

Appendices

- 1) Methodological details (Appendix 1)
- 2) <u>Details about each identified single study</u> (Appendix 2)
- 3) <u>Details from the jurisdictional scan of</u> <u>Canadian provinces and territories</u> (Appendix 3)

4) Details from the jurisdictional scan of international countries and multinational organizations (Appendix 4)

- 5) Documents that were excluded in the final stages of review (Appendix 5)
- 6) <u>References</u>

Appendix 1: Methodological details

Identifying research evidence

For this REP, we searched PubMed, Health Systems Evidence and Social Systems Evidence for:

- 1) evidence syntheses
- 2) single studies.

To identify any evidence documents, we conducted our searches on 12 February 2025 using an open text search for: (Monkeypox OR mpox) AND first AND (case OR imported case OR case definition) AND (response OR policy OR plan OR measure OR indicator OR risk assessment). We selected the following filters: only those from 2022–2025. We also used PubMed's 'Similar articles' feature based on the following articles:

- Overview of case definitions and contact tracing indications in the 2022 monkeypox outbreak
- Development and deployment of tools for rapid response notification of Monkeypox exposure, exposure risk assessment and stratification, and symptom monitoring
- How to recognize and respond to monkeypox 2022 outbreak in non-endemic countries: a narrative review

One team member screened the results to identify potentially relevant documents. A final inclusion assessment is performed both by the person who did the initial screening and the lead author of the REP, with disagreements resolved by consensus or with the input of a third reviewer on the team. The team uses a dedicated virtual channel to discuss and iteratively refine inclusion/exclusion criteria throughout the process, which provides a running list of considerations that all members can consult during the first stages of assessment. Evidence documents were included if they described any aspect of the organizing framework and was relevant to clade I. We excluded documents that only described clade II or did not specify the clade type.

During this process we included published, pre-print and grey literature. We did not exclude documents based on the language of a document. However, we were not able to extract key findings from documents that were written in languages other than Chinese, English, French, Portuguese, or Spanish, or were not able to be translated to English via Google applications. We provided any documents that did not have content available in these languages in an appendix containing documents excluded at the final stages of reviewing. We excluded documents that did not directly address the research questions and the relevant organizing framework.

Identifying first-case response plans for clade I mpox

3 March 2025

Rapid Evidence Profile

[MHF product code: REP 91]

Assessing relevance and quality of evidence

We assess the relevance of each included evidence document as being of high or low relevance to the question. We did not identify any evidence syntheses for the rapid evidence profile. Therefore, we did not appraise the methodological quality using the first version of the <u>AMSTAR</u> tool.

Identifying experiences from other countries and from Canadian provinces and territories

For each REP, we work with the requestors to collectively decide on what countries (and/or states or provinces) to examine based on the question posed. For this REP, we looked for first-case response plans for clade I mpox from all Canadian provinces and territories, G7 countries (Canada; European Union; France; Germany; Italy; Japan; United Kingdom; United States) and from nine multinational organizations (Africa CDC; ECDC; PAHO; WHO; WHO – Africa; WHO – South-East Asia; WHO – Europe; WHO – Eastern Mediterranean; WHO – Western Pacific). We searched relevant government and stakeholder websites including the agency or organization in each country responsible for healthcare delivery and for public health to identify any pandemic preparedness plans. In Canada, a similar approach was used, searching provincial or territorial government, Public Agency of Canada, and Government of Canada webpages. Where information is not available in English, Chinese, French, Portuguese, or Spanish, we attempt to use site-specific translation functions or Google Translate. A full list of websites and organizations searched is available upon request.

Preparing the profile

Each included document is cited in the reference list at the end of the REP. For all included evidence documents, we prepared a small number of bullet points that provide a summary of the key findings, which are used to summarize key messages in the text. We then draft a summary that highlights the key findings from all highly relevant documents as well as key findings from the jurisdictional scan.

Upon completion, the REP is sent to both the subject matter expert and one or more citizen partners for their review.

	Dimension of organizing framework	Declarative title and key findings	Relevance rating	Study characteristics	Equity considerations
•	Level of first-case response plan for clade I mpox National Components of a first-case response plan Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) 	 In response to a high suspicion of a MPXV clade lb infection in Germany, a comprehensive public health strategy was initiated to curb local transmission of mpox; the response involved isolating the infected individual, conducting thorough contact tracing, offering guidance to those identified as contacts, administering post-exposure prophylaxis, fostering collaboration across institutions, and ensuring rapid communication with local, regional, and national health departments (1) In October 2024, the first imported mpox clade lb case was confirmed in Germany in an individual in their thirties returning from Rwanda The local health unit of Cologne notified the federal public health institute of the mpox diagnosis after PCR testing of the traveller Molecular typing was used to confirm MPXV clade lb diagnosis The federal public health unit was notified and a risk assessment was performed by RKI who also informed the Rwanda Ministry of Health, European Centre for Disease Prevention and Control (ECDC), and the World Health Organization (WHO) Regional Offices for Europe and Africa Contact tracing began immediately after mpox was confirmed and a total of 34 contacts (all considered low risk) were identified across six local health departments (five in North-Rhine Westphalia and one in a neighbouring German federal state), including two contacts in the community and 32 hospital contacts (physicians, nurses, cleaning and service staff, co-patients) Contacts were followed for 21 days (maximum incubation period for mpox) after their most recent exposure to the case 	High	Publication date: November 2024 Jurisdiction studied: Germany Methods: Case report	None identified
•	 Level of first-case response plan for clade I mpox National Components of a first-case response plan Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case 	Management of the first case of clade lb mpox in Sweden and preventative public health measures included monitoring of contacts, whole genome sequencing, and increasing education on mpox (2)	High	Publication date: 2024 Jurisdiction studied: Sweden	None identified

Appendix 2: Details about each identified single study about first-case response plans for clade I mpox

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Study characteristics	Equity considerations
 Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Other components not described above Broader components of an mpox preparedness and response plan Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., immigrants, visitors, African Canadians) Outcomes related to containment of cases (e.g., spread of cases, prevention of secondary transmission) 	 The first clade Ib mpox case outside of Africa was a Swedish traveller returning to Sweden from Central Africa in August 2024 The traveller first noticed a popular lesion in the genital area that occurred 13 to 14 days after possible exposure; the traveller suspected mpox after being alerted by a person in Africa whom he had close physical contact with that had confirmed an mpox diagnosis On arrival in Sweden (seven days after symptom onset), the traveller presented at an outpatient clinic in Stockholm Swabs of the traveller's lesions were taken for real-time PCR testing, and subsequent whole genome sequencing confirmed clade Ib mpox the following day Following the appearance of the first lesion, the patient self-isolated and used a face mask and covered lesions in public spaces The patient's travel companion had symptoms of a sore throat and was monitored for 21 days They tested negative for mpox No contact tracing occurred since the patient had no contact with anyone other than the travel companion In this situation the case was contained and there was no transmission At the end of August 2024, the Public Health Agency of Sweden (PHAS) implemented public health measures to prevent the spread of clade I mpox, including: introducing whole genome sequencing providing advice for pre- and post-travel behaviour updating vaccine protocols to include mpox vaccination for individuals travelling to outbreak areas updating practice guidelines increasing communication with the public about mpox (e.g., displaying public guidance in airport arrival areas) increasing surveillance of open sources, media, and scientific literature for updates on mpox 	Lligh	Methods: Rapid communication case study	
 Provincial/territorial National 	among children, have revealed non-sexual transmission of mpox; infection risk extends beyond intimate contacts to include caregivers and children, highlighting the need for comprehensive	i iigii	September 2024	
Components of a first-case response plan	preventive measures (3) (pre-print)			

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Study characteristics	Equity considerations
 Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case High-risk populations Refugees 	 This study reported the first introductions of clade Ib MPXV cases from South Kivu into North Kivu province of Democratic Republic of the Congo (DRC), including in displacement camps where close contact transmission was suspected that included non-intimate contacts and children In the DRC, the human mpox case definition was established in 2001 and refined in 2010; human mpox is a mandatory reportable disease in DRC A suspected case is defined as a patient with a vesicular pustular eruption with hard and deep pustules, and at least one of the following symptoms: fever preceding the eruption, lymphadenopathy, and/or pustules or crusts on the palms of the hands or soles of the feet, and exposure (e.g., a travelling history from an affected area, nigh risk contact with people coming from affected area, or exposure to a wild animal with lesions or dead) In 2023, suspected mpox cases was reported in 25 of 26 DRC provinces, and in 2024, clade I mpox was confirmed to have spread from South Kivu into North Kivu Mpox cases were confirmed primarily through genomic sequencing The presence and spread of mpox in large urban centres in the DRC, such as Bukavu (population over 1 million) and Goma (population approximately 2 million), has substantially increased the risk of public health impacts, as the current outbreak has exceeded the scale of previous ones in endemic regions Mpox cases were found among individuals at the Mudja displaced persons site where there are poor sanitation conditions, very limited healthcare support, and highly dense populations 		Jurisdiction studied: Democratic Republic of the Congo Methods: Cross-sectional study	
 Level of first-case response plan for clade I mpox Provincial/territorial National Components of a first-case response plan 	 Using a risk assessment and stratification framework, measures used to respond to confirmation of the first mpox case detected in the U.S. in 2022 included contact tracing, risk assessments, postexposure prophylaxis, and symptom monitoring (4) The first mpox case diagnosed in the U.S. as part of the 2022 outbreak was a man who had travelled to Canada in late April 2022 where he had sex with multiple male partners 	Medium	Publication date: 2022 Jurisdiction studied: United States	 Personal characteristics associated with discrimination

