

Report of the Review Committee regarding standing recommendations for mpox

16 August 2023

CONTENTS

Contents	2
Acknowledgements	3
Preface.....	4
Acronyms and abbreviations	5
1. Introduction and background.....	6
1.1 Short history of the event.....	6
1.2 Mandate of this Review Committee	8
1.3 Methods of work	8
1.4 Emergency Committee, public health emergency of international concern, and temporary recommendations	9
1.5 Legal basis in the International Health Regulations (2005)	10
2. The multi-country outbreak of mpox	13
2.1 Current WHO Risk Assessment of the mpox situation	13
2.2 Assessment by the Review Committee of the current and future mpox situation	14
2.3 Draft WHO Global Strategic Framework for enhancing control and achieving elimination of human-to-human transmission of mpox (2023-2027)	16
3. Technical advice of the Review Committee on proposed standing recommendations.....	18
3.1 Necessity, appropriateness, and scope of standing recommendations	18
3.2 Technical advice on proposed standing recommendations	20
3.3 Reporting, duration of standing recommendations, and miscellaneous items	23
Appendices	24
Appendix 1. Names and affiliations of Review Committee members	24
Appendix 2. Relevant WHO MPOX DOCUMENTS.....	25

ACKNOWLEDGEMENTS

The Review Committee regarding standing recommendations for mpox wishes to thank WHO Director-General, Tedros Adhanom Ghebreyesus, and the Executive Director of the WHO Health Emergencies Programme, Michael Ryan, for actively supporting its work.

In addition, the Committee offers its thanks to the following people from the WHO Secretariat at headquarters and the regional offices: the International Health Regulations Secretariat, led by Carmen Dolea, and staffed by the following WHO staff members: Roberta Andraghetti, Véronique Deruaz, Jasmin Dian, Fernando Gonzalez-Martin, Helge Hollmeyer, Faith McLellan, Magdalena Rabini; Rosamund Lewis, Emergency Manager and Technical Lead for mpox in WHO headquarters, on behalf of Incident Management Teams in WHO headquarters, regional and country offices; Claudia Nannini and Steven Alan Solomon in the Office of the Legal Counsel; Eduard Markov and Andreas Mlitzke in the Office of Ethics, Compliance and Risk Management; and the Protocol Unit and Language Services in the Office of Governing Bodies.

PREFACE

The multi-country outbreak of mpox, which was detected in May 2022, has now caused almost ninety thousand reported cases worldwide. Primarily affecting men who have sex with men, with cases first appearing in Europe and spreading rapidly to the Americas and all regions of the world, including back to Africa, the outbreak has underscored a key lesson: the virus can propagate rapidly in interconnected sexual networks.

This outbreak compounded the longstanding neglected mpox situation in several African countries where zoonotic spillover followed by initially limited person-to-person transmission was presumed to be responsible for most cases. This neglect enabled the virus to exploit new modes of transmission across different countries, such that that mpox is also now considered to be sexually transmissible.

The sustained decline of the multi-country outbreak can be attributed to effective risk communication and community engagement for men who have sex with men and other groups at risk in countries experiencing the introduction of the monkeypox virus. These efforts facilitated behavioural shifts among persons at risk and increased vaccination uptake, where vaccines were available, providing immunity for many. Some of the persons who were most at risk of exposure acquired mpox early on, so their immunity also contributed to the decline.

Nonetheless, in a short period of time, mpox went from being a disease unknown to most people to a public health emergency of international concern, characterized by a mode of transmission not previously described, and about which there are still numerous unknowns. As long as global circulation of the monkeypox virus persists, the potential for new outbreaks among people who have multiple sex partners, including sex workers, remains. Furthermore, the risk of establishing new animal reservoirs and viral evolution towards heightened transmissibility are continuous concerns.

In response to these looming risks, countries worldwide, irrespective of their current epidemiological status, must unite to eliminate person-to-person transmission of mpox and prevent zoonotic spillover. Lessons from the emergency phase of the response and research into the myriad unknowns regarding the monkeypox virus and its interactions with the human body and human society will inform this concerted campaign.

Throughout the declared public health emergency of international concern associated with the multi-country outbreak of mpox spanning July 2022 to May 2023, countries' response efforts were guided by temporary recommendations issued under the International Health Regulations (2005) (IHR). As the elimination phase unfolds, countries' preparedness and response actions can be steered by the standing recommendations set forth under the IHR.

In this report, the Review Committee advises the Director-General on the contents of such recommendations.

Members of this Review Committee came from all regions of the world, and were appointed to the Committee for their expertise, their independence, and their commitment to global health. I thank them for their work on this report, which will form a basis for the Director-General of the World Health Organization (WHO) to issue standing recommendations for mpox to all States Parties to the IHR.

Preben Aavitsland

Chair, Review Committee regarding standing recommendations for mpox

15 August 2023, Kristiansand, Norway

ACRONYMS AND ABBREVIATIONS

DRC	the Democratic Republic of the Congo
HIV	human immunodeficiency virus
IHR	International Health Regulations (2005)
MPXV	monkeypox virus
PHEIC	Public Health Emergency of International Concern
STIs	sexually transmitted infections
UN	the United Nations
WHO	the World Health Organization

All hyperlinks embedded in the text were accessed on 15 August 2023

1. INTRODUCTION AND BACKGROUND

1.1 SHORT HISTORY OF THE EVENT

Mpox (monkeypox) is a viral infectious disease which commonly manifests with a skin rash or mucosal lesions which can last 2–4 weeks, accompanied by fever, headache, muscle aches, back pain, low energy, and swollen lymph nodes. While usually not severe, mpox may sometimes lead to grave complications such as encephalitis or sequelae such as blindness. The frequency of complications varies according to factors which include the virus clade, route of exposure, and underlying medical and immune status of the patient. Mpox can result in death, with case fatality ranging from 0.2% to 10% of cases in different contexts. The first case was identified in an infant in Africa in 1970.

In May 2022 an unprecedented outbreak of mpox began to spread rapidly in many countries in Europe and the Americas, primarily through sexual contact among men who have sex with men. On 23 July 2022, pursuant to the provisions of the International Health Regulations (2005) (IHR), the Director-General of the World Health Organization (WHO) determined that the multi-country outbreak of monkeypox ([later known as mpox](#)) was a public health emergency of international concern (PHEIC).

By August 2023, 90 000 confirmed cases and 152 deaths had been reported to WHO from 113 countries in all six WHO regions, with sustained human-to-human transmission. In addition, during this time, thousands of suspected cases and among them hundreds of deaths were reported in Africa, while access to diagnostics remains limited in many areas. During the year, the Director-General issued temporary recommendations for States Parties to prepare for and respond to the outbreak.

The infectious disease mpox is caused by the monkeypox virus (MPXV), a DNA virus of the *Orthopoxvirus* genus that transmits from person to person, and in parts of Africa, from animals to people. Mpox can spread through physical contact with skin or mucosal lesions, body fluids or respiratory secretions, or with contaminated materials including sharps or bedding. In enzootic areas, contact with animals carrying the virus or consumption of wild game has led to infection with onward transmission between people. Following eradication of smallpox (and the end of smallpox vaccination) after 1980, mpox steadily emerged in Africa.

