

Recommended Dental Infection Control Measures Following WHO's Declaration of Monkeypox as a Public Health Emergency

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ABSTRACT

The resurgence of monkeypox, subsequent to its designation as a Public Health Emergency of International Concern by the World Health Organization in 2022, underscores the critical need for rigorous infection control protocols within dental settings. Due to the inherent nature of dental procedures, that involve working in close proximity to patients and potential exposure to infectious bodily fluids, the dental profession faces significant challenges in mitigating the transmission of mpox. This update provides a comprehensive review of the virological characteristics, transmission pathways, and clinical presentation of mpox, with particular emphasis on its oral manifestations and the implications for dental practitioners. It delineates both standard and enhanced infection control measures, including the application of personal protective equipment, stringent hand hygiene practices, meticulous environmental disinfection, and the prudent management of aerosol-generating procedures. Additionally, it addresses the importance of patient screening, isolation of suspected cases, and the education of both dental staff and patients regarding the transmission and prevention of mpox. The necessity for dental professionals to maintain vigilance, remain current with evolving guidelines, and implement comprehensive infection control strategies is emphasized, highlighting the pivotal role of dental practices in the early detection and control of mpox transmission during the ongoing outbreak.

Keywords

Mpox, Infection Control, Dental Settings, Oral Manifestations, Transmission, Personal Protective Equipment

INTRODUCTION

As emerging infectious diseases continue to shape the global health landscape, the resurgence of monkeypox, now referred to as Mpox, has raised significant concerns, especially in the context of the ongoing COVID-19 pandemic. In July 2022, the World Health Organization (WHO) declared mpox a Public Health Emergency of International Concern (PHEIC)¹, emphasizing the need for stringent infection control measures across all sectors, including the dental setting.² Given the nature of dental procedures, that often involves close contact with patients' faces, mouths and exposure to bodily fluids, rigorous infection prevention and control (IPC) practices are essential to mitigate the risk of mpox transmission. This update provides a comprehensive overview of the recommended dental infection control measures in light of the mpox outbreak, detailing the virus's characteristics, transmission, clinical presentation, and implications for dental professionals.

What is Mpox?

Mpox is a viral zoonotic disease caused by the Mpox virus, a member of the Orthopoxvirus genus within the Poxviridae family, which also includes the variola virus (responsible for smallpox), cowpox virus, and vaccinia virus. The Mpox virus was first identified in 1958 in research monkeys, and the first human case was recorded in 1970 in the Democratic Republic of the Congo.³ There are two genetic clades of the virus: clade I and clade II, with clade II further divided into clade IIa and clade IIb.⁴ The latter was primarily responsible for the global outbreak in 2022–2023. Mpox is endemic in Central and West Africa, where it primarily circulates among wild animals, but recent outbreaks in non-endemic regions have raised global concerns.⁵

According to the WHO, mpox is typically a self-limiting disease, with symptoms lasting from 2 to 4 weeks. However, severe cases can occur, particularly in children, pregnant women, and individuals with compromised immune systems.⁵ As of August 2024, over 20,000 mpox cases have been reported across 13 African Union Member States, with the Democratic Republic of the Congo (DRC) accounting for more than 90% of these cases. The DRC has reported 19,667 cases, including 575 deaths, primarily linked to MPXV subclades Ia and Ib. Neighbouring countries, including the Republic of Congo, Central African Republic, Burundi, Rwanda, and Uganda, have also reported confirmed cases linked to these

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subclades. In addition, Kenya and Gabon have reported isolated cases, with the latter linked to travel from Uganda. While the DRC and Burundi are likely experiencing ongoing community transmission, insufficient data from other countries makes it difficult to determine the full extent of the outbreak across the continent.