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Study characteristics	Equity considerations
 Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring exposure risk assessments and stratification tools (e.g., classification frameworks of exposure risk level, likelihood and impact estimates of importation) management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies High-risk populations High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) Outcomes related to containment of cases (e.g., spread of cases, prevention of secondary transmission) 	 The patient presented to three health facilities in Massachusetts over several days with progressive skin lesions followed by other sever symptoms; the symptoms prompted admission to a tertiary hospital for additional evaluation For the first five days of hospital admission, monkeypox was not suspected and the patient was not isolated The potential for community spread of mpox through sexual networks in nonendemic countries was not yet understood Identification of both community and healthcare facility contacts was pursued For community contacts, both household and workplace contacts were identified Healthcare contacts were identified using medical records and interviews with managers of each work area the patient had contact with A framework for exposure risk assessment and stratification was developed to classify degrees of exposure to the patient as high, intermediate, low/uncertain, or no risk, and provide guidance on appropriate preventative measures to be taken for contacts Within 14 days of the last exposure, high risk contacts were recommended to receive post-exposure prophylaxis Intermediate exposures were recommended to receive post-exposure prophylaxis (PEP) on a case-by-case basis No high-risk contacts were identified in this case All contacts were monitored for symptoms during the 21-day period following their last exposure Personal contacts were contacted three times a week Healthcare contacts were observed twice daily, once in person and once with an at-home self-assessment PCR testing was conducted when necessary 		Methods: Contact tracing and exposure investigation	
 Level of inst-case response plan for clade 1 mpox National Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) 	notifications, risk stratification, and daily symptom monitoring (i.e., via e-mail or SMS), improved healthcare worker compliance (e.g., 94.9% compliance among those receiving SMS reminders) and enabled efficient deployment of PEP support, especially for those with high or intermediate risk of exposure (5)	meulum	Jurisdiction studied: United States Methods: Descriptive implementation study	None laentified

	Dimension of organizing framework	Declarative title and key findings	Relevance rating	Study characteristics	Equity considerations
0	Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and	 The study focused on healthcare personnel at Massachusetts General Hospital who were identified as potentially exposed to a monkeypox case A Research Electronic Data Capture (REDCap)–based 			
	reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions)	system was implemented to notify healthcare personnel of possible exposure, assess and stratify their risk, and monitor symptoms for 21 days, with integrated call-centre support and			
0	 Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring exposure risk assessments and stratification tools (e.g., classification frameworks of exposure risk level, likelihood and impact estimates of importation) Implementing pharmaceutical measures as part 	automated reminders via email and SMS			
	of public-health strategies				
• B	roader components of an mpox preparedness and				
• H	 Sponse plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) ligh-risk populations 				
• C s	Healthcare workers deployed to affected countries with clade I mpox outbreaks butcomes related to containment of cases (e.g., pread of cases, prevention of secondary ansmission)				
• L	evel of first-case response plan for clade I mpox	Differences in mpox case definitions and contact tracing protocols	Medium	Publication date: 2023	None identified
0	National	during the 2022 outbreak were found, with the WHO using four			
0	International or multinational	categories (suspected, probable, confirmed, discarded) and the European Centre for Disease Prevention and Control (ECDC)		Jurisdiction studied: France Spain Italy and	
• 0	Identifying and defining type of case (e.g., suspected, probable, confirmed case based on	using two categories (confirmed, probable), while countries like Italy followed WHO/ECDC guidelines, and others like Spain and		Portugal	
	available evidence)	France used their own criteria (6)		Methods: Comparative policy analysis	

Dimension of organizing framework	Declarative title and key findings	Relevance	Study characteristics	Equity
		rating		considerations
 Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) 	 This study compared the case definitions and contact tracing indications in mpox infection across four European countries during the 2022 mpox outbreak According to the study, Italy and Spain defined cases according to the WHO's criteria (four categories: suspected, probable, confirmed, and discarded) while France and Portugal used their own case definitions (three categories: 			
 Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring exposure risk assessments and stratification tools (e.g., classification frameworks of exposure risk level, likelihood and impact estimates of importation) management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) 	 It is the second of t			
Broader components of an mpox preparedness and response plan				
 Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) Delivery arrangements (e.g., risk communication) 				
and education, pharmaceutical measures)				
 High-risk populations High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) 				
 Outcomes related to containment of cases (e.g., spread of cases, prevention of secondary transmission) 				

Appendix 3: Details from the jurisdictional scan of Canadian provinces and territories about first-case response plans for clade I mpox

Jurisdiction and title of first-case response plans	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
British Columbia (B.C.) BC Centre for Disease Control epidemiological summary reports	 Level of first-case response plan for clade I mpox Provincial/territorial Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Other components not described above Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) Outcomes related to containment of cases (e.g., spread of cases, prevention of secondary transmission) 	 The British Columbia Centre for Disease Control created biweekly epidemiological summary reports for mpox in collaboration with regional health authorities as they monitored an outbreak of clade II mpox cases in the province All reports include information on <u>confirmed cases</u>, which are defined as cases confirmed through either real-time polymerase chain reaction and/or sequencing Probable cases are defined as persons who have unexplained acute rashes or lesions and has either a: 1) link to a probable or confirmed mpox case or 2) link to location of transmission, and Mpox was not ruled out by previous testing The first report included the same information on the total number of cases, epidemiological curves, exposure information, and vaccination campaigns, but provided no detail on their response plan The centre took a pause on reporting past January 2023 and began again due to rises in August 2024 The first report in August also did not include information on first-case response and followed the same format as previous reports The total number of confirmed mpox cases in B.C. was 325 with over 4,000 tests performed Sexual activity was the most common route of transmission Over 26,000 doses of the Imvamune vaccine were administered The most recent report in January 2025 stated that new reporting initiatives would include wastewater monitoring (for all clades including clade 1) from Lower Mainland treatment plants, completed in collaboration with the National Microbiology Laboratory A total of 96 cases were sequenced and only clade IIb was confirmed As part of their response plan, the Government of B.C. is encouraging high risk individuals to receive the Imvamune vaccine in collaborations with Vancouver Coast	 No specific outcomes related to clade I mpox response
Alberta Alberta Public Health Disease Management Guideline (2022)	 Level of first-case response plan for clade I mpox Provincial/territorial National International or multinational Components of a first-case response plan 	 The <u>official statement from the Alberta</u> government states that they are monitoring the spread of mpox with federal and local partners, including the Public Health Agency of Canada (PHAC) As part of Alberta's response plan, Albertans <u>self-identifying as high-risk</u> can seek their nearest clinic for testing or to receive the Imvamune vaccine 	None identified

Jurisdiction and title of first-case response plans	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) High-risk populations High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) 	 High risk individuals include men who have sex with men, have a previous confirmed sexually transmitted infection, sexual partners meeting the criteria, attending a sex-on-premise venue, sex workers, those who engage in sex tourism, or healthcare/research professional who may be exposed The <u>Alberta Public Health Disease Management Guideline</u> (December 2022) provides suggestions for monitoring mpox The guideline defines a confirmed case of mpox as one that was confirmed by DNA sequencing or real-time polymerase chain reaction The guideline defines a probable case of mpox as presence of an acute rash or ulcer, symptoms not caused by another diagnosis, and with an epidemiological link to a probable or confirmed case of mpox The guideline defines a suspect case of Mpox as a presence of a rash or ulcer, symptoms not attributed to another diagnosis, and had sexual contact with new or multiple partners Physicians, health practitioners, Alberta Health Services, and Inuit Health Branch are required to report the name, age, date of birth, gender, personal health number, date of death, and other relevant information of suspect mpox cases to the Medical Officer of Health via phone or email Laboratories must report all positive results by the fastest means to the Chief Medical Officer of Health Alberta Health is required to notify PHAC, who then notifies World Health Organization (WHO) within 24 hours of every confirmed case 	
Saskatchewan	 Level of first-case response plan for clade I mpox Provincial/territorial National Components of a first-case response plan Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) 	 The <u>Government of Saskatchewan</u> reports all confirmed cases of mpox to PHAC On its official website, the Saskatchewan government provides resources from PHAC on mpox and recommends Imvamune for those who meet the eligibility criteria It also highlights that sexual contact with an mpox case is the most commonly reported risk factor for infection and that having multiple sexual partners may increase risk of infection 	None identified

Jurisdiction and title of first-case response plans	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., immigrants, visitors, African Canadians) High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) 		
Manitoba Manitoba Public Health Agency Communicable Disease Management Protocol (2024)	 Level of first-case response plan for clade I mpox Provincial/territorial National Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) 	 The Government of Manitoba reported its first case of clade I mpox on 22 November 2024 related to travel, and following this they implemented additional reporting guidelines Healthcare providers should discuss all cases with an Infectious Disease Specialist The government recommended strategies for prevention including vaccination, covering lesions, avoiding skin-to-skin contact, isolation, using barrier protection, disinfecting objectives, and avoiding sharing personal items The Manitoba Public Health Agency provides a communicable disease management protocol with suggestions for definitions, reporting, and management of mpox A confirmed case of mpox is defined as one that was confirmed by DNA sequencing or real-time PCR A probable case of mpox is defined as someone with the presence of an acute rash or ulcer, face-to-face exposure including healthcare workers, travel history to locations where mpox is prevalent A suspect case of mpox is defined as someone with the presence of a rash or ulcer, symptoms not attributed to another diagnosis, and sexual contact with new or multiple partners Laboratories and healthcare providers must report all cases to the Manitoba Health Surveillance Unit The government recommends strategies for management of cases including backtracking cases, active monitoring and isolation, avoiding direct contact with others, cover lesions and wear mask, frequent 	None identified