Outbreaks of mpox have thus historically occurred largely in West, Central and East African countries, where the virus is enzootic, presumed to result from zoonotic spillover followed by limited human-to-human transmission. Prior smallpox vaccination (with vaccinia virus) was often protective. However, over the years, chains of transmission have lengthened, and since 2018, sporadic cases and clusters have been detected elsewhere, largely linked to travel from endemic countries with limited onward spread and imported animal-to-human transmission documented on one occasion. Two genetic clades of MPXV exist, clade I and clade II, subdivided into clades IIa and IIb. Clade I MPXV occurs primarily in Central and East Africa and has a case fatality ratio of 10%.

Clade II, sporadically found in West Africa with a significant outbreak in Nigeria ongoing since 2017, has a case fatality of 1% or more in that context. Cases linked to travel from Nigeria reported since 2018 have been found to have clade IIb MPXV. The global outbreak of mpox that began in 2022 is also linked to clade IIb MPXV, so far found only in humans, and has resulted in death in 0.2% of cases. Both virus clades lead to similar clinical features. However, in the West African and global outbreaks, clade IIb has been associated with a more frequent occurrence of rash presenting primarily as anogenital lesions, leading to newly described clinical syndromes including extreme pain. Other newly described conditions have included myocarditis, proctitis and recurrent cropping of skin lesions.

Since 2017, isolates of clade IIb virus have been characterized by genetic changes associated with genome edits by the human protein, APOBEC3,¹ suggesting adaptation of the virus outbreak strain to, or propagation through, human-to-human transmission. It is important to note that patterns of transmission with no apparent zoonotic source have also been occurring in Africa for many years. The 2022 - 2023 multi-country outbreak has been characterized by sustained human-to-human transmission via direct skin-to-skin and sexual contact, with early transmission linked to amplifying events involving sexual networks of men who have sex with men. The primary mode of transmission in these networks was close contact during sex. Occasionally, household members, including children, of persons with mpox acquired the infection through close contact. Health workers have been exposed through occupational incidents. In Africa, women and children continue to represent a greater proportion of cases than in countries experiencing the introduction of the MPXV. People living with HIV have been disproportionately affected in both contexts. Risk factors for severe disease and death include immune suppression due to advanced HIV disease or other cause, as well as young age under 5 years or older age above 65.

Response efforts were rapidly put in place and WHO worked with governments, communities, and stakeholders worldwide to develop and implement effective strategies to stop the outbreak. WHO published technical guidance, public health advice and research protocols; provided diagnostic test kits to over 90 countries and supported harmonization of testing protocols and procedures; established reserves of therapeutics for compassionate or emergency use; and supported coordination of vaccine supply through bilateral or multilateral arrangements. Community responses to share information, combat the stigma associated with mpox, and support integration of services with HIV/STI and other health services and community activities have been crucial to the outbreak response. However, important gaps remain in understanding patterns of transmission, particularly in Africa. Any State Party may also now experience importation of mpox from the territory of any other State Party, as well as local spread. Mpox can occur anywhere, and introduction or re-introduction of the virus that causes mpox remains an ongoing risk for all countries.

The global outbreak has shifted the understanding of mpox as an infectious disease that spreads between people. In addition to ongoing risks of human-to-human transmission, some countries will continue to have some outbreaks related to zoonotic transmission.

The multi-country outbreak clearly highlighted the continuing inequity in access to diagnostics, vaccines and therapeutics within countries and between regions. While patterns of transmission of mpox without any confirmed or apparent zoonotic source had been noted in Africa for years, prior to 2022, efforts to develop specific counter-measures for mpox were limited. Studies of diagnostics, vaccines and therapeutics were for example focused primarily on smallpox preparedness concerns, such as ability to detect variola virus, vaccine safety or feasibility of use of tecovirimat in remote locations, rather than effectiveness in response to outbreaks of mpox in under-resourced settings.

In the wake of the multi-country outbreak, large and widening gaps remain. Access to diagnostics in resource-limited and/or remote areas remains very challenging. For example, in the Democratic Republic of the Congo (DRC), only about 10% of reported suspected cases are tested and of these, in a recent update from the country, three quarters of suspected cases tested positive for mpox, a high positivity rate which suggests under-ascertainment of cases. Likewise, while progress in the

¹ APOBEC3 (apolipoprotein B mRNA editing enzyme, catalytic subunit 3) is a human enzyme family that plays a role in generating virus mutations. How emerging MPXV strains will evolve remains unknown. These mutations may help guide future development of vaccines or therapeutics.

authorization of smallpox vaccines for use in preventing mpox has been rapid and vaccine effectiveness data are emerging, access to vaccines remains limited to high income, self-procuring countries or collective entities procuring vaccines for their members, such as through the Commission of the European Union or the PAHO Revolving Fund for vaccines. Antiviral agents such as tecovirimat and/or brincidofovir, developed to treat smallpox, have been used to treat mpox in a few countries, and further studies are underway. Nevertheless, highlighting inequities once again, access to tecovirimat and its clinical use has been limited almost exclusively to high income, self-procuring countries or within the context of ongoing clinical studies and is otherwise not available in lower resourced countries.

There is a need for longer-term attention and support to address this emerging disease, with robust, proactive and sustainable mpox control, particularly where mpox continues to occur regularly, to stop outbreaks and prevent resurgence of global spread. The Emergency Committee established under the International Health Regulations (2005) in June 2022 therefore recommended that all countries develop and implement plans to control mpox, eliminate human-to-human transmission, and reduce the risks of zoonotic transmission. To meet these needs, WHO is preparing a *Global Strategic framework for enhancing control and achieving elimination of human-to-human transmission of mpox (2023-2027)* which is undergoing a consultative process with WHO Member States, partners and stakeholders. This framework outlines the goal to achieve sustained elimination of human-to-human transmission of mpox, which is underpinned by three objectives: to 1) achieve control of mpox outbreaks in every context, 2) advance mpox research and access to countermeasures and 3) minimize zoonotic transmission. The WHO Secretariat presented to the Review Committee a draft of the framework, hereafter referred to as Draft Global Strategic Framework for mpox (2023-2027).

1.2 MANDATE OF THIS REVIEW COMMITTEE

The [Review Committee regarding standing recommendations for mpox](#) was convened by the Director-General of WHO pursuant to Part IX – Chapter III – The Review Committee of the IHR (Articles 50-53) of the IHR. The IHR are a binding instrument of international law that entered into force in 2007. Their 196 States Parties include all 194 Member States of WHO, plus the Holy See and Liechtenstein.

Pursuant to Articles 50.1(b) and 53 of the IHR, this Review Committee is providing its views and technical advice to the Director-General with respect to standing recommendations for mpox, as proposed by the Director-General. The Review Committee functions in accordance with the [WHO Regulations for Expert Advisory Panels and Committees](#).

