Monkeypox virus–HIV co-infections in Sierra Leone

The ongoing monkeypox virus clade IIb outbreak in Sierra Leone has caused over 4800 confirmed cases in the first half of 2025, 5% of which are in children.[1] Although the infection in most patients is not severe, mpox is often debilitating and life-threatening for those with advanced HIV disease. Caring for these patients is medically challenging and heartbreaking in equal measure.

The national HIV prevalence in Sierra Leone is estimated at 1·7%, with higher rates in the Western Area (2·0–3·4%)—the epicentre of this mpox outbreak.[2] However, across three facilities where all patients are screened on admission (the Médecins Sans Frontières-supported Freetown City Council Mpox Treatment Center [FCC], the Police Training School, and Connaught hospital), HIV was detected in 15 (13%) of 112 patients, 73 (17%) of 435 patients, and 58 (83%) of 70 patients with mpox, respectively. None of the HIV-positive patients were children. Most of these patients were either newly diagnosed with HIV (eight [53%] of 15 patients from the FCC) or had interrupted treatment (five [33%] of 15 patients at the FCC), and many of them presented with CD4 counts less than 200 cells per mm^3 (six [38%] of 15 patients at the FCC, 21 [36%] of 58 patients at the Police Training School, and 40 [77%] of 52 patients at Connaught hospital). As of August, 2025, 40 (82%) of the reported 49 mpox-related deaths were in people living with HIV.

From our experience responding to this outbreak, it is clear that mpox presents differently in people with advanced HIV disease. By comparison with immunocompetent individuals, this cohort demonstrates distinctive clinical features, including often larger (>1 cm) but relatively few lesions, and extensive necrosis (figure A–C). Large, initially hard, subcutaneous nodules of unclear pathophysiology are also present in some patients, most frequently located on the extremities (figure D).

A main reason for poor outcomes is delayed care seeking due to stigma, lack of awareness, and fear. Additionally, many questions remain unanswered in monkeypox virus–HIV coinfection. Firstly, what are the roles of immune reconstitution inflammatory syndrome (IRIS) and opportunistic infections? The updated 2025 WHO mpox guidelines recommend immediate initiation of antiretroviral therapy for patients who are newly diagnosed or with treatment interruption,[3] and we adhere to this advice. However, IRIS was suspected in up to 25% of patients in previous cohorts,[4] and it is unclear to what extent IRIS contributes to worsening of the patient's clinical condition, as differentiating it from other causes of deterioration is challenging with the diagnostic tools available.

Secondly, what is the duration of infectiousness of mpox in patients with advanced HIV disease? Case reports describe positive monkeypox virus PCRs for more than 11 months post-infection in patients with advanced HIV disease.[5] The current criteria for terminating isolation for these patients are "all lesions crusted, crust fallen off and a new layer of skin formed". These criteria are difficult to evaluate in severely immunocompromised patients with open wounds that persist for months. This uncertainty leads to prolonged isolation, which could pose a serious barrier to other care such as surgery.

Thirdly, what is the impact of mpox vaccination in patients with advanced HIV disease? Over 11 000 people living with HIV have been vaccinated as part of

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Figure: **Images of mpox disease in patients with advanced HIV disease**
A 36-year-old woman with symptom debut 3 weeks before admission (CD4 count 26 cells per mm^3) had photographs taken on admission showing multiple large and necrotic lesions involving the genital area (A) and the left hand (B). (C) A 35-year-old man with symptom debut 4 weeks before admission (CD4 count 90 cells per mm^3) had a photo taken a few days after admission, showing extensive necrosis in the genital area. (D) A 37-year-old man with symptom debut 9 weeks before admission (CD4 count 101 cells per mm^3) had a photo taken on admission showing a subcutaneous, hard, nodular lesion on the left lower leg. The patients have consented to the use of the images for publication.

the outbreak response in Sierra Leone. Although vaccine immunogenicity appears to be broadly preserved in people living with HIV, evidence is insufficient for those with advanced disease (CD4 count <200 cells per mm^3), in whom efficacy and duration of protection remain uncertain.[6] Effective therapeutic options for these patients are desperately needed.

Finally, what are the effects of antivirals? Although tecovirimat did not show any effect on the healing of mpox lesions in the general population affected by monkeypox virus clade Ia in the PALM007 trial,[7] it is likely that the viral replication phase for which the drug could have an effect is considerably prolonged in patients with advanced HIV disease. Therefore, the US Centers for Disease Control and Prevention and other institutions recommend tecovirimat for patients with CD4 counts less than 100 cells per mm^3.[8] Unfortunately, as of Aug 20, 2025, no patients in Sierra Leone had received any experimental treatments, as tecovirimat and brincidofovir are still not available in the country.

Mpox is recognised as an opportunistic disease in HIV, and integration of active mpox surveillance and care into HIV services is key. Ensuring continuity of HIV programmes (amid worldwide budget cuts impeding access to HIV diagnostics and care across the region) is crucial to preventing new infections, improving viral suppression rates, and reducing the pool of patients at risk of severe mpox disease.

Clinical guidelines inadequately address the management of severe mpox in patients with advanced HIV disease, particularly regarding necrotic wound care and the use of antivirals. There is an urgent need for research to evaluate the efficacy of monkeypox virus-specific antiviral therapies in these patients. Even as the current outbreak comes under better control, we expect to continue to see severe mpox cases co-infected with HIV. It is crucial that we expand availability of and access to effective interventions, leaving no one behind.

We declare no competing interests.

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