Jurisdiction and title of first-case response plans	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., immigrants, visitors, African Canadians) High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) 	disinfection and hand hygiene, avoid sharing of linens, towels, and utensils, and securing personal waste	
Ontario Ontario Ministry of Health Recommendations for the management of cases and contacts of mpox in Ontario (2024)	 Level of first-case response plan for clade I mpox Provincial/territorial Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission 	 The Ontario Ministry of <u>Health's guidance document on case and contact management</u> (September 2024) describes case definitions, reporting requirements, and case management recommendations for public health units (PHUs) Case Definitions: Confirmed Case: Laboratory confirmation via PCR Suspect Case: Individual with relevant symptoms (e.g., rash, fever, lymphadenopathy) Probable Case: Meets clinical criteria and has an epidemiological link to mpox Reporting Requirements: PHUs must notify Public Health Ontario and the Ministry of Health before classifying cases that lack common risk factors Immediate notification is required for suspected clade I MPXV cases Case and Contact Management: Self-isolation may not be necessary if skin lesions can be covered and symptoms are mild Cases at risk for severe illness should be actively monitored by PHUs Contact tracing should extend up to four days before symptom onset to align with federal guidance Isolation measures must be followed Control Measures: Preventative: Imvamune vaccine After Exposure: Contact tracing, monitoring, and risk-based isolation After Exposure: Contact tracing, monitoring, and risk-based	None identified
Quebec	 Level of first-case response plan for clade I mpox Provincial/territorial Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) 	 Quebec's Ministry of Health and Social Services provides <u>public health</u> recommendations for case identification, prevention, and control of mpox On 19 May 2022, the National Director of Public Health (DNSP) launched an investigation following a report of concerning cases 	None identified

Jurisdiction and title of first-case response plans	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring Implementing pharmaceutical measures as part of public-health strategies 	 presenting with legions; clinicians were put on alert to remain vigilant for possible cases On 14 February 2023, the Ministry of Health and Social Services announced the end of the mpox outbreak in the province A total of 527 probable or confirmed cases of mpox were reported in connection with the May 2022 outbreak The guidelines detail specific recommendations on case definitions, transmission, and vaccination Transmission: direct contact of the skin or mucous membranes with the lesions of a probable or confirmed symptomatic case of mpox direct contact of the skin or mucous membranes with biological fluids direct contact of skin or mucous membranes with surfaces and objects contaminated with body fluids from a probable or confirmed symptomatic case of mpox respiratory droplets during physical contact within one meter for at least three hours Case definitions: suspected case: a person presenting with one or more skin lesions probable case: an orthopoxvirus is detected by an appropriate laboratory test confirmed case: Simian orthopoxvirus is detected by an appropriate laboratory test Maxematical and can be used as a pre- and post-exosure vaccine: two doses should be given 28 days anart 	
New Brunswick Government of New Brunswick's Mpox Guidelines (2024)	 Level of first-case response plan for clade I mpox Provincial/territorial Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time 	 The <u>Government of New Brunswick's mpox guidelines</u> (September 2024) provides comprehensive recommendations for healthcare professionals on the management of mpox All confirmed, probable, and suspect cases must be reported to Regional Public Health (RPH) immediately Healthcare professionals are obligated to report positive mpox test results to the Office of the Chief Medical Officer of Health and Epidemiology (OCMOHE) Exposure Risk Levels: High-risk exposure includes direct skin or mucosal contact, sexual contact, prolonged close contact, shared contaminated 	None identified

Jurisdiction and title of first-case response plans	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
Prince Edward Island	 notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring Implementing pharmaceutical measures as part of public-health strategies 	 items, or aerosol-generating procedures without PPE; self-monitoring for 21 days is recommended, along with vaccination within 14 days, and isolation if symptoms appear Medium-risk exposure involves casual close contact or handling contaminated objects without direct skin contact; self-monitoring for 21 days is recommended, and vaccination and isolation should be considered if symptomatic Low-risk exposure includes brief interactions or proper PPE use in healthcare settings; isolation is not required but self-monitoring is recommended Antiviral medications with activity against orthopoxviruses can be considered as treatment; the province has one course of TPOXX available The Imvamune Vaccine is offered to eligible New Brunswickers 	None identified
Prince Edward Island (P.E.I.) Living guideline (2024)	 Level of first-case response plan for clade I mpox Provincial/territorial National Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Implementing non-pharmaceutical measures to prevent and control transmission contact tracing and monitoring exposure risk assessments and stratification tools (e.g., classification frameworks of exposure risk level, likelihood and impact estimates of importation) Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) 	 P.E.I. has a living guideline for the management of mpox; the most recent update (May 2024) has the following guidance and recommendations: A confirmed case is defined as a case confirmed by real-time polymerase chain sequencing A probable case is a person who meets the criteria and has an epidemiological link to an mpox event A suspect case is a person with one or the following symptoms: headache, acute onset fever, lymphadenopathy, myalgia, back pain, prostration, fatigue, and sore throat Laboratories are required to report all positive molecular tests and serological evidence to the Chief Public Health Officer Healthcare professionals must report all confirmed, probable, and suspect cases to the Chief Public Health Officer The Chief Public Health Officer reports all cases to PHAC Measures to control the spread include contact tracing, isolation, managing contacts, and vaccination with Imvamune vaccine 	None identified
Nova Scotia	 Level of first-case response plan for clade I mpox Provincial/territorial National 	 The Nova Scotia <u>Communicable Diseases Manual</u> (September 2024) states that case management for mpox should be the same, regardless of the type of clade 	None identified

Jurisdiction and title of first-case response plans	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
Government of Nova Scotia Surveillance guideline (2023) The Nova Scotia Communicable Diseases Manual (2024)	 Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) High-risk populations High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) 	 Testing is required to confirm all suspected cases Isolation is required for confirmed and probable cases Isolation can end when no new cases have shown for 48 hours, no fever for 24 hours, and all lesions are scabbed Public health measures to reduce transmission include avoiding contact with high-risk individuals, refraining from blood donation, limiting contact with others, avoiding the sharing of clothes or linens, and practicing frequent hand hygiene High risk individuals are defined as immunocompromised persons, pregnant people, and children under 12 The government of Nova Scotia provides a <u>surveillance guideline</u>, last updated in September 2023 A confirmed case is defined as a case confirmed by real-time polymerase chain sequencing A probable case is a person who meets the criteria and has an epidemiological link to an mpox event A suspect case is a person with one or the following symptoms: headache, acute onset fever, lymphadenopathy, myalgia, back pain, prostration, fatigue, and sore throat Healthcare professionals must report all suspect cases to the local public health office, infectious disease physician, and medical microbiologist on call The local public health office should immediately report all probable and confirmed cases to the Department of Health and Wellness (DHW) surveillance In <u>April 2023</u>, the government of Nova Scotia expanded access to the lommunity Pharmacy Primary Care Clinic program, with pre-exposure vaccination being made available to: cisgender or transgender queer men who have sex with men, diagnosed with a sex ually transmitted infection since 2022, participated in a social venue for sexual contact, had anonymous sex, or engaged with a sex worker/sex work people who have sexual contact with someone who meets the above criteria Nova Scotia Health provides an <u>information sheet</u> regard	
Newfoundland and Labrador	Level of first-case response plan for clade I mpox Provincial/territorial	 In 2022, the government of Newfoundland and Labrador created a guideline for the management of mpox cases and contacts 	None identified
	Components of a first-case response plan	 A suspect case of mpox was defined as an individual with one or more of the following symptoms: unexplained rash, headache, 	

Jurisdiction and title of first-case response plans	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
Guideline for the management of mpox cases and contacts (2022)	 Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies High-risk populations High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) 	 fever, lymphadenopathy, myalgia, back pain, and asthenia, and acute genial lesion A probable case of mpox was defined as persons with an acute rash and epidemiological link A confirmed case was defined as a case confirmed by real-time polymerase chain sequencing Management includes isolation, covering all lesions, avoiding sharing clothing and linens, maintaining proper hand hygiene, avoid working with wildlife As a preventative measure, the <u>Newfoundland and Labrador government</u> recommends the Imvamune vaccination for those planning to have sex with multiple partners, previous diagnosis of a sexually transmitted infection, attended sex-on-premise venues, and engage in sex work or had sexual contact with a sex worker 	
Northwest Territories (N.W.T) <u>NWT Communicable</u> <u>Disease Manual</u> (2024)	 Level of first-case response plan for clade I mpox Provincial/territorial Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring Other components not described above 	 No documents were found with specific reference to clade I mpox In reference to mpox, the <u>NWT Communicable Disease Manual</u> for healthcare providers indicates that: The N.W.T. uses the public health measures found in the AHS Public Health Disease Management Guidelines unless otherwise indicated Providers are directed to immediately inform the Office of the Chief Public Health Office by telephone if there is a confirmed or probable case and report all outbreaks/suspected outbreaks by phone Providers are directed to follow all regulations included in the <u>Reportable Disease Control Regulations</u> and <u>the Disease</u> <u>Surveillance Regulations</u> 	None reported
Yukon Nunavut	 N/A Level of first-case response plan for clade I mpox Provincial/territorial Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) 	 None reported <u>The Nunavik Regional Board of Health and Social Services (NRBHSS)</u> <u>created a public 2024 mpox recommendations sheet</u> Mpox spreads through prolonged skin-to-skin contact, respiratory droplets during close interactions, or shared contaminated items Common symptoms include fever, headache, fatigue, swollen lymph nodes, muscle pain, rash, and skin lesions, often appearing in oral and genital areas 	 None identified None identified