This would be the second time that these specific provisions of the IHR are being applied; as such, it is understood that further details in support of the [Terms of Reference](#) of the Committee may be provided as experience is gained.

1.3 METHODS OF WORK

The Review Committee was convened by the Director-General of WHO on 27 July 2023. It was expected to meet virtually and to deliver their final report to the Director-General before 10 August 2023², when

² On [9 August 2023](#), in his opening remarks at the WHO virtual press conference on global health issues, the Director-General of WHO indicated that “*The Review Committee is also discussing standing recommendations for mpox, which it will deliver later this week.*”

the current temporary recommendations, issued by the Director-General after the termination of the PHEIC related to the multi-country outbreak of mpox, have come to an end.

The Review Committee includes 20 Members, selected from the IHR Roster of Experts or other WHO Expert Advisory Panels and Committees, representing a wide range of expertise, from all six WHO regions, in accordance with Articles 47 and 50 of the IHR. Ahead of their convening, the Committee was provided with a draft agenda, its Terms of Reference and mandate under the IHR, as well as with the draft standing recommendations and global long-term risk assessment for mpox, prepared by the WHO Secretariat.

The Review Committees met virtually in both, open and closed sessions as follows:

- 27 July 2023 – First closed session, opened by the Director-General via a pre-recorded video. The opening remarks are available [here](#). The Review Committee were reminded of their obligations under the WHO Rules of Procedures for Advisory Panels and Committees, and no conflict of interests were reported. In accordance with the Rules of Procedures, the Committee selected its officers: as Chair Professor Preben Aavitsland, from Norway; as Vice-Chair Mister Andrew Forsyth, from New Zealand; and as Rapporteur, Dr Inger K. Damon, from the United States of America.

The Review Committee proceeded then to consider the proposed standing recommendations for mpox, presented by the WHO Secretariat, who also provided an update of the epidemiological situation, and the long-term risk assessment.

- 27 July 2023 – Open joint session of the Review Committees regarding standing recommendations for COVID-19 and Review Committees regarding standing recommendations for mpox. In accordance with Article 51.2 of the IHR, the two Review Committees met with States Parties, the United Nations, other UN specialized agencies, relevant intergovernmental organizations and non-State actors in official relations with WHO.
- 7 August 2023 – Second closed session. After electronic communications to elaborate their report, the Review Committee reconvened virtually to finalize and adopt it.

This report of the Review Committee contains its views and technical advice to the Director-General regarding the proposed standing recommendations, and was transmitted on 16 August 2023 to the Director-General for consideration and decision. Any standing recommendation that the Director-General may be issuing, would enter into effect upon issuance.

To that effect, pursuant to Article 53(f) of the IHR, the Director-General shall communicate to States Parties any standing recommendation, together with the views and technical advice of the Review Committee. Furthermore, in accordance with Article 53(e) and Article 53(g), the Director-General shall communicate the Review Committee's views and technical advice, as well as standing recommendations, to the Seventy-seventh World Health Assembly in May 2024 for its consideration.

1.4 EMERGENCY COMMITTEE, PUBLIC HEALTH EMERGENCY OF INTERNATIONAL CONCERN, AND TEMPORARY RECOMMENDATIONS

The Director-General of WHO first convened an [Emergency Committee](#) under the IHR on [23 June 2022](#), to advise him on whether the multi-country outbreak of monkeypox, constituted or not a PHEIC. At that time, the Director-General, following the advice of the Emergency Committee, determined that

the event did not constitute a PHEIC. The Committee was reconvened on 21 July 2022, when divergent views were noted as to whether to advise the Director-General that the event constituted a PHEIC. The Director-General, taking into account considerations provided by the Emergency Committee, as well as other elements as per Article 12.4 of the IHR, on [23 July 2022](#), determined that the event constituted a PHEIC and issued temporary recommendations, in accordance with Articles 1, 15, 17 and 18 of the IHR. The temporary recommendations were reviewed every three months.

At its 5th meeting, held on 10 May 2023, the Emergency Committee advised the Director-General that in its views the event no longer constituted a PHEIC and suggested that standing recommendations under the IHR may provide a better tool to manage the long-term public health risks posed by MPXV. On [11 May 2023](#), on the advice of the Emergency Committee, the Director-General terminated the PHEIC related to the multi-country outbreak of mpox. In accordance with Article 15 of the IHR, the Director-General continued to issue temporary recommendations after the termination of the PHEIC, at the advice of the Emergency Committee, and these recommendations expired on 10 August 2023.

1.5 LEGAL BASIS IN THE INTERNATIONAL HEALTH REGULATIONS (2005)

The purpose and scope of the IHR are set out in **Article 2 - Purpose and scope** as follows “[...] *to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade.*”

To that effect, the issuance by the Director-General of both temporary recommendations, in association with a PHEIC, and standing recommendations represents some of the tools offered by the IHR to manage public health risks, including curbing their international spread and mitigating their impact. Public health risks are defined in **Article 1 - Definitions** as “*likelihood of an event that may affect adversely the health of human populations, with an emphasis on one which may spread internationally or may present a serious and direct danger.*”

The IHR include the following specific provisions related to standing recommendations:

The standing recommendations are defined in **Article 1 - Definitions** as “*non-binding advice issued by WHO for specific ongoing public health risks pursuant to Article 16 regarding appropriate health measures for routine or periodic application needed to prevent or reduce the international spread of disease and minimize interference with international traffic.*”

Article 16 authorises the Director-General with the discretion to issue standing recommendations.

Article 16 - Standing recommendations

WHO may make standing recommendations of appropriate health measures in accordance with Article 53 for routine or periodic application. Such measures may be applied by States Parties regarding persons, baggage, cargo, containers, conveyances, goods and/or postal parcels for specific, ongoing public health risks in order to prevent or reduce the international spread of disease and avoid unnecessary interference with international traffic. WHO may, in accordance with Article 53, modify or terminate such recommendations, as appropriate.

Article 17 includes the criteria that Director-General shall consider when issuing, modifying or terminating any standing recommendations.

Article 17 - Criteria for recommendations

When issuing, modifying or terminating temporary or standing recommendations, the Director-General shall consider:

- (a) the views of the States Parties directly concerned;*
- (b) the advice of the Emergency Committee or the Review Committee, as the case may be;*
- (c) scientific principles as well as available scientific evidence and information;*
- (d) health measures that, on the basis of a risk assessment appropriate to the circumstances, are not more restrictive of international traffic and trade and are not more intrusive to persons than reasonably available alternatives that would achieve the appropriate level of health protection;*
- (e) relevant international standards and instruments;*
- (f) activities undertaken by other relevant intergovernmental organizations and international bodies; and*
- (g) other appropriate and specific information relevant to the event. [...].*

Article 18 provides a list of public health measures that may be included in standing recommendations.