Transmission and Spread of Mpox

Mpox transmission occurs via multiple pathways, making infection control in dental settings particularly challenging. The virus can spread from person to person through direct contact with infectious skin lesions, respiratory droplets, or contaminated materials such as bedding and clothing. The virus can enter the body through broken skin, mucosal surfaces (e.g., oral, pharyngeal, ocular, genital, anorectal), or the respiratory tract. This mode of transmission is especially relevant for dental professionals due to the potential for aerosolized virus particles during procedures.⁵ Human-to-human transmission is often facilitated by close physical contact, including face-to-face, skin-to-skin, and mouth-to-mouth contact, which are common in settings like dental clinics.³

In addition to human-to-human transmission, mpox can also spread from animals to humans, often through bites, scratches, or activities like hunting and preparing infected animals. The virus has been detected in a range of animals, and the potential for further zoonotic spill over adds complexity to controlling its spread.⁷ This zoonotic aspect underscores the complex nature of mpox outbreaks and the importance of comprehensive infection control measures in various settings.⁵

The WHO also highlights the possibility of transmission via fomites, where the virus can remain viable on surfaces or objects that have been in contact with an infected person. Therefore, there should be routine environmental cleaning and disinfection in all healthcare settings, including dental clinics, to prevent indirect transmission of the virus.⁵

Signs and Symptoms of Mpox

The clinical presentation of mpox usually begins within one to 21 days after exposure, with symptoms lasting two to four weeks. Common symptoms include fever, sore throat, headache, muscle aches, back pain, low energy, and swollen lymph nodes, followed by a rash that progresses through several stages: macules, papules, vesicles, pustules, and scabs. The rash often starts on the face and spreads to other parts of the body, including the palms, soles, mouth, and genital areas.⁵ Oral lesions, which can be particularly painful, are a significant concern in dental settings as they can facilitate viral transmission during procedures.⁸

Oral manifestations of mpox are significant for dental professionals, as they can present as mucosal lesions in the mouth, including ulcers, vesicles, or pustules on the tongue, oral mucosa, or lips.⁹ A systematic review and meta-analysis by Bagde et al. (2024)¹⁰ reported a high prevalence of oral lesions in mpox cases, and oral lesions can therefore be one of the early indicators of the disease. The review and meta-analysis highlight the significant variation in the presentation of oral lesions associated with Mpox, which poses challenges in clinical diagnosis and management. The study documents a spectrum of oral manifestations, ranging from isolated ulcers to multiple vesicular eruptions,

reflecting the diverse pathophysiology of the disease.¹⁰ This variability complicates the identification of Mpox in its early stages, as oral lesions may resemble those of other viral or non-viral infections. The findings underscore the need for heightened clinical awareness and the inclusion of Mpox in differential diagnoses when encountering atypical oral lesions, particularly in areas where the disease is endemic or among patients with relevant exposure histories.

The oral manifestations of mpox can be similar to those observed in other viral and bacterial infections, making diagnosis challenging.¹¹ For example, mpox oral lesions can resemble those of herpes simplex virus (HSV), that is characterized by painful vesicles and ulcers in the mouth. Additionally, they may be similar to aphthous ulcers, which are common in conditions like Behçet's disease or even secondary syphilis, where oral mucosal patches and ulcers are prevalent. This similarity underscores the need for careful differential diagnosis in dental settings to avoid misdiagnosis and ensure appropriate management.¹¹

In response to the Mpox outbreak, it is imperative that dental clinics uphold the stringent infection control protocols initially implemented during the COVID-19 pandemic. The risk to healthcare personnel is significantly elevated when exposed to an infected patient without appropriate personal protective equipment (PPE), a concern substantiated by prior instances of healthcare-associated infections. The WHO is collaborating with healthcare authorities to investigate ways to disrupt the transmission chain by enhancing awareness among at-risk populations and healthcare professionals, including those in laboratory settings. While the likelihood of Mpox transmission in dental practices is relatively low, it is crucial that dentists adopt additional precautions during aerosol-generating procedures, notably by utilizing N95 respirators. Furthermore, dental professionals are integral to curbing the spread of the virus through diligent preventive measures and timely reporting of suspected Mpox cases to local health authorities.¹² Moreover, the identification of oral manifestations can play a crucial role in the early detection of mpox. Dental professionals are often among the first healthcare providers to observe these signs. They should be aware of and trained to recognize the oral symptoms of mpox and take appropriate actions, including isolating the patient, implementing additional IPC measures, and referring the patient for further medical evaluation.¹³ The WHO also notes that the early recognition of these signs is critical in controlling the spread of mpox, particularly in healthcare settings.⁵

Some patients may experience severe complications, such as bacterial skin infections, pneumonia, encephalitis, and even death, particularly in immunocompromised individuals. The distinctiveness of mpox symptoms, particularly the simultaneous occurrence of rash and lymphadenopathy, helps differentiate it from other diseases such as chickenpox or measles.¹⁴ However, due to overlapping symptoms with other illnesses, accurate diagnosis is crucial.