Jurisdiction and title of first-case response plans	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring Implementing pharmaceutical measures as part of public-health strategies 	 While most cases resolve within two to four weeks, severe cases can lead to pneumonia, sepsis, encephalitis, or eye infections Immunocompromised individuals, young children, and pregnant women are at higher risk There is no specific treatment; symptom management focuses on fever control and hydration Severe cases may require hospitalization or antiviral treatment with tecovirimat The Imvamune vaccine can prevent or reduce symptoms and is available for at-risk individuals If exposed, monitor for symptoms for 21 days 	

Jurisdiction and title of first-case response	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
plan(s)			
Canada Rapid risk assessment: Clades 1a and 1b mpox virus (MPXV) multi-country outbreaks – public health implications for Canada (2024) Mpox: Public health management of human cases and associated human contacts in Canada (2024) Federal, provincial, and territorial public health response plan for the management of the mpox outbreak (2022)	 Level of first-case response plan of mpox clade I National Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control infection 	 The <u>Government of Canada's latest rapid risk assessment</u> (assessment completed 4 September 2024) provides details on the likelihood and impact estimates of importation and transmission of clade la and lb, risk communication, collaboration and coordination, and surveillance and reporting In the technical annex, they provide key definitions and mathematical modelling to estimate likelihood of importation According to the <u>Government of Canada's public health management</u> of <u>cases</u>, a national case definition for suspect, probable and confirmed cases has been established, and an mpox case report form is available for provinces and territories a suspect case is defined as a person presenting with an unexplained acute skin, genital, perianal, anorectal rash or lesions and at least one symptom (e.g. headache, fever, back pain, myalgia, fatigue, pharyngitis, proctitis) a probable case is defined as someone who meets the criteria of a suspect case and has an epidemiological link to a probable or confirmed mpox (monkeypox) case or a location/event where transmission of mpox is suspected or known in the 21 days before symptom onset a confirmed case is defined as having laboratory-confirmed mpox virus by real-time PCR testing and/or sequencing In terms of <u>case management</u>, they indicate that cases should be isolated until they are no longer contagious (typically between two to four weeks) and that tailored approaches should be taken depending on the living situation (e.g., student residence, correctional facility) Isolation should include staying home and away from others as much as possible (in separate spaces with the exception of a healthcare worker or professional with relevant infection, prevention and control (IPC) measures), have necessities delivered, no travel to other locations, postpone any elective medical visits, use personal protective measures (e.g., medical mask, cover lesions, practice hand hygiene),	• Not reported

Appendix 4: Details from the international jurisdictional scan about first-case response plans for clade I mpox

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
plan(s) European Union (E.U.) Mpox research and innovation (No date) EMA recommends extending indication of mpox vaccine to adolescents (2024) ETF statement on the use of Invanex for the prevention of mpox in children below 12 years of age (2024) Possible use of the medicinal product TPOXY	 Level of first-case response plan for clade I mpox International or multinational Components of a first-case response plan Implementing pharmaceutical measures as part of public-health strategies Other components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) Financial arrangements (e.g., costs related to case management) Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) 	 Additional measures are described for reducing the risk of spread to caregivers, household members, and animals Local public health authorities are responsible for contact tracing based on evidence suggesting infection and transmission up to four days before symptom onset (the document provides a risk assessment based on human exposure level) These measures should remain consistent regardless of mpox clade The Government of Canada has also recommended a framework for public-health agencies (PHAs) to classify the <u>exposure risk level of contacts</u> of mpox cases as high, medium, and low or uncertain Following this framework, all contacts should implement basic public health measures (e.g. hand hygiene, self-monitoring for symptoms, avoid donations of bodily fluids), be offered Invamune vaccination, and notify PHAs and isolate if symptoms develop during the 21 days following mpox exposure Additional public health measures (e.g. avoiding high-risk settings, wearing a medical mask, refraining from sexual contact) should be implemented if contacts are identified as intermediate- or high-risk exposure contacts during the 21 days following mpox exposure Following the 2022 outbreak of mpox, the <u>European Union (E.U.)</u> invested 17 million euros of <u>Horizon Europe</u> funds in two mpox-related clinical research initiatives called MPX-RESPONSE and VERDI MPX-RESPONSE aims to build understanding of mpox, evaluate treatment options, and support E.U. and global public health responses using an observational study and three randomized control trials Building on its COVID-19-related research, <u>VERDI</u> aims to track and enhance understanding of mpox, with a focus on its clinical features and treatment options, alongside risk factors for severe mpox among children and adults (including pregnant women) Additional mpox research projects supported by E.U. funding include: <u>VEO</u>, which created an in	Not reported
for the treatment of monkeypox (2022)		 Nine projects led by <u>Global Health EDCTP3</u> – an Africa-Europe clinical research partnership constituted in 2004 – and address 	

Jurisdiction and title of first-case response	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
plan(s)			· · · · ·
Possible use of the vaccine Jynneos against infection by monkeypox virus (2022) Considerations on posology for the use of the vaccine Jynneos/ Imvanex (MVA- BN) against monkeypox (2022) Mpox (No date)		 mpox surveillance, virology, epidemiology, and vaccine safety and immunogenicity for mothers and infants Following the 2022 mpox outbreak, the <u>European Medicines Agency</u> (<u>EMA</u>) accelerated mpox vaccine and treatment development by advising product development, conducting clinical trials, fast-tracking approval processes, and creating a list of essential mpox medicines to mitigate shortages, in collaboration with E.U. partners (e.g., <u>Health</u> <u>Preparedness and Response Authority</u>); similar activities are being undertaken in response to the 2024 outbreak of clade I mpox The EMA issued <u>pharmaceutical recommendations</u> for E.U. nations During the 2022 outbreak, the EMA recommended that E.U. nations import tecovirimat (TPOXX) and Imvanex (Jynneos) from the United States, in addition to administering Imvanex intradermally rather than subcutaneously, given the E.U.'s shortages of these pharmaceuticals During the 2024 outbreak, the EMA concluded that E.U. nations could use Imvanex (Jynneos) for mpox prevention in at-risk children under the age of 12, at the discretion of national health authorities; the EMA also recommended extending Imvanex 	
France Sante publiqué France action plan for mpox (n.d.) Ministère du travail, de la santé, des solidarités et des familles recommendations for travellers (n.d.) Sante publiqué France case definition and procedures (2024) High Council for Public Health (HCSP) recommendations for mpox cases (2022)	 Level of first-case response plan for clade I mpox National International or multinational Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring exposure risk assessments and stratification tools (e.g., classification frameworks of 	 France had their first confirmed case of clade lb reported in January 2025 from a woman who had encountered two individuals who returned from Central Africa As of 2025, France has 11 reported cases of clade I mpox Santé publique France established guidance for mpox clades All probable cases will be confirmed and are mandatorily reported to Santé publique France website Confirmed cases require clade I or II identification via PCR or sequencing Labs capable of clade determination must send clade I samples to the National Centre for Scientific Research for subclade analysis Suspected patients must undergo medical consultation and diagnostic testing via qPCR or RT-PCR Sample selection should follow Coreb guidelines (skin, mucosal, rectal, or pharyngeal swabs) Early knowledge acquisition and rapid response are essential for clade I (la, lb) circulation All probable or confirmed clade I cases must be investigated Investigations (questionnaires) are conducted by SpF regional cells with ARS10 	Not reported

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 exposure risk level, likelihood and impact estimates of importation) management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) 	 The goal is to identify contamination sources and stop transmission chains For clade I, cases returning from high-risk countries or with risky contacts must be investigated Investigations (questionnaire, contact tracing) should proceed without waiting for clade confirmation Treatment: Use tecovirimat as the first-line treatment for its oral availability and tolerance, brincidofovir as the second-line option if available due to its oral route and better tolerance than cidofovir, and cidofovir as the third-line treatment due to its injectable form, high toxicity, and potential risks (available under compassionate access); reserve vaccinia immunoglobulin (VIG) for pregnant women and children under 13 kg when antivirals are not an option The Ministère du travail, de la santé, des solidarités et des familles recommends suggestions to people travelling to countries where Mpox clade I is circulating Adhere to hygiene protocols, including frequent handwashing Avoid close contact with infected individuals and animals Refrain from sharing personal items with potentially infected persons Monitor temperature and check for symptoms for 21 days upon return Seek medical consultation if fever and blister-like rash develop Contact CeGIDD for diagnosis or call 15 in emergencies Consider vaccination if eligible before traveling using 3rd generation vaccination (i.e., IMVANEX@ or JYNNEOS®) HCSP emphasizes the importance of raising awareness among health professionals of mpox clade I cases, travel links, varied clinical presentations, and differing transmission and affected groups 	
Germany Rober Koch Institute recommendations for encounters with MPXV (2024) Response of the German public health service to the first imported mpox clade lb	 Level of first-case response plan for clade I mpox National Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring 	 Germany has at least seven reported cases of clade lb mpox, with the first case reported in October 2024 The Robert Koch Institute (RKI), Germany's national public-health institute, has recommendations for encounters with mpox clade I All MPXV clade I cases should be confirmed using real-time PCR or DNA sequencing All MPXV clade I cases in Germany must be immediately reported to RKI Cases linked to travel in Central and East Africa should be specifically tested for MPXV clade I due to potential exposure in these regions 	Not reported