Article 18 - Recommendations with respect to persons, baggage, cargo, containers, conveyances, goods and postal parcels

1. Recommendations issued by WHO to States Parties with respect to persons may include the following advice:

– no specific health measures are advised; – review travel history in affected areas; – review proof of medical examination and any laboratory analysis; – require medical examinations; – review proof of vaccination or other prophylaxis; – require vaccination or other prophylaxis; – place suspect persons under public health observation; – implement quarantine or other health measures for suspect persons; – implement isolation and treatment where necessary of affected persons; – implement tracing of contacts of suspect or affected persons; – refuse entry of suspect and affected persons; – refuse entry of unaffected persons to affected areas; and – implement exit screening and/or restrictions on persons from affected areas.

2. Recommendations issued by WHO to States Parties with respect to baggage, cargo, containers, conveyances, goods and postal parcels may include the following advice: [...]

Article 53 includes provisions related to the procedure for issuing standing recommendations. These are issued by the Director-General, taking into account the advice of a Review Committee convened with this sole purpose.

Article 53 - Procedures for standing recommendations

When the Director-General considers that a standing recommendation is necessary and appropriate for a specific public health risk, the Director-General shall seek the views of the Review Committee. In addition to the relevant paragraphs of Articles 50 to 52, the following provisions shall apply:

(a) proposals for standing recommendations, their modification or termination may be submitted to the Review Committee by the Director-General or by States Parties through the Director-General;

(b) any State Party may submit relevant information for consideration by the Review Committee;

(c) the Director-General may request any State Party, intergovernmental organization or nongovernmental organization in official relations with WHO to place at the disposal of the Review Committee information in its possession concerning the subject of the proposed standing recommendation as specified by the Review Committee;

(d) the Director-General may, at the request of the Review Committee or on the Director-General's own initiative, appoint one or more technical experts to advise the Review Committee. They shall not have the right to vote;

(e) any report containing the views and advice of the Review Committee regarding standing recommendations shall be forwarded to the Director-General for consideration and decision. The Director-General shall communicate the Review Committee's views and advice to the Health Assembly;

(f) the Director-General shall communicate to States Parties any standing recommendation, as well as the modifications or termination of such recommendations, together with the views of the Review Committee;

(g) standing recommendations shall be submitted by the Director-General to the subsequent Health Assembly for its consideration.

Articles 50 to 52 include provisions related to the mandate and conduct of business of a Review Committee, which is meant to advise the Director-General on the issuance, modification or termination of standing recommendations. The conduct of business of the Review Committee is subject to the WHO Advisory Panel Regulations.

2. THE MULTI-COUNTRY OUTBREAK OF MPOX

2.1 CURRENT WHO RISK ASSESSMENT OF THE MPOX SITUATION

This section is based on the Long-Term Risk Assessment for mpox provided by the WHO Secretariat to the Review Committee in advance of the first session of its meeting.

According to the assessment by the WHO Secretariat, the global public health risk associated with mpox is low in the general population. In African settings where mpox continues to occur regularly, the risk for the general population is moderate, higher than elsewhere around the world. For men who have sex with men and for sex workers, the risk is assessed as moderate in all settings and contexts.

Since the beginning in May 2022 of the ongoing outbreak of mpox largely associated with clade IIb lineage B MPXV, 113 countries in all six WHO regions have reported cases. From 1 January 2022 to 25 July 2023, 88 600 confirmed and 1087 probable cases, including 152 confirmed deaths, have been reported to WHO (CFR: 0.17%). This is the largest ever recorded mpox outbreak, and 99 of the 113 reporting countries have detected mpox for the first time.

The number of cases peaked in July-August 2022, followed by a steady decline until March 2023 and a low plateau of around 100 new confirmed cases reported per week continuously since, which is now rising again. The virus continues to circulate globally. Sixteen countries have reported cases in the last 21 days (the maximum incubation period), with some reporting mainly travel-related cases and others experiencing sustained human-to-human community transmission. In 2023, some countries have reported cases for the first time and sustained person-to-person transmission has been reported in the South-East Asia and Western Pacific Regions, including most recently in mainland China. In Europe and the Americas, sporadic cases and outbreaks continue. Transmission continues to be reported in countries where MPXV has historically been circulating in the African Region, especially Nigeria and DRC. The upward trend of reported suspected cases and deaths in the DRC continues unabated, with the highest number of suspected cases ever reported (6031 cases) as of mid-July 2023.

The 2022-2023 multi-country mpox outbreak has affected mainly men 18-49 years of age (90% of cases; 70 112 / 78 168) and, among those with available information, the majority (84%; 26 111/31 031) have self-identified as gay men or bisexual men or reported same-sex activities. Transmission through sexual contact has also been described in settings in the African region: in Nigeria, recent studies have shown that heterosexual transmission plays an important role. Overall, countries in West, Central and East Africa with previous history of mpox present cases among younger age groups, including children and adolescents, which also suggests different transmission dynamics. This for example is particularly true of the first ever reported outbreaks of mpox in refugee camps, in Sudan in 2022, where children under the age of five years were most affected, as well as older children and some adults, from which specimens were confirmed to have clade I MPXV. This supports observations that the range of MPXV may be expanding in Central and East Africa. Countries in the African region have also observed an increase in cases in the last year compared to previous years.

The general clinical presentation of mpox associated with clade II MPXV in the multi-country outbreak has been less severe compared to what was previously described for cases in West Africa. The reasons for this are not fully understood but may in part be due to better case ascertainment (detection) of milder cases during the peak of the outbreak. Nevertheless, there have been people hospitalized for very severe mpox disease, as well as deaths. Among reported cases of mpox for whom the information is available, around half were people living with HIV. People living with HIV who are immunosuppressed

due to advanced or uncontrolled disease are more likely to present severe forms of mpox and have a greater risk for hospitalization and death. While the case fatality ratio (CFR) in the multi-country outbreak remains under two deaths per thousand cases, the CFR in West (>1%) and Central Africa (around 10%) remain at the higher levels previously described. While the degree of case ascertainment in Central Africa is uncertain, clade I MPXV has also been shown in animal studies to be more virulent than clade II.

With respect to the risk of ongoing zoonotic exposure there are many uncertainties. While various small mammals are susceptible, including rope squirrels, gambian rats and dormice as well as species of monkeys and other primates, the origin and animal reservoirs of MPXV are not known. It may be that several animals support MPXV circulation in a natural lifecycle with complex interactions of reservoir hosts and incidental species, from which virus shedding may lead to human exposure. This was the case in the outbreak of mpox in the U.S. in 2003, where North American prairie dogs were the primary transmitting species. Some outbreaks in human populations have been linked to contact with squirrels or monkeys or consumption of their meat, particularly in Central Africa.

Based on the current available information, WHO assesses that the public health risk of mpox among men who have sex with men, and among sex workers is moderate. The risk for the general population at the global level is assessed as low. However, the risk to the general population including women and children is higher in African contexts where mpox continues to occur regularly, modes of transmission are less well understood, and the origins of outbreaks are largely unknown. The individual-level risk is largely dependent on individual factors such as exposure risk and immune status.

