



衛生防護中心
Centre for Health Protection

**Scientific Committee on Emerging and Zoonotic Diseases
and
Scientific Committee on Vaccine Preventable Diseases**

**Consensus Interim Recommendations on the
Use of Monkeypox Vaccines in Hong Kong
(As of 16 June 2022)**

Introduction

On 16 June 2022, the Scientific Committee on Vaccine Preventable Diseases (SCVPD) and the Scientific Committee on Emerging and Zoonotic Diseases (SCEZD) under the Centre for Health Protection of the Department of Health (JSC) convened a meeting to discuss the interim recommendations related to the use of monkeypox vaccines in Hong Kong.

Global Situation

2. Since 13 May 2022, monkeypox cases has been reported to the World Health Organization (WHO) that are not endemic for monkeypox virus. This is the first time that monkeypox cases and clusters are reported concurrently in non-endemic and endemic countries in widely disparate geographical areas. According to the WHO, the sudden appearance and wide geographic scope of many apparently sporadic cases indicate that widespread human-to-human transmission is already underway, and the virus may have been circulating unrecognized for several weeks or longer. Meanwhile, there have been 59 confirmed cases and 1536 suspected cases with 72 deaths reported from eight countries in the African region as of 8 June 2022.



3. As of 8 June 2022, 1285 laboratory confirmed cases of monkeypox have been reported to the WHO from 28 countries across four WHO regions where monkeypox is not usually or had not previously been reported. No associated deaths from these countries have been recorded. Given the number of countries across several WHO regions reporting cases of monkeypox, WHO stated that it is highly likely that other countries would identify cases and there would be further spread of the virus.

4. In this multi-country outbreak, cases have mainly, but not exclusively, been identified amongst men who have sex with men. Many cases in this outbreak are not presenting with the classically described clinical picture for monkeypox (fever, swollen lymph nodes, followed by centrifugal rash). Atypical features described include presentation of only a few or even just a single lesion, lesions that begin in the genital or perineal/perianal area and not spread further, lesions appearing at different (asynchronous) stages of development, and the appearance of lesions before the onset of fever and other constitutional symptoms.

Local Situation

5. No confirmed case of monkeypox has been identified in Hong Kong so far. Upon gazette on 10 June 2022, monkeypox has been listed as a statutory notifiable disease in Hong Kong. The Government also launched a preparedness and response plan for monkeypox, and plans to procure monkeypox vaccines for contingency purpose.

Vaccines preventing Monkeypox

6. Vaccine formulated for smallpox provides cross-protection afforded for the immune response to orthopoxviruses, including monkeypox which is closely related to smallpox virus. Past data from Africa suggests that the smallpox vaccine is at least 85% effective in preventing monkeypox. Following the eradication of smallpox declared by the WHO in May 1980, the first-generation of smallpox vaccine is no longer available with the cease of smallpox vaccination programmes worldwide (since 1 January 1981 in Hong Kong).

7. Currently, two types of vaccines are available overseas for use to prevent monkeypox, namely the second generation smallpox vaccine (e.g. ACAM-2000) and the third generation vaccine (e.g. LC16 or MVA-BN). ACAM2000 is a live vaccinia virus containing vaccine whereas MVA-BN is a live attenuated virus (modified vaccinia ankara) containing vaccine. Vaccine efficacy of ACAM2000 was assessed in clinical trials by comparing the immunologic response to another previously live vaccinia virus smallpox vaccine, Dryva. ACAM2000 was non-inferior to Dryva with regard to the strength of the neutralizing antibody immune response. It should be noted that serious complications may follow either primary live vaccinia smallpox vaccination or revaccination with a second generation vaccine. An example of such complication is myocarditis and/or pericarditis (suspect cases 5.7 per 1000 primary vaccinees). Also, historically, death following vaccination with live vaccinia virus is a rare event. Vaccine effectiveness of MVA-BN against monkeypox was inferred from clinical and non-clinical studies with multiple lines of evidence that the immune response to MVA-BN provided protection against different orthopoxviruses, and specifically monkeypox.

Recommendation

8. Having reviewed the latest scientific evidence, recommendations by the WHO and overseas health authorities and taking local context into account, the JSC considered that **mass vaccination is not recommended** for monkeypox. **First- or second-generation smallpox vaccines are not recommended** for use in the context of monkeypox.

9. Subject to availability of monkeypox vaccines, **post-exposure prophylaxis for contacts of cases is recommended**, in the order of exposure risk from high to low, with an appropriate third-generation vaccine, ideally within four days of first exposure (and up to 14 days in the absence of symptoms) to prevent the onset of disease.

10. **Pre-exposure prophylaxis for the following target groups could be considered** (prioritisation would depend on the availability of vaccines and situation) when monkeypox vaccine is available:

- (a) healthcare workers responsible for caring of patients with confirmed monkeypox
- (b) laboratory personnel working with zoonotic pox viruses (such as monkeypox or genetically modified vaccinia), and others whose work involves an identifiable risk of exposure to zoonotic pox viruses
- (c) animal care personnel with high risk of exposure
- (d) staff responsible for environmental decontamination at risk for occupational exposure to monkeypox
- (e) other high risk groups in the community when there is documented transmission chain within such high risk groups

11. The number of doses required, dosing interval and contraindication for use of monkeypox vaccines should follow the manufacturer's recommendations. In principle, one dose would be sufficient in persons with past history of smallpox vaccination. Meanwhile, vaccines for preventing monkeypox should be given at least 4 weeks before or after an mRNA COVID-19 vaccine, if possible.

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