Jurisdiction and title of first-case response	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
case in Germany, October 2024 (2024)	 Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) 	 Isolate individuals suspected of clade I infection or confirmed cases immediately until symptoms subside, and scabs heal or fall off Isolation guidelines apply until further notice and may be updated based on new research Private room with a separate bathroom is ideal; avoid sharing bedding or household items and refrain from all sexual activities The RKI recommends monitoring individuals with low infection risk who have been in contact with suspected or confirmed clade I MPXV cases Health authorities should regularly check on these contacts to identify potential new cases early and take further action if necessary These recommendations are subject to change based on new findings RKI also notes that the transmission through contaminated objects or surfaces has mainly been reported in endemic areas, with no evidence of significant impact in the clade IIb outbreak in Germany Research is ongoing regarding the link between MPXV clades and disease severity In clade IIb and, based on previous findings, clade Ib, urogenital lesions are commonly observed due to sexual transmission Local health authorities in Cologne, in collaboration with the North Rhine-Westphalia federal state public health institute (LZG.NRW), initiated comprehensive contact tracing to identify and monitor individuals who may have been exposed to the patient This coordinated effort aimed to prevent further transmission of the virus The RKI assessed the risk to the general population as low, emphasizing that transmission requires close physical contact They continue to monitor the situation closely and have communicated this assessment to the public to maintain awareness without causing undue alarm 	
Italy <u>Ministry of Health mpox</u> <u>bulletin</u> (January 2025)	 Level of first-case response plan for clade I mpox National Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time 	 There have been no reported cases of clade I mpox in Italy; the <u>last</u> reported outbreak of mpox in Italy was from the clade II (West African) mpox strain, with the first case confirmed in Rome, Italy in May 2022 <u>Since the first case was identified</u>, the Ministry of Health activated a health surveillance system with all Italian Regions and published a bulletin on their website every Tuesday and Friday From <u>20 May 2022 to 8 January 2025</u>, there were 1,088 mpox cases reported in Italy 	None reported

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring Implementing pharmaceutical measures as part of public-health strategies Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) 	 According to the Italian Ministry of Health's <u>bulletin on mpox</u> (last updated 6 February 2025), case definitions adopted by Italy meet the <u>criteria of the World Health Organization (WHO)</u> and are included in <u>Circular of 18 September 2024</u>, which requires that confirmed and suspected cases self-isolate Confirmed cases are reported to international organizations (<u>WHO</u> and <u>European Centre for Disease Prevention and Control (ECDC)</u>) and published on the institutional portal 	
Japan Government response in light of WHO's PHEIC declaration for Mpox (2024)* <u>MPOX Medical Care /</u> <u>Treatment Guide</u> (2024)* *translated in English	 Level of first-case response plan for clade I mpox National Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management exposure risk assessments and stratification tools (e.g., classification frameworks of exposure risk level, likelihood and impact estimates of importation) management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies (e.g., vaccine) 	 Although no cases of clade I have been reported in Japan, the Ministry of Health, Labour and Welfare (MHLW) and related ministries developed response plans in accordance with the WHO's Public Health Emergency of International Concern declaration on mpox clade I: Testing, monitoring and reporting: The MHLW instructed quarantine stations to display mpox awareness posters and directed local governments to maintain testing systems and submit samples from cases with overseas travel history The Cabinet Office and MHLW jointly issued a notice to local governments and research institutes (requesting rapid clade identification testing) The Ministry of Health, Labour and Welfare developed the MPOX Medical Care / Treatment Guide which provides information on Japan's mpox response: Definitive testing method is by PCR testing Reporting: Mpox is a notifiable disease in Japan; physicians must report suspected or confirmed cases to the local health authority The basic treatment is supportive therapy and pain control For severe cases or high-risk patients (e.g., immunocompromised individuals), antiviral drugs like tecovirimat are recommended Vaccination and prophylaxis: The LC16 vaccine, a smallpox vaccine developed in Japan, has been approved for mpox prevention 	Not reported

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 Broader components of an mpox preparedness and response plan Governance arrangements (e.g., collaboration between government and public-health agencies) Delivery arrangements (e.g., risk communication and education) High-risk populations High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners) 	 Pre-exposure vaccination is recommended for healthcare workers, laboratory personnel, and high-risk groups (e.g., men who have sex with men (MSM) with multiple sexual partners) Post-exposure vaccination is recommended for close contacts of mpox patients, ideally within four days of exposure Infection control measures mentioned include measures at medical institutions and clinics, and measures at home Government agencies distribute public information (awareness and education) materials to raise awareness and provide education Mpox awareness is raised through community outreach via website postings and leaflets, and training sessions for medical institutions This effort is carried out through collaborations among the National Institute of Infectious Diseases, National Center for Global Health and Medicine, community-based organizations (CBOs) representing MSM communities, the Ministry of Health, Labor and Welfare, and local governments 	
United Kingdom (U.K.) <u>UKHSA: Mpox: technical</u> <u>elements of preparedness</u> <u>and response for clade I –</u> <u>Technical briefing 10</u> (2024)	 Level of first-case response plan for clade I mpox National Components of a first-case response plan Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring exposure risk assessments and stratification tools (e.g., classification frameworks of exposure risk level, likelihood and impact estimates of importation) management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies Other components not described above 	 The U.K. Health Security Agency published a <u>technical briefing on preparedness and response for mpox clade I</u> that described several components PCR assays were used to identify MPXV clade Ib in all mpox cases; whole genome sequencing was used as additional confirmation Individual risk assessment for contact tracing: Mpox clade Ib contact classification is based on exposure risk, ranging from high (Category 3: unprotected direct contact or high-risk environmental exposure) to low (Category 1: protected physical or droplet exposure or no physical contact with minimal droplet risk) High-risk contacts require active monitoring, self-isolation, and travel restrictions for 21 days, and they should be offered the MVA-BN vaccine within four days, or up to 14 days for high-risk groups Risk assessment of importation to U.K.: components of the framework include probability of importation (e.g., community transmission in other countries), potential for spread in the U.K. once introduced, severity of disease, and countermeasures Response plans were laid out based on three scenarios: Scenario A (incursions and small clusters of case) entails border advisories, aircraft declarations, and immigration messaging to identify or prompt healthcare presentation of imported cases. along 	 Prevention of secondary cases of mpox among household and close contacts

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., immigrants, visitors, African Canadians) High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners) Healthcare workers deployed to affected countries with clade I mpox outbreaks 	 with pre-travel advice and vaccination for deployed healthcare workers to slightly reduce importation Scenario B (controllable epidemic in high contact sexual networks) entails expanding vaccination to sex workers and high-risk heterosexuals in addition to gbMSM (gay, bisexual, and other men who have sex with men), enhancing contact tracing, and using ring vaccination in outbreak clusters (e.g., schools, hospitals, care homes and other closed settings) It also emphasizes accessible testing and rapid home diagnostic kits Scenario C (community transmission in general population through close contact) entails vaccination for high-risk individuals and healthcare workers until global supply increases In cases of severe morbidity or mortality, public health measures and pharmaceutical and non-pharmaceutical interventions, such as new vaccines, treatments, and rapid home tests, may be needed for a global response 	
United States (U.S.) <u>Mpox in the United States</u> <u>and Around the World:</u> <u>Current Situation</u> (2025) <u>Public Health Strategies for</u> <u>Mpox</u> (2025) <u>Preventing Mpox While</u> <u>Traveling (2024)</u> <u>First Case of Clade I Mpox</u> <u>Diagnosed in the United</u> <u>States (2024)</u> <u>Mpox Caused by Human-to-</u> <u>Human Transmission of</u> <u>Monkeypox Virus in the</u> <u>Democratic Republic of the</u> <u>Congo with Spread to</u> <u>Neighboring Countries</u> (2024)	 Level of first-case response plan for clade I mpox National Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission 	 In preparation for a potential clade I outbreak in the United States, the federal government coordinated an incident response structure that consisted of outbreak simulation, wastewater surveillance, laboratory testing, vaccination, and review of treatment options for the rapid detection, containment, and management of emergent clade I mpox cases Using laboratory diagnostics, the government of California confirmed the United States' first known case of clade I mpox before reporting to the Centers for Disease Control and Prevention (CDC); the CDC then collaborated with the state of California to characterize the clade I mpox virus and notify potential contacts Following confirmation of the first known clade I mpox case in the United States, the CDC collaborated with public health and government agencies to enhance laboratory diagnostics, surveillance measures, education of clinicians, and capacity to report case data The CDC conducted clade I mpox risk assessments, identifying low risk in the general United States population, children, and adults who have sex with members of the other sex, and low to moderate risk in MSM and people who have sex with MSM The CDC issued guidance for the clinical and public health management of clade I mpox, alongside clade I—specific and general mpox recommendations, stating: 	Not reported

Jurisdiction and title of first-case response	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
plan(s)			
Mpox Case Reporting Recommendations (2024) FACT SHEET: United States Response to the Clade I Mpox Outbreak in Several African Countries (2024)	 respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies Other components not described above Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) Financial arrangements (e.g., costs related to case management) Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) 	 The interim case definition for clade I mpox is as follows: A suspect case is defined as having probable or confirmed mpox alongside at least one of the Clade I Epidemiologic Criteria A probable case is defined as having probable or confirmed mpox, at least one of the Clade I Epidemiologic Criteria, and clade I and clade II MPXV-negative by PCR testing without Next-Generation sequencing of a clinical specimen to confirm clade A confirmed case is defined as having the demonstrated presence of clade I MPXV DNA via PCR testing or Next-Generation sequencing of a clinical specimen Clinicians should report suspected clade I mpox cases to the appropriate public health laboratory within 24 hours and facilitate clade-specific testing Clinicians and health departments should request clinical consults from the CDC for diagnosed clade I mpox, in addition to submitting case information in line with CDC reporting recommendations, such that the clinical evolution of clade I mpox cane be understood People with suspected, probable, or confirmed clade I mpox, should isolate at least until their diagnosis is confirmed clade I mpox, going back four days prior to the onset of illness Contacts with high exposure risk must be monitored by the health department for 21 days, and restrict their activities in line with CDC guidance Contacts with intermediate exposure risk must self-monitor for 21 days, and restrict their activities in line with CDC recommends with mpox has had suspected or known exposure to someone with mpox has had suspected or known exposure to someone with mpox has had suspected or known exposure to someone with mpox has had suspected or known exposure to source within the last two weeks has engaged in sexual activities at a comm	