While the epidemiological situation appears to be improving globally, this is not the case in countries with new outbreaks or in Africa where case counts are steady or continue to rise, representing higher risk in those countries and continuing risk of spread from Africa to other parts of the world.

2.2 ASSESSMENT BY THE REVIEW COMMITTEE OF THE CURRENT AND FUTURE MPOX SITUATION

In the early months of 2022, the MPXV was found to have entered networks of men who have sex with men in Europe and North America and spread rapidly through intimate or sexual contact within those networks, including through several international gatherings where multiple sexual contacts occurred. Several factors seemed to drive transmission in this group: new or multiple sexual partners, amplification of the outbreak during such events, the rather long infectious period typical of mpox, and greater risk of poor outcomes in people who are immunocompromised.

Outside those networks, spread of the disease was limited, concerning primarily close contacts in the household, including some children, and in a few cases health workers through occupational incidents.

The outbreak reached a peak in the Europe and North America in mid-2022 followed by slower declines in the Americas. The virus continues to circulate globally. Sixteen countries that experienced the introduction of MPXV have been reporting new cases in the last 21 days, with some reporting mainly travel-related cases and others newly experiencing sustained community transmission. Transmission also continues to be reported in the African Region, particularly but not exclusively in Nigeria and the DRC. In addition, in recent months, countries that experienced the introduction of MPXV have reported cases for the first time, including most recently in mainland China. In Europe and the Americas, sporadic cases and outbreaks continue.

The reasons for the decline after August 2022 in the Northern hemisphere were mainly effective risk communication and community engagement, which all led to behaviour change among people at risk, and immunity due to infection or vaccination among those at highest risk of exposure and onward transmission. This year's festival season in Europe has led to smaller outbreaks in several cities.

A key lesson from the first year of the multi-country outbreak is that the virus can transmit rapidly in social and sexual networks of men who have sex with men (and who have multiple partners), and infrequently spreads outside this group. However, the situation in countries in Africa may be quite different, given the mixed modes of transmission described, including heterosexual transmission and spread within families. The first report of sexual transmission of clade I MPXV among men who have sex with men is also concerning.

Based on current information, the Review Committee concurs with the WHO assessment that the public health risk of mpox for men who have sex with men and for sex workers in all contexts is moderate, while at the global level the overall public health risk is low. In addition, the Committee concurs that the risk to the general population in a group of countries in Africa where mpox continues to occur regularly is higher than at the global level due to many factors outlined above, and that this also represents a risk for continuing or renewed global spread.

The experience from the last years is that outbreaks can be managed effectively through rapid case detection, case isolation, contact tracing, effective risk communication (about symptom recognition and risk behaviours) and community engagement, as well as treatment and vaccination. This means that outbreaks may be stopped, and elimination of human-to-human transmission is within reach. The outlook for stopping outbreaks in enzootic-endemic contexts and preventing future spread outside these contexts is less certain due to limited understanding of how the circulation of the virus in wildlife leads to zoonotic infections and contributes to ongoing human-to-human transmission. There remain many other uncertainties, including the sustainability of behaviour change, the degree and duration of immunity following infection or vaccination, the potential role of virus evolution, the efficacy of antivirals.

WHO has presented to the Review Committee three scenarios for the future of mpox in humans that were regarded as useful by the Committee. In the best-case scenario the disease comes under control and human-to-human transmission is eliminated in all contexts. This is the goal of the Draft Global Strategic Framework for mpox (2023-2027). In the intermediate-case scenario the virus continues to spread in endemic settings and at a slow pace globally, while in the worst-case scenario the virus spreads extensively.

The two latter scenarios may be influenced or characterized by the following events:

- Endemicity: without sustained action, the virus will continue to circulate in the groups affected to date, including among sex workers who also face social barriers to health services. There will be a need for continuous efforts to stop outbreaks, including in children, outside of these groups, particularly where the disease already occurs regularly. The risk of international spread continues from these outbreaks.
- Enzootic circulation: There is a risk of viral spill-back from humans to animals, with potential for the formation of animal reservoirs in new countries. This risk increases with the duration of the multi-country outbreak. Currently unknown animal reservoirs represent a constant risk of zoonotic infection, new outbreaks and international spread.
- Evolved virus: The mpox virus has entered a new ecological niche, animal or human, where there may be an evolutionary pressure towards greater intrinsic transmissibility, immune

evasion or both. The virus' ability to undergo such adaptation is largely unknown. Under these circumstances the risk of international spread will continue or possibly increase.

In order to avoid these negative scenarios, standing recommendations may be needed to stimulate efforts in all countries to eliminate human-to-human transmission of mpox.

2.3 DRAFT WHO GLOBAL STRATEGIC FRAMEWORK FOR ENHANCING CONTROL AND ACHIEVING ELIMINATION OF HUMAN-TO-HUMAN TRANSMISSION OF MPOX (2023-2027)

Rapid case detection, isolation, contact tracing, risk communication and community engagement, treatment and preventive vaccination are all essential to manage mpox outbreaks and move towards elimination of human-to-human transmission. It is essential to create and tailor messages to different local contexts, population groups at risk and modes of transmission, including where activities may be criminalized or subject to stigma. It is essential to have testing services for mpox readily available, and to integrate mpox into existing health programmes and services. Genomic sequencing capacity is also essential to monitor the virus spread and any genetic changes.

Preventive vaccination for people at risk, including from occupational exposure, is not available in virtually all low- and middle-income countries. Even in countries that experienced the introduction of MPXV, access is limited. It is thus necessary to improve access to mpox vaccines globally and develop vaccination strategies locally.³

Throughout the multi-country outbreak, WHO has supported States Parties with temporary recommendations and advice to address it. In July 2023, the WHO Secretariat initiated a consultation regarding the Draft Global Strategic Framework for mpox (2023-2027), outlining the strategy until 2027⁴. The plan is meant to support countries in eliminating human-to-human transmission of mpox in all contexts, including where some outbreaks may be linked to zoonotic spillover events. The Draft Framework document presents its goals and objectives as follows:

“The overarching goal of the next phase of mpox prevention and response is to achieve sustained elimination of human-to-human transmission of mpox.”

“The objectives of the global mpox elimination strategy are to:

- (1) Achieve control of mpox outbreaks in every context.
- (2) Advance mpox research and access to countermeasures.
- (3) Minimize zoonotic transmission.”

Elimination of human-to-human transmission is defined as the absence of new cases (without any travel history or zoonotic exposure) for at least three months in the presence of adequate surveillance.

The Draft Framework outlines four guiding principles: i. Support for community leadership; ii. Respect for equity and human rights; iii. Context-specific collaboration and integration of mpox prevention and care in other health programmes and services, and iv. Commitment to continuous learning. The Draft

³ [WHO guidance on vaccines and immunization for mpox](#) [Accessed on 15 August 2023]

⁴ A summary of the Draft Global Strategic Framework for mpox (2023-2027) is presented in the WHO [“Multi-country outbreak of mpox, External situation report #26 – 14 July 2023”](#) [Accessed on 15 August 2023]

Framework suggests that most countries or sub-national areas fall into one of four epidemiological contexts which serve as starting points for integrated national planning for mpox.

