaluation of monkeypox therapeutics and vaccines.
- Countries perspectives in terms of research priorities and support needed.

EXPECTED OUTCOMES

Baseline document to inform a research Roadmap enumerating knowledge gaps and outlining priority research. A defined list of next steps to address the above.

Over **50 experts** from around the world will contribute to the deliberations

> 2000 researchers have registered so far to attend to the meeting

Thank You for your attention