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
		 and/or will be traveling to a country with a clade I mpox outbreak and anticipates engaging in sexual activities Mpox vaccination should be included in health departments' prevention activities If clade-specific testing is warranted but locally unavailable, laboratories should seek it through other potential avenues Those with mpox risk factors should consider vaccination The CDC issued guidance for mpox prevention while travelling, stating: Those with mpox should avoid travel unless necessary Those traveling to areas with mpox spread should consider obtaining travel health and medical evacuation insurance, learn about the activities that may increase their risk of clade I exposure, consult with a healthcare provider, receive vaccination if eligible, and monitor CDC travel notices Those traveling are encouraged to: minimize skin-to-skin contact, particularly with those who have mpox avoid sharing items or linens with people who have mpox practice safety (e.g., using personal protective equipment) while caring for people with mpox avoid contact with non-human carriers of mpox in places with endemic mpox regularly clean their hands with soap and water or alcohol- based hand sanitizer Those who become infected with mpox at any point should seek medical care, isolate, and share their travel history with their physician 	
Africa Centres for Disease Control (Africa CDC) <u>Mpox continental</u> <u>preparedness and response</u> <u>plan for Africa</u> (2024–2025) <u>Mpox surveillance reporting</u> <u>protocol for African Union</u> <u>Member States</u> (2024)	 Level of first-case response plan for clade I mpox International or multinational Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time 	 The mpox continental preparedness and response plan for Africa from September 2024–February 2025 for all clades highlighted 10 key pillars to their response plan for all clades, including coordination and leadership, risk communication, surveillance, laboratory capacity, case management, infection prevention and control, vaccination, research and innovation, logistics and financing, and continuity of essential services They categorized countries and plans based on mpox risk (e.g., existing human-to-human transmission, endemic zoonotic reservoirs, requiring enhanced readiness due to proximity to human-to-human transmission) 	Not reported

Jurisdiction and title of first-case response	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
A coordinated research roadmap on mpox virus (2024) Mpox testing strategy (2024)	 notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring exposure risk assessments and stratification tools (e.g., classification frameworks of exposure risk level, likelihood and impact estimates of importation) management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) Financial arrangements (e.g., costs related to case management) High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) 	 Mpox surveillance is expected to be integrated into existing platforms, included in the list of notifiable diseases across all countries with event- and indicator-based surveillance systems, and to promote digitalization and real-time reporting of surveillance data from both facilities The region expects to confirm at least 80% of mpox suspected cases and sequence at least 50% of them to identify clade type In terms of case management, they aim to develop tailored approaches for patient populations such as children, youth, pregnant women, commercial sex workers and other key groups, which will generally include active and community-based surveillance, contact tracing, and cross-border data sharing The estimated budget for the plan (excluding vaccine procurement) is US\$599, 153, 498, of which 53% of the funds will support 14 of the affected member states The Africa CDC's mpox surveillance reporting protocol indicates that countries should follow the WHO definition of cases to facilitate detection and reporting, and should use the standardized line list to inform case-based data collection Guidance is provided for case-based surveillance in the community, evidence-based surveillance, and points of entry For points of entry surveillance, they recommend screening of travellers and conveyance operators (e.g., symptoms such as rash, fever, completion of a questionnaire) with suspected cases to go for further screening including an in-depth interview, a focused medical and laboratory examination by a healthcare professional, and reporting to be shared across borders They advise that lesion specimens are the preferred sample types, where nucleic acid amplification test (NAAT) is used as the primary diagnostic tool for mpox, and are encouraged to systematically sequence to characterize the spread and evolution of the virus (and to ensure appropriate reporting of the genomic sequencing outcome) Reporting g	

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
European Centre for	Level of first-case response plan for clade I mpox	 The strategy also provides testing strategies for optimal outbreak response based on the different disease transmission settings (e.g., no/low cases, sporadic cases, cluster cases, widespread community transmission) The Africa CDC coordinated research roadmap highlights immediate next research steps for the region for all clades, which includes evaluating and deploying new rapid and sensitive diagnostic tests to detect all mpox clades that would inform all elements of optimized clinical standards, integrating research into outbreak response activities, and expanding coordination and collaboration with key partners in research and government The ECDC collaborates with the WHO – Regional Office for Europe in developing the provide the prov	Detecting cases
Mpox (MPX) reporting protocol (2024) Risk assessment for the E.U./E.E.A. of the mpox epidemic caused by monkeypox virus clade I in affected African countries (2024) Mass gathering events and communicable diseases Considerations for public health authorities (2024)	 Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring exposure risk assessments and stratification tools (e.g., classification frameworks of exposure risk level, likelihood and impact estimates of importation) Implementing pharmaceutical measures as part of public-health strategies 	 Surveillance System (TESSy) They developed and distributed a <u>routine surveillance bulletin</u> The mandatory reporting includes clade-specific classification for MPXV clades and subclades Surveillance case definitions include suspected, probable, confirmed, discarded, and MPXV reinfection cases Other changes in response to clade I mpox outbreak include updating information on subclades and redefining categories of sexual orientation, including MSM, bisexual, and others Effective surveillance (including genomic surveillance), laboratory testing (including molecular clade identification), epidemiological investigation, and contact tracing capacities should be ensured Any importation of MPXV clade I infections or significant mpox events – such as outbreaks related to mass gatherings or specific settings, reinfections among cases, or a rise in cases among at-risk groups – should be promptly reported via event-based surveillance mechanisms (e.g., EpiPulse and/or EWRS). Risk assessment for the E.U./E.E.A. general population is based on likelihood of infection with MPXV clade I and its impact Nucleotide sequencing and sharing sequence information through public databases (e.g., GISAID) is an essential component to monitor the monitor in the set of the mone and point of the set of the mone and point of the set of the mone and the monitor is based on likelihood of infection with MPXV clade I and its impact 	Preventing secondary transmission
	 response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health 	 component to monitor the mpox epidemiological situation in Europe (and globally) Public health authorities must investigate every case and report any significant increases in case numbers or changes in epidemiology (increased severity, detections of MPXV clade I, 	

Jurisdiction and title of first-case response	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
plan(s)	agencies, laboratories, surveillance systems across jurisdictions) Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., immigrants, visitors, African Canadians) High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) Outcomes related to containment of cases (e.g., spread of cases, prevention of secondary transmission)	 outbreaks related to mass gathering events, re-infections among cases, rise in cases among risk groups) Any suspected cases should be rapidly isolated until they test negative, and if positive, they should remain isolated until symptoms resolve Contact tracing should be implemented, and close contacts of confirmed cases should be tested Interim indications for testing include: Individuals returning from an affected area and reporting any of the symptoms (including prodromal symptoms or lymphadenopathy) Close contacts of confirmed cases in the E.U./E.E.A. reporting any of the symptoms (including prodromal symptoms or lymphadenopathy (regardless of type of contact) Individuals presenting with mpox compatible lesions or any other typical symptoms, including isolated genital lesions Vaccination: In the event of a MPXV clade I outbreak in the E.U./E.E.A., public health authorities must identify and offer vaccination to eligible unvaccinated high-risk individuals for sexual transmission If feasible, post-exposure vaccination of cases with the available third-generation smallpox vaccine can be offered as one of the response options Risk communication: Awareness should be raised among clinicians and other health professionals regarding possible travel-associated mpox cases caused by MPXV clade I, including the potential for different clinical presentations, transmission through both sexual and non-sexual routes, and the involvement of different affected groups compared to previous outbreaks Risk communication activities should continue, along with collaboration with civil society organizations to engage population groups at higher risk of infection Public health authorities must prepare for mass gatherings with risk communication, community engagement, and infodemic maagement Early all-hazard prepa	

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
Jurisdiction and title of first-case response plan(s) Pan American Health Organization (PAHO) PAHO Situation Report on mpox (January 2025) PAHO Epidemiological update on mpox in the Americas Region (December 2024)	 Dimensions of the organizing framework Level of first-case response plan for clade I mpox International or multinational Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management 	 Approaches taken within plan(s) Travel medicine clinics should be aware of the ongoing outbreaks and familiar with the available preventive and control methods. Travel advice should be given to individuals visiting or returning from countries experiencing confirmed MPXV clade I outbreak According to PAHO's latest <u>Situation Report</u> on the monkeypox outbreak in the Region of the Americas (31 January 2025), PAHO/WHO is responding to reports of mpox clade Ib cases in the United States and Canada by: working with clinicians in Member States to disseminate information on the clinical features, management, and diagnostic challenges of suspected and confirmed mpox cases continuing to strengthen and coordinate epidemiological surveillance, laboratory capacity for rapid testing and diagnosis, and community engagement updating its mpox cases <u>dashboard</u> and communicating it to Members According to this report, PAHO has been monitoring travel measures for mpox in 35 countries in the Americas, and there were no travel measures in place in these countries at the time, which aligned with WHO's recommendation 	Outcomes from plans (if evaluated) Outcomes from plans
	 contact tracing and monitoring management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) 	 PAHO published an <u>epidemiological update</u> on mpox in the Americas Region in December 2024 that offered guidance and advise to Member States PCR laboratory testing is PAHO's recommended choice of test to confirm mpox, but genomic sequencing is needed to confirm the specific detection of clade lb PAHO does not recommend mass mpox vaccination but rather encourages the use of vaccines on a case-by-case basis after an assessment of risks and benefits; individuals with high risk of exposure to mpox should be prioritized Every effort should be made to control person-to-person transmission of mpox through early diagnosis, isolation, and contact tracing Clinical management should involve testing suspected mpox cases as soon as possible to distinguish them from other infections, isolating suspected, probable, and/or confirmed cases immediately and promptly implementing appropriate IPC measures, and offering an HIV serology test to all suspected mpox cases and initiating antiretroviral treatment as soon as possible if the test is positive 	