- Context A: Areas reporting sporadic cases or sustained community transmission primarily linked to sexual transmission, mainly among men (e.g., Europe and the Americas in 2022-2023, Asia and the Pacific since mid-2023).
- Context B: Mixed modes of transmission, continuous over time, particularly affecting urban or peri-urban areas, in which cases are more evenly distributed between men, women and children with known or presumed person-to-person transmission (e.g., primarily urban areas in West and Central Africa).
- Context C: Mixed modes of transmission, including episodic or recurrent outbreaks, often in rural areas, involving person-to-person transmission and on some occasions potentially linked to presumed zoonotic spillover events (e.g., primarily Central and East Africa).
- Context D: No reported cases, including consideration of areas from which travel-related cases are reported by other jurisdictions.

The Draft Framework presents three priorities:

- Coordinated planning to ensure sustainable long-term action.
- Integration of mpox activities with relevant health, laboratory and community-based programmes rather than “standalone” vertical mpox elimination and control plans.
- Strengthened global support for access to diagnostic tests, vaccines and therapeutics, development of a research agenda, and WHO assistance to State Parties.

The Draft Framework sets out proposed mpox control and elimination phases and associated criteria for consideration by regions and countries and provides specific domains in which operational planning should be carried out. Suggestions for integration of planning and response activities are offered for each domain, as well as a proposed monitoring and evaluation framework.

3. TECHNICAL ADVICE OF THE REVIEW COMMITTEE ON PROPOSED STANDING RECOMMENDATIONS

3.1 NECESSITY, APPROPRIATENESS, AND SCOPE OF STANDING RECOMMENDATIONS

Necessity and appropriateness of standing recommendations

Since the entry into force of the 2005 revision of the IHR, the Director-General has issued standing recommendations only once⁵. There are several reasons why the Review Committee considers that standing recommendations may be issued for mpox to all States Parties:

- While the PHEIC associated with the multi-country outbreak of mpox was terminated and the incidence of disease in countries that experienced the introduction of MPXV is now far lower than during the peak one year ago, this outbreak for the first time demonstrated the potential for a global mpox epidemic driven by sexual transmission. Uncertainty remains concerning the future trajectory and geographic expansion of the outbreak.
- In the African context where mpox has occurred since first discovered in 1970 and with rising incidence in recent years, there is no clear downward trend: Nigeria where the multi-country outbreak appears to have originated continues to report confirmed cases. The upward trend of reported suspected cases in the DRC continues unabated, with the highest number of suspected cases ever reported already in mid-2023. The emergence of clade I MPXV in Sudan, which had not previously reported mpox, is also concerning. Other countries in the region continue to report cases.
- The historical neglect of mpox in the African region and by the wider global community, as reflected in the perennial inequity of access to vaccines, therapeutics, and diagnostics that occurred during the multi-country mpox outbreak (which was determined to be a PHEIC once the outbreak affected non-endemic countries), could be addressed by the issuance of standing recommendations, in order to maintain interest globally in this previously under-appreciated health problem, and especially to spur positive action in mpox endemic areas.
- Although the risk of severe disease and death has been low in the multi-country outbreak, mpox may in some patients be a very severe disease, in particular in persons with immune suppression, including those with untreated HIV infection. There is a high prevalence of HIV disease in some communities of men who have sex with men, and in some heterosexual populations in the African region. In the African context, the reported case fatality of mpox has been up to 10 percent with small children being most at risk of death.
- There is a risk that the virus adapts to humans, resulting in more efficient human-to-human transmission. This may alter the risk considerably.
- While the mpox virus belongs to an important virus family, there are myriad unknowns regarding mpox, including the spectrum of clinical presentation, risk factors for severe disease, efficacy and effectiveness of vaccines and antivirals, degree and duration of immunity following infection or vaccination, routes of transmission, virus biology and evolution, and

⁵ More information on standing recommendations is available at: <https://www.who.int/teams/ihr/standing-recommendations> [Accessed on 15 August 2023]

zoonotic reservoirs and intermediate hosts. These unknowns make it difficult to assess the risk with high confidence.

- When the Emergency Committee after its meeting on 10 May 2023 advised the Director-General to lift the PHEIC determination of mpox, it also advised him that “Standing Recommendations under the IHR would now be a more appropriate tool to manage the immediate, short and long-term public health risks posed by mpox”. The Director-General followed this advice with the intention of issuing standing recommendations.
- The use of standing recommendations will help with the transition from the emergency phase of the response, which included the use of temporary recommendations, to a sustainable long-term strategy towards elimination, as outlined in the Draft Global Strategic Framework for mpox (2023-2027) (see section 2.3) where States Parties are stimulated to keep up their interest, awareness, and public health response to mpox so that elimination can be achieved.

However, the Review Committee acknowledged that there are reasons why standing recommendations may not be considered necessary and appropriate for mpox:

- Although the mpox situation is a “specific, ongoing public health risk” as per Articles 1 and 16 of the IHR, the level of risk assessed by WHO for the general population globally may be too low to justify standing recommendations.
- WHO guidance through technical advice to States Parties might be sufficient, rather than issuing standing recommendations. The Draft Global Strategic Framework for mpox (2023-2027) may stand alone without the enhancement of standing recommendations.
- States Parties need to pay attention to several disease risks. Issuance by WHO of standing recommendations with respect to mpox might reduce focus on other national disease priorities at a time when the health impact of mpox is small in most settings and the risk assessed as low or moderate.
- The issuance of standing recommendations for mpox may set a precedent and lead to proposals for standing recommendations for several other diseases, for which the long-term consequences, for better or for worse, for global public health cannot at present be known.

After deliberating on the above-mentioned reasons and hearing a range of views from Committee Members, the majority of the Committee was of the opinion that, in the current context, issuing standing recommendations is necessary and appropriate and can be expected to prove useful for managing the current risk posed by mpox and for reaching the goal of eliminating human-to-human transmission. The Committee’s majority provides, in Section 3.2, a set of proposed standing recommendations for consideration by the Director-General, and, in Section 3.3, its views and advice on the duration of the standing recommendations that the Director-General may issue.

One Member of the Review Committee, pursuant to Article 52.2 of the IHR, provided the following views underpinning his divergence from the Committee’s majority.

Recognizing that the multi-country mpox outbreak has been sustained mainly by sexual contact, the expert deemed that it would be hard to justify the necessity of issuing standing recommendations, for the following reasons: Firstly, the PHEIC associated with multi-country of mpox was terminated on 11 May 2023. Secondly, the global incidence of cases has decreased considerably in the last year, the case fatality of mpox is low and WHO’s current risk assessment for the general population is low in the general population globally. Thirdly, Member States’ compliance with standing recommendations may

pose an additional technical and financial burden to the public health systems in member states, especially in low- and middle-income countries, whose underfinanced public health resources could otherwise be directed towards other infectious disease threats. This expert recommended that WHO instead encourages Member States to implement the WHO Global Strategic Framework for Enhancing Control and Achieving Elimination of Human-to-human Transmission of Mpox (2023-2027) when published.