Diagnosis of Mpox

Diagnosing mpox involves a combination of clinical assessment and laboratory testing. Clinicians may suspect mpox based on the characteristic rash and a history of potential exposure. Laboratory confirmation is typically achieved through polymerase chain reaction (PCR) testing of samples from skin lesions, which is the preferred

diagnostic method. In the absence of skin lesions, swabs from oropharyngeal, anal, or rectal sites can be tested. Blood tests are generally not recommended, as they do not effectively distinguish between different Orthopoxvirus infections.⁵

Advanced diagnostic tools, such as next-generation sequencing (NGS), are increasingly being used to detect and characterize the virus, providing critical information for outbreak tracking and management.⁷ NGS offers a more detailed understanding of the virus's genetic makeup, which is vital for monitoring the evolution of mpox and identifying any potential mutations that could impact disease spread or vaccine efficacy.¹⁵ For dental professionals, understanding the diagnostic process is crucial for early identification of symptoms in patients, leading to timely referrals and appropriate management.

Basic Treatment & Vaccination

Currently, there is no specific treatment for mpox, and clinical management primarily focuses on symptomatic relief and supportive care.¹⁶ Patients with mild symptoms require only basic symptomatic treatment, such as antipyretics for fever and analgesics for pain. In severe cases, antiviral agents like tecovirimat, originally developed for smallpox, may be used under compassionate use protocols for mpox.⁷ Supportive care is also critical in managing severe cases, including hydration, pain management, and treatment of secondary bacterial infections.

Vaccination plays a pivotal role in preventing mpox. The smallpox vaccine, which has historically been effective against mpox due to the similarity between the viruses, remains the primary prophylactic measure. The JYNNEOS vaccine (also known as Imvamune or Imvanex) is an attenuated live vaccine that is FDA-approved for mpox prevention and is recommended for individuals at high risk of exposure, such as healthcare workers and laboratory personnel handling orthopoxviruses.⁷ According to the WHO, the JYNNEOS vaccine is also recommended for people who have been in close contact with someone with mpox, as vaccination within four days of exposure can prevent the onset of the disease. If administered between 4 and 14 days after exposure, it can reduce the severity of symptoms, even if it does not completely prevent the disease.⁵

Another vaccine, ACAM2000, is a replication-competent live vaccinia virus vaccine that has also been used against mpox. However, due to its risk profile, including potential side effects, its use is limited to specific groups under particular conditions.¹⁶ The WHO emphasizes that while these vaccines are vital tools in controlling the spread of mpox, their availability and use should be accompanied by robust public health measures, including surveillance, contact tracing, and education to ensure comprehensive prevention and control efforts.⁵

Recent advances in vaccine development have led to the creation of multivalent mRNA vaccines, such as BNT166, which have shown promise in preclinical trials for providing broad protection against orthopoxvirus

There are three active mucosal morphologies typically seen in the mouth: ulcerations/erosions without surrounding induration; papules and nodules resembling chancres; and pseudomembranous (sloughy) plaques mimicking candidiasis. All these lesions heal quickly without crust formation or dyspigmentation.



Source: Hospital Clínic de Barcelona, Spain Atlas of mpox lesions: a tool for clinical researchers.



Source: Hospital Clínic de Barcelona, Spain. Atlas of mpox lesions: a tool for clinical researchers.



Source: Evandro Chagas National Institute of Infectious Diseases-Fiocruz (Brazil)

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Source: Atlas of mpox lesions: a tool for clinical researchers, version 1.0, 28 April 2023 WHO/MPX/Clinical/Lesions/2023.1 World Health Organization, 2023



Umbilicated vesicle on Day 4 of MPox infection.