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
		 PAHO also recommends the constant use of condoms during sexual activity during the 12 weeks following recovery from a confirmed mpox case to reduce the potential transmission of mpox through sexual activity 	
World Health Organization (WHO) <u>Strategic framework for</u> <u>enhancing prevention and</u> <u>control of mpox – 2024–</u> <u>2027</u> (2024) <u>Mpox global strategic</u> <u>preparedness and response</u> <u>plan</u> (2024) <u>Mpox resource toolkit</u> (2024)	 Level of first-case response plan for clade I mpox International or multinational Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission 	 The WHO recently released their strategic framework for enhancing prevention and control of mpox for all clades Key definitions by the WHO include: suspected outbreak (which requires detailed case investigation and active case search), confirmed outbreak (which requires contact tracing and symptom monitoring), community transmission (i.e., occurrence of new mpox cases spread via human-to-human direct or indirect contact), control of mpox (i.e., no new mpox cases beyond six weeks after the last case was reported), elimination of human-to-human transmission (i.e., absence of new local cases) The WHO recommends adequate surveillance that involves regular reporting of suspected, probable, and confirmed cases, detailed case investigations with agreed indicators, use of contact tracing and active case search, availability of laboratory and/or field-based diagnostics, use of performance indicators, use of genomic sequencing, and WHO Target product profiles for tests for mpox diagnosis The WHO further recommends that countries review and update case investigation forms to include new understanding of emerging disease and assess all possible modes of transmission (e.g., clade I transmission includes sexual contact) Engaging community health workers and the community are important to implementing case identification, in addition to the ability to notify the health authorities at the next administrative level The WHO also recommends tailored strategies in congregate settings (e.g., refugee camps, residential facilities, schools) and based on the epidemiological context of the relevant country Additional information is available about the core components of a health emergency preparedness and response for mpox with selected options for integrated planning and implementation, and their plans to monitor the uptake of the framework The WHO released their global strategic preparedness and response plan, involving details abo	• Not reported

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., immigrants, visitors, African Canadians) High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) Refugees Healthcare workers deployed to affected countries with clade I mpox outbreaks 	 countries are at moderate risk due to the potential for imported cases Key recommendations from the plan include strengthened coordination with local and national response mechanisms, enhanced surveillance and laboratory diagnostics, strengthened cross-border collaboration, vaccination, risk communication, governance and financing, and reporting WHO recommends to Member States to implement a standardized system to report quarterly to WHO, event- and indicator-based surveillance, community-based surveillance, strengthen and decentralize laboratory capacity and data exchange protocols, expand diagnostic testing to include the deployment of point-of-care diagnostics and sample referral networks, prioritize individuals at high-risk of exposure (including close contacts) for vaccinations, and integrate genomic sequencing in routine mpox surveillance The WHO provides resources to countries related to identifying mpox cases (for either clades) and conducting contact tracing and management, such as the <u>mpox triage and clinical assessment tool</u> for suspected and confirmed cases, <u>self-care and prevention fact sheets</u>, risk <u>assessment tool</u> for identifying and managing health and care workers with a potential occupational exposure to mpox, a <u>technical document</u> about infection prevention, and control measures With this response, the WHO and collaborating partners have developed and used <u>analytic tools for surveillance purposes</u>, such as the Go.Data platform that is an open-source outbreak tool for real-time analyses to inform field operations (e.g., use in case investigations, follow-up identified contacts and clusters, develop relationships between cases, dashboards to identify risk profiles), the global repository of epidemiological parameters (GREP), and analytics used by the WHO Hub for Pandemic and Epidemic Intelligence 	
World Health Organization – Regional Office for Africa <u>Mpox Continental</u> <u>Preparedness and</u> <u>Response Plans for Africa</u> (2024)	 Level of first-case response plan for clade I mpox Provincial/territorial National International or multinational Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) 	 The <u>WHO</u> categorizes African Union Member States into four mpox risk levels based on their mpox status and associated risk: (1) experiencing sustained human-to-human transmission, (2) reporting sporadic human cases and/or having endemic zoonotic reservoirs for mpox, (3) requiring preparedness due to proximity to Category 1 countries, and (4) all other countries The <u>mpox preparedness and response plan</u> is organized into pillars: Surveillance: Implement/enhance active, sensitive, or routine surveillance through digitalized and real-time event/ community- 	 Cases and deaths reported Case fatality rate Proportion of member states with high mpox transmission where community groups representing high- risk populations

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring exposure risk assessments and stratification tools (e.g., classification frameworks of exposure risk level, likelihood and impact estimates of importation) management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) Financial arrangements (e.g., risk communication and education, pharmaceutical measures) High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) Healthcare workers deployed to affected countries with clade I mpox outbreaks 	 based surveillance, contact tracing, point of entry, and cross-border data sharing This includes the integration of mpox surveillance into existing disease surveillance platforms, such as the Integrated Disease Surveillance and Response (IDSR) system Laboratory: Strengthen laboratory testing for diagnostic and sequencing through training and provision of equipment and reagents This includes upgrading lab infrastructure, diagnostics (e.g., decentralizing qPCR testing to sub-national levels, deploying point-of-care testing (POCT) antigen rapid diagnostic tests (RDTs)), quality control and assurance, and incorporating genomic sequencing into routine mpox surveillance Infection Prevention and Control (IPC): Strengthen infection and prevention control measures at households, schools, health facilities and communities through comprehensive IPC guidelines, PPE supplies, and training This includes the healthcare waste management, and the provision of water, sanitation, and hygiene (WASH) services Case Management: Implement comprehensive case management (clinical, psychosocial, nutritional) protocols, supply provision, and healthcare worker capacity building, adaptable to various care settings and patient populations (such as commercial sex workers, key population groups, etc.) This includes revising and integrating HIV testing and management national protocols Vaccination: Administer mpox vaccination to target populations and expanded high-risk population groups in two phases: (1) exposed group of those at risk (i.e., healthcare workers, immunocompromised and key populations), and (2) wider targeting of affected communities, depending on progress in the epidemiology and the availability of vaccines. Vaccination: Establish/enhance a multisectoral strategic and operational coordination mechanism led by the country's ministry of health with support of Africa CDC and WHO, at national and subnati	 have received training, financial resources, and/or supplies to facilitate community outreach and engagement. Percentage of health districts in each member state with community transmission having access to WHO- approved mpox vaccines and therapeutics

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
World Health Organization – Regional Office for South- East Asia <u>Technical Brief (interim) and</u> <u>Priority Actions: Enhancing</u> <u>Readiness for mpox in</u> <u>WHO South-East Asia</u> <u>Region (September 2024)</u> <u>New WHO toolkit on risk</u> <u>communication and</u> <u>community engagement for</u> <u>mpox (2024)</u>	 Level of first-case response plan for clade I mpox International or multinational Components of a first-case response plan Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies	 enhancing supply transparency and implementing fair allocation, strengthening logistics, and maintaining supply chain integrity for equitable distribution Risk Communication and Community Engagement (RCCE): Implement tailored RCCE strategies with a focus on reducing sexual transmission, driving vaccine acceptancy, and reducing stigma This also includes development of community feedback mechanisms, community engagement, contextualized risk communication, managing infodemics (misinformation and disinformation), and media engagement A September <u>2024 technical brief</u> recommended priority areas for enhancing readiness for mpox in the South-East Asia Region Surveillance Surveillance case definitions are specified differentiating suspected, probable, and confirmed cases Probable and confirmed mpox cases should be reported to the WHO Specimens must be collected and shipped for laboratory testing and contact tracing should be initiated Enhance vigilance and enable early diagnosis by sensitizing clinicians about mpox and ensuring they report suspected cases immediately to national or local health authorities, training health staff at points of entry (POE), especially airports, to identify cases among international travellers from affected areas/countries, and educating affected communities, such as MSM and sex workers, about mpox while ensuring access to testing and care services Laboratory testing Laboratory confirmation of mpox will be based on nucleic acid amplification testing (NAAT), using real-time or conventional PCR methods and/or genomic sequencing, which is recommended for confirming the clade Planning for genomic sequencing for diagnosis and characterization of mpox, monitoring of mpox viruses, and data sharing for public health decision-making is crucial and strongly encouraged Infection Prevention and Control (IPC) Capacities sh	 Reduction in mortality and morbidity Prevention of transmission
	High-risk populations		