Scope of the standing recommendations

The Review Committee discussed the scope of the proposed standing recommendations. Both of the following interpretations were represented among the Members of the Review Committee.

A narrow interpretation of the scope of relevant articles of the IHR, especially 16, 17 and 18, is that recommendations should be concerned with only measures that *directly* “reduce the international spread of disease and avoid unnecessary interference with international traffic” (Article 16). Article 18 lists examples of such measures. Furthermore, standing recommendations should be specific and relevant to the particular disease and risks associated with it and not generic recommendations, e.g. regarding strengthening of health systems or surveillance systems in general.

A broad interpretation of the scope of the same articles is that the prevention and control of disease, including inside individual States Parties, could *indirectly* serve to reduce international spread as well. The Committee noted that temporary recommendations of similar scope, which are not explicitly listed in Article 18, have been issued by the Director-General in relation to the PHEIC associated with the multi-country outbreak of mpox.

The Review Committee recalled that mpox was and still is a neglected disease. Occurring for decades mainly in a few African countries, mpox is in fact so neglected, that it is not even on the WHO list of neglected tropical diseases^{6,7}. The limited efforts to develop diagnostic tests, vaccines and therapeutics were focused almost entirely on the global health security consideration of smallpox preparedness, with limited assessment of the needs of countries and communities to prevent, control and respond to mpox. During the emergency in 2022-2023 inequity in access to medical countermeasures continued. The Committee advised that the standing recommendations should be guided by the public health risk posed by mpox. Further, the Review Committee advised that the standing recommendations should be in line with Articles 3, 42 and 44 of the IHR.

3.2 TECHNICAL ADVICE ON PROPOSED STANDING RECOMMENDATIONS

Based on the proposed standing recommendations presented to the Review Committee in advance of its first session, the formulation of the standing recommendations enumerated below reflects the technical advice of the Review Committee’s majority.

The Committee advises that the standing recommendations should apply to all States Parties and should be adapted to national and local contexts as appropriate.

⁶ [Decision WHA73\(33\)](#), Road map for neglected tropical diseases 2021–2030, 2020 [Accessed on 15 August 2023]

⁷ [Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030](#), WHO, 2020 [Accessed on 15 August 2023]

A. States Parties are recommended to develop and implement national mpox plans that build on the Draft Global Strategic Framework for mpox (2023-2027)⁸. The draft outlines critical actions to sustain control of mpox and achieve elimination of human-to-human transmission in all contexts through coordinated and integrated policies, programmes and services. Actions are recommended to:

1. Incorporate lessons learned from evaluation of the response (such as through intra- or after-action reviews) into related plans and policies in order to sustain, adapt, and promote key elements of the response and inform public health policies and programmes.
2. Aim to eliminate human-to-human transmission of mpox by anticipating, detecting, preparing for and responding to mpox outbreaks and taking action to reduce zoonotic transmission, as appropriate.
3. Build and retain capacity in resource-limited settings, and among marginalized groups, where mpox transmission continues to occur, to improve understanding of modes of transmission, quantify resource needs, and detect and respond to outbreaks and community transmission.

B. States Parties are recommended to, as a critical basis for actions outlined in A in support of the elimination goal, establish and sustain laboratory-based surveillance and diagnostic capacities to enhance outbreak detection and risk assessment. Actions are recommended to:

4. Include mpox as a notifiable disease in the national epidemiological surveillance system.
5. Strengthen diagnostic capacity at all levels of the health care system for laboratory and point of care diagnostic confirmation of cases.
6. Ensure timely reporting of cases to WHO, as per WHO guidance and Case Reporting Form, in particular reporting of confirmed cases with a relevant recent history of international travel.
7. Collaborate with other countries so that genomic sequencing is available in, or accessible to, all countries. Share genetic sequence data and metadata through public databases.
8. Notify WHO about significant mpox-related events through IHR channels.

C. States Parties are recommended to enhance community protection through building capacity for risk communication and community engagement, adapting public health and social measures to local contexts and continuing to strive for equity and build trust with communities through the following actions, particularly for those most at risk. Actions are recommended to:

9. Communicate risk, build awareness, engage with affected communities and at-risk groups through health authorities and civil society.
10. Implement interventions to prevent stigma and discrimination against any individuals or groups that may be affected by mpox.

⁸ The Review Committee acknowledges the draft status of the Draft Global Strategic Framework for mpox (2023-2027), which was provided to the Committee as background document to support its deliberations.

D. States Parties are recommended to initiate, continue, support, and collaborate on research to generate evidence for mpox prevention and control, with a view to support elimination of human-to-human transmission of mpox. Actions are recommended to:

11. Contribute to addressing the global research agenda to generate and promptly disseminate evidence for key scientific, social, clinical, and public health aspects of mpox transmission, prevention and control.
12. Conduct clinical trials of medical countermeasures, including diagnostics, vaccines and therapeutics, in different populations, in addition to monitoring of their safety, effectiveness and duration of protection.
13. States Parties in West, Central and East Africa should make additional efforts to elucidate mpox-related risk, vulnerability and impact, including consideration of zoonotic, sexual, and other modes of transmission in different demographic groups.

E. States Parties are recommended to apply the following measures related to international travel. Actions are recommended to:

14. Encourage authorities, health care providers and community groups to provide travelers with relevant information to protect themselves and others before, during and after travel to events or gatherings where mpox may present a risk.
15. Advise individuals suspected or known to have mpox, or who may be a contact of a case, to adhere to measures to avoid exposing others, including in relation to international travel.
16. Refrain from implementing travel-related health measures specific for mpox, such as entry or exit screening, or requirements for testing or vaccination.

The Review Committee's majority acknowledged that the worldwide spread of MPXV was also due to inequity in access to medical countermeasures in lower resource settings, including diagnostics, vaccines and therapeutics. Nevertheless, Members of the Review Committee expressed different views regarding the following two proposed standing recommendations, which address clinical care and access to countermeasures respectively. Some Members considered that these issues fall outside the scope of IHR as per Article 2. Other Members, acknowledging that their interpretations of Article 2 are broader than the previous view, considered the issue of equity in access to medical countermeasures critical not only to the response to multi-country outbreak of mpox, but particularly in the African countries where MPXV has historically been circulating. Similarly, it was argued that the provision of clinical care has a direct impact on the clinical outcomes of mpox, consequently on the morbidity and mortality, and an indirect effect on the reduction of international transmission. Therefore, the two recommendations below are included for the discretion of the Director-General.

F. States Parties are encouraged to continue providing guidance and coordinating resources for delivery of optimally integrated clinical care for mpox, including access to specific treatment and supportive measures to protect health workers and caregivers as appropriate. States Parties are encouraged to take actions to:

17. Ensure provision of optimal clinical care with infection prevention and control measures in place for suspected and confirmed mpox in all clinical settings. Ensure training of health care providers accordingly and provide personal protective equipment.
18. Integrate mpox detection, prevention, care and research within HIV and sexually transmitted disease prevention and control programmes, and other health services as appropriate.