Umbilicated vesicle on Day 4 of MPox infection.

diseases, including mpox. These innovations could offer additional tools for managing future outbreaks. The development of these vaccines is critical as they could provide a more targeted immune response and longer-lasting immunity, which is particularly important for high-risk populations.^{17,18}

Self-Care and Prevention

For individuals diagnosed with mpox, self-care is essential to manage symptoms and prevent further transmission. Patients are advised to isolate until all lesions have healed and scabs have fallen off. During this period, maintaining good hygiene, including frequent handwashing and disinfecting surfaces, is crucial. Infected individuals should avoid close contact with others, particularly those who are immunocompromised, to reduce the risk of spreading the virus.⁵

Public health strategies to prevent mpox include vaccinating high-risk populations, educating the public on recognizing and responding to symptoms, and enforcing robust infection control measures in healthcare settings. For dental professionals, this involves adhering to strict IPC protocols, such as the use of personal protective equipment (PPE), proper sterilization of instruments, and comprehensive environmental cleaning.³ These preventative measures are essential in breaking the chain of transmission, particularly in high-risk environments like dental clinics, where close contact is unavoidable.

Importance to Dental Professionals

Mpox poses unique challenges to dental professionals due to the nature of their work, which involves close contact with patients' faces and mouths. Dental procedures often generate aerosols and droplets, which could potentially carry the mpox virus, increasing the risk of transmission if proper precautions are not taken.¹³ The use of high-speed dental instruments, such as drills, ultrasonic scalers, and air-water syringes, can create a significant aerosol plume that may contain infectious particles, making enhanced protective measures essential.

Additionally, the presence of oral manifestations of mpox complicates infection control efforts in dental settings. Lesions in the oral cavity can act as viral reservoirs, facilitating the spread of the virus during routine dental care. This is particularly concerning given the close proximity required for carrying out dental procedures and the potential for direct exposure to these lesions.¹² The systematic review by Bagde et al. (2023)¹⁰ further underscores the importance of recognizing the oral manifestations, as they not only indicate the presence of mpox but also highlight the potential for significant viral transmission during dental procedures. The review also calls attention to the need for dental professionals to remain vigilant, up-to-date and well-informed about the latest research on mpox and its oral manifestations to ensure effective infection control.

The implications for dental professionals extend beyond the immediate risk of infection. The psychological impact of working in an environment with potential exposure to emerging infectious diseases can lead to increased stress and anxiety among dental staff. It is essential for dental practices to provide adequate training, support, and mental health resources to help staff manage these challenges while maintaining high standards of patient care.⁹

Standard Precautions in Dental Settings

Infection control in dental settings has always been a priority due to the inherent risks associated with aerosol-generating procedures (AGPs). The following standard precautions should be rigorously implemented to prevent the transmission of mpox in dental practices:

1. Hand Hygiene: Hand hygiene is the foundation of infection control in any healthcare setting. Dental

professionals should perform hand hygiene before and after each patient contact, after contact with potentially infectious materials, and after removing PPE. Alcohol-based hand sanitizers or handwashing with soap and water are effective against the mpox virus and should be used consistently.¹⁹

2. **PPE:** The appropriate use of PPE is essential in preventing the spread of mpox in dental settings. This includes wearing gloves, gowns, masks, and eye protection (e.g., goggles or face shields) to protect against contact with infectious materials. N95 respirators or equivalent protection should be worn during AGPs to safeguard against respiratory droplets and potential aerosols that may carry the virus.¹³
3. **Respiratory Hygiene/Cough Etiquette:** Patients should be encouraged to cover their mouths and noses with a tissue or their elbow when coughing or sneezing. Dental practices should ensure that disposable tissues and hand hygiene facilities are readily available in the clinic.²⁰ Patients presenting with symptoms consistent with respiratory infections should be rescheduled if possible, or treated with heightened precautions to prevent potential transmission.¹³
4. **Environmental Cleaning and Disinfection:** Environmental cleaning and disinfection are critical components of infection control in dental practices. Surfaces in dental settings should be cleaned and disinfected using EPA-registered disinfectants that are effective against enveloped viruses, including the mpox virus. High-touch surfaces, such as dental chairs, countertops, and door handles, should be disinfected between patients to minimize the risk of surface-to-person transmission.²¹
5. **Safe Injection Practices:** To prevent cross-contamination, dental practices should use single-dose vials at all times and ensure the safe handling of sharps. Adherence to safe injection practices is essential in reducing the risk of pathogen transmission, particularly in a high-risk environment like a dental clinic.²²