Jurisdiction and title of first-case response plan(s)	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
	 Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., immigrants, visitors, African Canadians) High-contact sexual networks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) Healthcare workers deployed to affected countries with clade I mpox outbreaks Outcomes related to containment of cases (e.g., spread of cases, prevention of secondary transmission) 	 Health workers caring for suspected or confirmed mpox patients must implement standard, contact, and droplet precautions Airborne precautions should also be implemented if varicella zoster virus (chickenpox) is suspected, until it is excluded; airborne precautions should be applied during procedures that generate infectious respiratory particles (IRPs), previously referred to as aerosol-generating procedures (AGPs) Case/clinical management Approaches mentioned include home-based management for mild or uncomplicated cases under proper IPC conditions and facility-based management for high-risk or severe cases Since antiviral pharmacological treatments have little to no effect on outcomes associated with clade I, supportive care is prioritized Symptomatic treatment is recommended for mild cases, with special considerations for sexually active populations Vaccination The mpox response emphasizes a targeted vaccination approach rather than mass vaccination, based on the current risk-benefit assessment Targeted vaccination is recommended for individuals at high risk of exposure during outbreaks, with primary preventive vaccination (PPV) advised for laboratory personnel working with Orthopoxviruses and other high-risk groups Pre-exposure preventive vaccination is advised for individuals at high risk of exposure, while post-exposure preventive vaccination is recommended for individuals at high risk of exposure, while post-exposure preventive vaccination is recommended for individuals at high risk of exposure preventive vaccination is advised for individuals at high risk of exposure, while post-exposure preventive vaccination is recommended for individuals at high risk of exposure, while post-exposure preventive vaccination is recommended for individuals at high risk of exposure preventive vaccination is recommended for individuals at high risk of exposure preventive vaccination is recommende	
vvorld Health Organization – Regional Office for	 Level of first-case response plan for clade I mpox International or multinational 	 The <u>first case of mpox clade lb</u> was reported in the E.U. on 15 August 2024 	Deaths
Europe	Components of a first-case response plan	• Surveillance	
Mpox (MPX) Reporting Protocol (2024)	 Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) 	 A routine <u>surveillance bulletin</u> was created by WHO Regional Office for Europe and distributed in collaboration with the ECDC Mpox case confirmation for E.Ulevel reporting adheres to the 2022 WHO case definition and requires MPXV detection through PCR and/or sequencing 	

Jurisdiction and title of first-case response	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
plan(s)			(
Surveillance, case investigation and contact tracing for mpox (monkeypox) Interim guidance (2024)	 Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Developing and/or strengthening monitoring and reporting approaches (e.g., use of real-time notification dashboards, ability to report findings across jurisdictions) Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) Healthcare workers deployed to affected countries with clade I mpox outbreaks Outcomes related to containment of cases (e.g., spread of cases, prevention of secondary transmission) 	 The European Surveillance System (TESSy) reporting protocol specifies categories for reporting MPXV clade and subclade data (clade-specific reporting) Surveillance case definitions include suspected, probable, confirmed, discarded and MPXV reinfection The WHO's interim guidance on mpox surveillance, case investigation, and contact tracing, developed by its headquarters and regional offices, is applied and includes mpox testing (i.e., PCR to suspected cases, using oropharyngeal, anal, or rectal swabs if lesions are absent and resources allow), reporting, investigation, and contact tracing (including international contact tracing for travellers) Pre- and post-exposure vaccination must be offered to individuals at risk (e.g., gbMSM) Exposed health workers should monitor for potential symptoms, particularly within 21 days of their last exposure As part of risk communication and community engagement, an mpox toolkit for healthcare workers was developed and distributed to support case recognition (regardless of clade), testing (i.e., specimen collection for PCR testing), infection prevention and control, patient care, and effective communication with patients 	
– Regional Office for the	Level of first-case response plan for clade I mpox International or multinational	 I ne initial response focused on infection prevention and control (IPC) measures and mobilizing a coordinated effort by activating the incident 	 Not reported
Eastern Mediterranean	Components of a first-case response plan	Management Support Team	
	 Components of a first-case response plan 		

Jurisdiction and title of first-case response	Dimensions of the organizing framework	Approaches taken within plan(s)	Outcomes from plans (if evaluated)
Surveillance, case investigation and contact tracing for mpox (monkeypox): Interim guidance (2024) Laboratory testing for the monkeypox virus: interim guidance (2023)	 Identifying and defining type of case (e.g., suspected, probable, confirmed case based on available evidence) Using laboratory diagnostics (e.g., PCR testing, antigen-based rapid diagnostics tests, serology) and genomic sequencing to confirm case Implementing non-pharmaceutical measures to prevent and control transmission case investigation and management contact tracing and monitoring management of mpox contacts (e.g., diagnostic test, regular practice of hand hygiene and respiratory etiquette, minimum physical contact) Implementing pharmaceutical measures as part of public-health strategies Broader components of an mpox preparedness and response plan Delivery arrangements (e.g., risk communication and education, pharmaceutical measures) High-risk populations Individuals travelling to and from countries in Africa with clade I mpox outbreaks (e.g., gbMSM, heterosexual individuals with high number of sexual partners, sex workers) Healthcare workers deployed to affected countries with clade I mpox outbreaks 	 Awareness and preparedness are scaled up through staff training (e.g., regional IPC and water, sanitation, and hygiene (WASH) training), the development and adaptation of risk communication and community engagement (RCCE) materials in Arabic and English, and other capacity-building sessions for member states, providing guiding documents on surveillance, case management, laboratories, vaccination, and RCCE The WHO Regional Office works closely with partners in the WHO Regional Office for Africa, and supports the Africa's <u>Mpox Continental Preparedness and Response Plans</u> Other responses are based from the interim guidelines released by the WHO Health Emergencies Programme and Emergency Response Teams, including mpox surveillance, case investigation, contact tracing, and laboratory testing The guidelines identify high-risk populations, including gbMSM, health workers, and immigrants or individuals traveling from high- risk countries 	
World Health Organization –Regional Office for the Western Pacific <u>Asia Pacific Health Security</u> <u>Action Framework</u> (2024)	 Level of first-case response plan for clade I mpox International or multinational Components of a first-case response plan Other components not described above Broader components of an mpox preparedness and response plan Governance arrangements (e.g., coordination, collaboration, and data sharing across related stakeholders such as government, public-health agencies, laboratories, surveillance systems across jurisdictions) 	 The Asia Pacific Health Security Action Framework broadly outlines a response plan, identifying mpox as one of the public health events of international concern The WHO activates the regional Incident Management System (IMS) to coordinate regional health security efforts by offering guidance, technical support, field deployments, and necessary supplies The framework emphasizes strengthening regional mechanisms for multisource surveillance, risk assessment, and early alert systems 	 Not reported

Appendix 5: Documents excluded at the final stages of reviewing

Document type	Hyperlinked title
Other types of documents	The first imported case of monkeypox in Singapore during the 2022 outbreak – Reflections and lessons
(e.g., editorial, narrative	
reviews with unspecified	Unveiling the first case of mpox in Jordan 2024: A Look at the national preparedness and response measures
clade, studies about clade II)	Management of Contacts of the First Imported Monkeypox Case in Korea
	The first case of monkeypox virus infection detected in Taiwan: Awareness and preparation
	How to recognize and respond to monkeypox 2022 outbreak in non-endemic countries: A narrative review
	Isolation and identification of monkeypox virus MPXV-ROK-P1-2022 from the first case in the Republic of Korea
	First case of mpox in Pakistan: What can we learn from it?
	The first case of mpox infection in Iran during the 2022 outbreak
	Rapid diagnostic testing for response to the monkeypox outbreak – Laboratory response network, United States, May 17–June 30, 2022
	Variations in national surveillance reporting for mpox virus: A comparative analysis in 32 countries
	Evaluation of mpox contact tracing activities and data collection in EU/EEA countries during the 2022 multicountry outbreak in nonendemic
	countries

References

- 1. de Jong R, Schauer J, Kossow A, Scharkus S, Jurke A. Response of the German public health service to the first imported mpox clade lb case in Germany, October 2024. *Euro Surveill* 2024; 29(48): 2400743.
- 2. Treutiger CJ, Filén F, Rehn M, et al. First case of mpox with monkeypox virus clade lb outside Africa in a returning traveller, Sweden, August 2024: public health measures. *Euro Surveill* 2024; 29(48): 2400740.
- 3. Mukadi-Bamuleka D, Kinganda-Lusamaki E, Mulopo-Mukanya N, et al. First imported cases of MPXV clade Ib in Goma, Democratic Republic of the Congo: Implications for global surveillance and transmission dynamics. *medRxiv* 2024: 2024.09.12.24313188.
- Shenoy ES, Wright SB, Barbeau DN, et al. Contact tracing and exposure investigation in response to the first case of monkeypox virus infection in the United States during the 2022 global monkeypox outbreak. *Ann Intern Med* 2022; 175(12): 1639-1647.
- 5. Simpson LA, Macdonald K, Searle EF, et al. Development and deployment of tools for rapid response notification of Monkeypox exposure, exposure risk assessment and stratification, and symptom monitoring. *Infect Control Hosp Epidemiol* 2022; 43(8): 963-967.
- 6. Guarducci G, Porchia BR, Lorenzini C, Nante N. Overview of case definitions and contact tracing indications in the 2022 monkeypox outbreak. *Infez Med* 2022; 31(1): 13-19.

Bain T, Dass R, Mishra S, Bhuiya AR, Grewal E, Phelps A, Cura J, Ali A, Sivanesanathan T, Wilson MG. Rapid evidence profile #91: Identifying firstcase response plans for clade I mpox, Hamilton: McMaster Health Forum, 3 March 2025.

This rapid evidence profile was funded by the Public Health Agency of Canada. The McMaster Health Forum receives both financial and in-kind support from McMaster University. The views expressed in the rapid evidence profile are the views of the authors and should not be taken to represent the views of the Public Health Agency of Canada or McMaster University.