G. States Parties are encouraged to work towards ensuring equitable access to safe, effective and quality-assured countermeasures for mpox, including through resource mobilization mechanisms. States Parties are encouraged to take action to:

19. Strengthen provision of and access to diagnostics, genomic sequencing, vaccines, and therapeutics for the most affected communities, including in resource-constrained settings where mpox occurs regularly, and including for men who have sex with men and groups at risk of heterosexual transmission, with special attention to those most marginalized within those groups.
20. Make mpox vaccines available for primary prevention (pre-exposure) and post-exposure vaccination for persons and communities at risk of mpox, taking into account recommendations of the WHO Strategic Advisory Group of Experts on Immunization (SAGE).

3.3 REPORTING, DURATION OF STANDING RECOMMENDATIONS, AND MISCELLANEOUS ITEMS

The Review Committee welcomes the presentation by the Director-General of this report and of the standing recommendations that he may issue to the Seventy-seventh World Health Assembly in May 2024, for its consideration, in accordance with Article 53 of the IHR.

The Committee advises that the standing recommendations that the Director-General may issue should have immediate effect and be in place for one year. Furthermore, the Committee advises the Director-General to consider possible modification or termination of the standing recommendations he may issue, taking into account the considerations by the Seventy-seventh World Health Assembly in May 2024, as appropriate, in accordance with the procedure in Article 53 of IHR.

The Committee notes that the monitoring and evaluation framework related to the Draft Global Strategic Framework for mpox (2023-2027) is likely to be related to the standing recommendations that the Director-General may issue.

APPENDICES

APPENDIX 1. NAMES AND AFFILIATIONS OF REVIEW COMMITTEE MEMBERS

Professor Preben Aavitsland (Chair), Director of Surveillance, Area of Infection Control, Management and Staff, Norwegian Institute of Public Health, Norway

Mr Andrew Forsyth (Vice-Chair), Manager, Public Health Strategy, Ministry of Health, New Zealand

Dr Inger K. Damon (Rapporteur), Adjunct Professor of Clinical Medicine Emory University, Atlanta, USA, retired Director, Division of High Consequence Pathogens and Pathology, National Center for Emerging and Zoonotic Infectious Diseases, Centers for Disease Control and Prevention, USA

Dr Mohammad Abdelfattah Abdelmawla Abdelaziz, Undersecretary for Preventive Affairs, Ministry of Health and Population, Egypt

Dr Mohannad Al-Nsour, Executive Director, Eastern Mediterranean Public Health Network (EMPHNET), Amman, Jordan

Dr Carmen Aramburu Celigueta, Director of Health and Social Policy, Delegation of the Spanish Government in Catalonia, Spain

Dr Jacqueline Bisasor-McKenzie, Chief Medical Officer, Ministry of Health and Wellness, Jamaica

Dr Eduardo Hage Carmo, Associate Researcher, Fundação Oswaldo Cruz (Fiocruz), Brasília, Distrito Federal, Brazil

Dr Akram Ali Eltoum, COVID-19 Regional Program Development Consultant/Project Director for Project HOPE in North Africa; Former Federal Minister of Health of Sudan

Dr Yang Liu, Assistant Professor, Law School, and Director of the Center for Global Law and Strategy, Law and Technology Institute, Renmin University of China, Beijing, China

Dr Mohamed Moussif, Chief Medical Officer at Casablanca International Airport, Morocco; National Coordinator of the Points of Entry Program of Morocco

Professor Mahmudur Rahman, Country Director, Eastern Mediterranean Public Health Network (EMPHNET), Bangladesh Office, Dhaka, Bangladesh

Professor Helen Rees, Executive Director, Wits Reproductive Health and HIV Institute, University of the Witwatersrand, Johannesburg, South Africa

Dr Aalisha Sahukhan, Head of Health Protection, Ministry of Health and Medical Services, Fiji

Dr Tomoya Saito, Director, Center for Emergency Preparedness and Response, National Institute of Infectious Diseases, Japan

Dr Sandhya Dilhani Samarasekera, Consultant Community Physician, Quarantine Unit, Ministry of Health, Sri Lanka

Dr Vyacheslav Smolensky, Deputy Head, Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing (Rospotrebnadzor), Russian Federation

Ms Sunita Sreedharan, Lawyer and Registered Patent Agent, New Delhi, India

Dr Oyewale Tomori, Professor of Virology, Redeemer's University, Ede, Osun State, Nigeria

Professor Maria Zambon, Head of Influenza, Respiratory Virology & Polio Reference Services, United Kingdom Health Security Agency; Co-Director, Health Protection Research Unit in Respiratory Infections, NIHR, Imperial College London, United Kingdom

APPENDIX 2. RELEVANT WHO MPOX DOCUMENTS

All hyperlinks enumerated below were accessed on 15 August 2023

- [Health Topics - Mpox](#)
- [Multi-country outbreak of mpox](#)
- [Emergency situation reports](#)
- [Multi-country outbreak of mpox, External situation report. Edition 26 – 14 July 2023](#) - Special preview: Global strategy for the elimination of human-to-human transmission of mpox: Proposed goal, objectives, definitions and contexts
- [Mpox outbreak toolbox](#)

Interim guidance

- [Responding to the global mpox outbreak: ethics issues and considerations. A policy brief. July 2023](#)
- [Surveillance, investigation and contact-tracing for mpox: Interim guidance](#), December 2022
- [Laboratory testing for the monkeypox virus. Interim Guidance](#), May 2022 (update in process)
- [Target product profiles for tests used for mpox \(monkeypox\) diagnosis](#), July 2023.
- [Vaccines and immunization for mpox. Interim Guidance](#), November 2022
- [Clinical management and infection prevention and control for mpox: Interim rapid response guidance](#), 2022
- [Risk communication and community engagement for mpox outbreaks. Interim guidance](#), 2022

Public health advice

- [Mpox Q&A](#), 12 May 2023
- [Public health advice on mpox and congregate settings: settings in which people live, stay or work in proximity](#), 20 March 2023
- [Public health advice for gay, bisexual and other men who have sex with men and mpox](#), Version 3, 9 March 2023
- [Mpox Q&A — on mpox testing for health workers](#), 2 March 2023
- [Mpox Q&A — on mpox testing for individuals and communities](#), 2 March 2023
- [Public health advice on mpox and sex-on-premises venues and events](#), 1 March 2023
- [Infographic on getting tested for mpox](#), 27 February 2023
- [Public health advice for sex workers on monkeypox](#), 30 September 2022
- [Public health advice on understanding, preventing and addressing stigma and discrimination to monkeypox](#), 1 September 2022
- [Public health advice for gatherings during the current monkeypox outbreak](#), 28 June 2022
- [Mpox infographics \(all\)](#)

Online training (also available in numerous languages)

- [Mpox: introduction](#), January 2020
- [Mpox: intermediate training](#), December 2021
- [Mpox: the global outbreak](#), August 2023