Additional Precautions for Mpox

In addition to standard precautions, dental practices should implement the following additional measures to address the specific risks posed by mpox:

1. **Screening and Triage:** Dental practices should implement screening protocols to identify patients with symptoms of mpox, such as fever, rash, and lymphadenopathy. Patients who present with suspected or confirmed mpox should be rescheduled unless urgent dental care is necessary. In cases where treatment cannot be postponed, strict IPC measures, including enhanced PPE and isolation protocols, should be implemented.⁹
2. **Isolation of Suspected Cases:** If a patient is suspected of having mpox, they should be isolated from other patients and staff immediately. Treatment should be provided in a designated room with adequate ventilation and minimal traffic to reduce the risk of spreading the virus within the clinic.²¹
3. **AGPs:** Given the potential for mpox transmission

through respiratory droplets and aerosols, AGPs should be minimized whenever possible. When AGPs are necessary, enhanced precautions, such as using rubber dams, high-volume evacuators, and pre-procedural mouth rinses with antiviral agents, should be employed to reduce the risk of viral dissemination.²³

4. **Patient and Staff Education:** Educating both patients and dental staff about mpox transmission and prevention is vital to controlling the spread of the virus in dental settings. Staff should be trained on the correct use of PPE, the importance of hand hygiene, and the implementation of IPC measures. Patients should be informed about the signs and symptoms of mpox and advised to notify the clinic if they develop symptoms after their visit.²²

Concluding Remarks

The declaration of mpox as a Public Health Emergency of International Concern by the WHO highlights the urgent need for stringent infection control practices in dental settings. As emerging infectious diseases, like mpox, continue to pose significant public health threats, dental professionals need to be informed and prepared to implement the necessary precautions to protect themselves, their patients, and the broader community. By adhering to recommended guidelines, staying updated on new therapies and developments in mpox research, and conducting thorough oral examinations, dental practices can play a vital role in controlling the spread of the mpox virus during and beyond the current outbreak.

Conflict of Interest

The authors declare that the manuscript was created without any commercial or financial associations that may give rise to a conflict of interest.

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REFERENCES

1. World Health Organization. Monkeypox [Internet]. WHO. World Health Organization; 2023. Available from: <https://www.who.int/news-room/fact-sheets/detail/monkeypox>
2. Hasan S, Saeed S. Monkeypox Disease: An Emerging Public Health Concern in the Shadow of COVID-19 Pandemic: An Update. *Tropical Medicine and Infectious Disease*. 2022 Oct 3;7(10):283.
3. Kang Y, Yu Y, Xu S. Human monkeypox infection threat: A comprehensive overview. *PLOS Neglected Tropical Diseases*. 2023 Apr 20;17(4): e0011246-6.
4. Desingu PA, Rubeni TP, Nagarajan K, Sundaresan NR. Molecular evolution of 2022 multi-country outbreak- causing Monkeypox virus Clade IIb. *iScience*. 2024 Jan 1;27(1):108601-1.
5. World Health Organization. Mpox [Internet]. Who.int. World Health Organization: WHO; 2024. Available from: <https://www.who.int/news-room/fact-sheets/detail/mpox>
6. European Centre for Disease Prevention and Control. Mpox due to monkeypox virus clade I [Internet]. European Centre for Disease Prevention and Control. 2024 [cited 2024 Aug 27]. Available from: <https://www.ecdc.europa.eu/en/news-events/mpox-due-monkeypox-virus-clade-ii#:~:text=According%20to%20the%20Africa%20CDC>
7. Alakunle E, Kolawole D, Diaz-Cánova D, Alele F, Oyelola Adegboye, Moens U, et al. A comprehensive review of monkeypox virus and mpox characteristics. *Frontiers in Cellular and Infection Microbiology*. 2024 Mar 6;14(6):14:1360586.
8. Gandhi P A, Patro SK, Sandeep M, Satapathy P, Shamim MA, Kumar V, et al. Oral manifestation of the monkeypox virus: a systematic review and meta-analysis. *eClinicalMedicine*. 2023 Feb;56(101817):101817.
9. Amato M, Di Spirito F, Boccia G, Fornio D, D'Ambrosio F, De Caro F. Human Monkeypox: Oral Implications and Recommendations for Oral Screening and Infection Control in Dental Practice. *Journal of Personalized Medicine*. 2022 Dec 2;12(12):2000.
10. Bagde H, Dhopte A, Bukhary F, Momenah N, Akhter F, Mahmoud O, et al. Monkeypox and oral lesions associated with its occurrence: a systematic review

- and meta-analysis. F1000Research. 2024 Mar 1;12(964):964–4.
11. Iamaroon A. Oral manifestations of monkeypox: Brief review. Dental and Medical Problems. 2022 Sep 30;59(3):483–7.
 12. Yasmeen S, Noor R. Monkeypox: red alert for the dentists? Journal of Integrative Medicine and Public Health. 2024 Jan 1;3(1):4–8.
 13. Samaranyake L, Anil S. The Monkeypox Outbreak and Implications for Dental Practice. International Dental Journal. 2022 Aug;72(5).
 14. Diana Emilia Martínez-Fernández D, Fernández-Quezada D, Casillas-Muñoz F, Josué Carrillo-Ballesteros F, Ortega-Prieto AM, Jiménez-Guardeño JM, et al. Human Monkeypox: A Comprehensive Overview of Epidemiology, Pathogenesis, Diagnosis, Treatment, and Prevention Strategies. Pathogens. 2023 Jul 18;12(7):947–7.
 15. Kabir F, Plaisance E, Portman A, Marfo A, Cirrincione K, Silva D, et al. Mpox Viral Lineage Analysis and Technique Development Using Next Generation Sequencing Approach. The Journal of Infectious Diseases. 2023 Nov 16;229(Supplement_2):S163–71.
 16. CDC. Mpox Treatment Information for Healthcare Professionals [Internet]. Centers for Disease Control and Prevention. 2024 [cited 2024 Aug 27]. Available from: <https://www.cdc.gov/poxvirus/mpox/clinicians/treatment.html>
 17. CDC. Vaccination [Internet]. Centers for Disease Control and Prevention. 2024. Available from: <https://www.cdc.gov/poxvirus/mpox/interim-considerations/overview.html>
 18. Zuiani A, Dulberger CL, Silva, Marquette M, Lu YJ, Palowitch GM, et al. A multivalent mRNA monkeypox virus vaccine (BNT166) protects mice and macaques from orthopoxvirus disease. Cell. 2024 Mar 1;187(6):1363-1373.e12.
 19. CDC. Clinical Safety: Hand Hygiene for Healthcare Workers [Internet]. Clean Hands. 2024. Available from: <https://www.cdc.gov/clean-hands/hcp/clinical-safety/index.html#:~:text=Hand%20hygiene%20protects%20both%20healthcare>
 20. CDC. Respiratory Hygiene/Cough Etiquette in Healthcare Settings [Internet]. Centers for Disease Control and Prevention. 2019 [cited 2024 Aug 27]. Available from: <https://www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm>
 21. Salah A, Al-Otaibi M, Al-dhmashi A, Mariee A. Infection control practices and approaches in the dentistry field; a review. Journal of Bioscience and Applied Research/Journal of Bioscience and Applied Research. 2024 Mar 1;0(0).
 22. CDC. Infection Control in Healthcare Settings [Internet]. Centers for Disease Control and Prevention. 2024 [cited 2024 Aug 28]. Available from: <https://www.cdc.gov/poxvirus/mpox/clinicians/infection-control-healthcare.html>
 23. WHO. CLINICAL MANAGEMENT AND INFECTION PREVENTION AND CONTROL FOR MONKEYPOX Interim rapid response guidance [Internet]. 2022. Available from: https://iris.who.int/bitstream/handle/10665/355798/WHO-MPX-Clinical_and_IPC-2022.1-eng.pdf?sequence=1

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