# Epidemiologic and Clinical Characteristics of MPOX Outbreak-Dominican Republic: An overview of confirmed cases and future insights

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## Background

Monkeypox virus (MPOX) widespread outbreak identified in 2022 represents a new challenge for public health programmes. MPOX has been identified in several countries including the Dominican Republic. This virus´ propensity to spillover into humans and sustained human-to-human transmission calls for an integrated approach and its inclusion in rutinary differential diagnosis for several infectious agents. This study aims to describe the distribution of MPOX cases, clinical characteristics, and future insights in the Dominican Republic.

## Methods

Data detailing MPOX infections was collected during passive and active surveillance across the country. solicited to the Department of Epidemiology within the Ministry of Health. First case reported in June 2022.

## Results

As on March 2023, a total of 295 confirmed and probable Mpox cases were reported in the DR, predominantly among men 61% (n=180) of the total cases. Mean age of confirmed cases was 26.5 (range 1-73) (19-44 yo, 47.1%). Most of mpox cases (98.6% (n=70) during the current outbreak have been self-limited, with less severe illness, and only one fatality was reported. The median interval from symptom onset was 14 days (IQR = 7–35 days). Hospitalized care was required in 7% of cases. Among confirmed cases, 8.5% were immunocompromised because of HIV (Table 1).
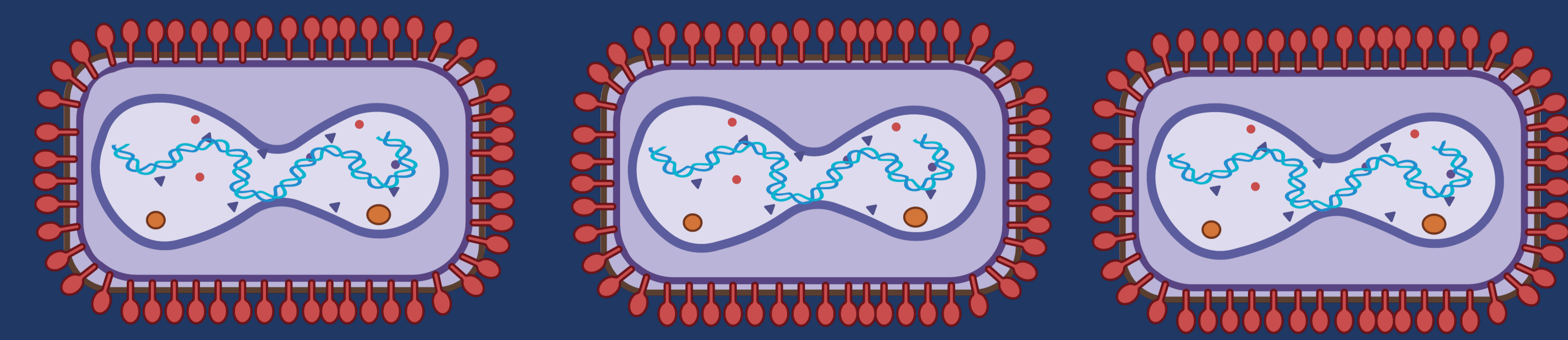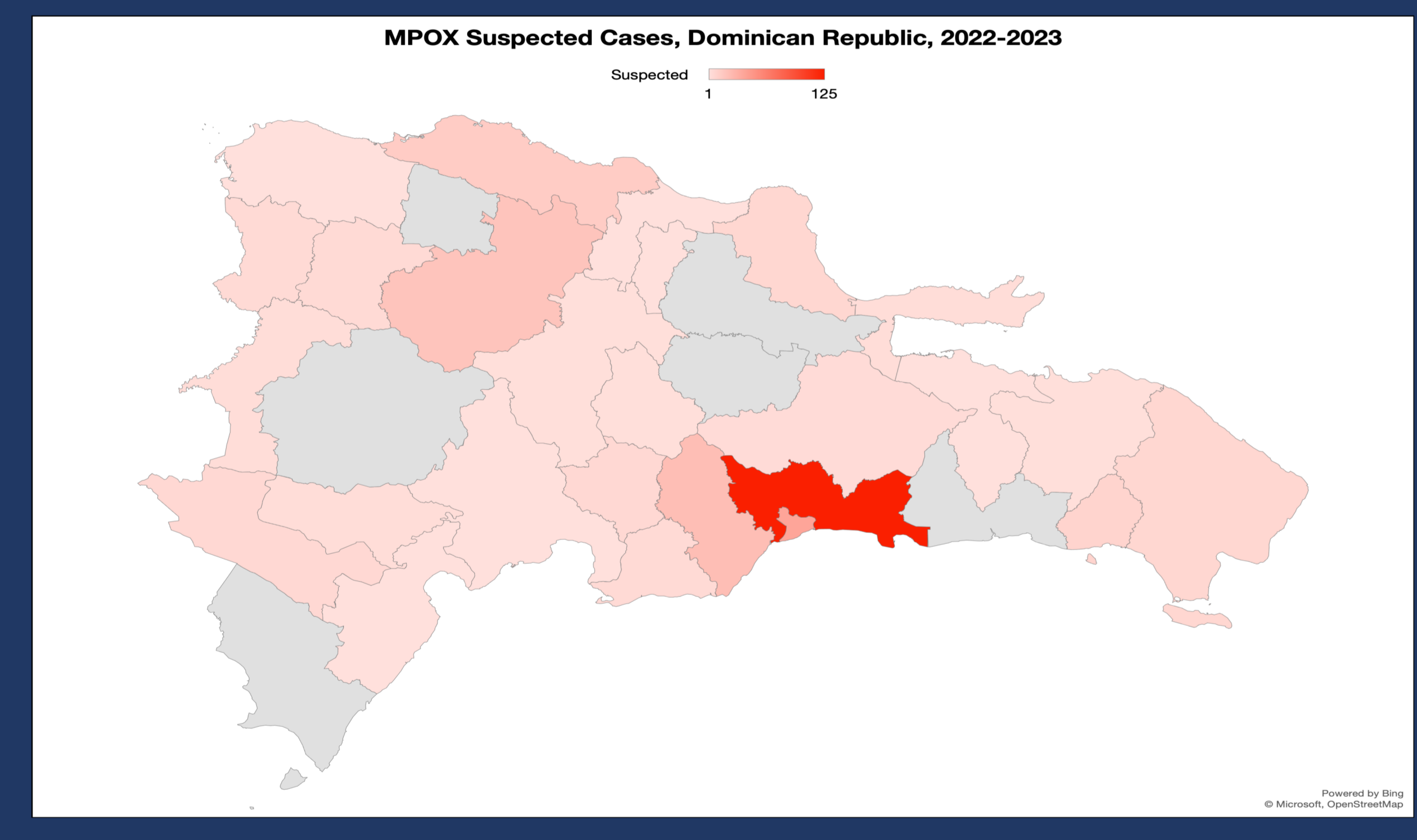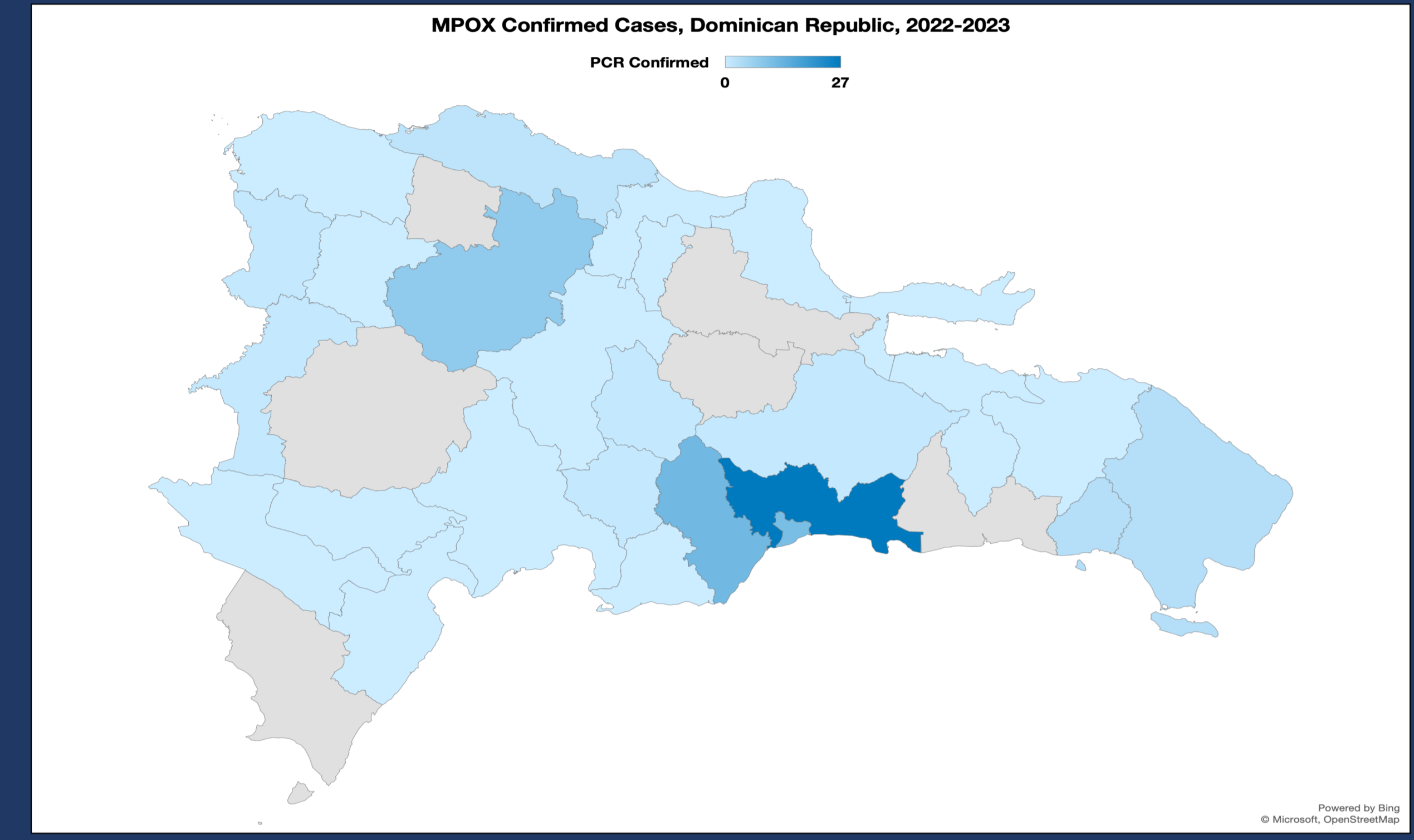
## Conclusions

Mpox outbreak in the Dominican Republic showed a uniform distribution across sexes and a predilection for younger ages. This data suggest that community level circulation of the pathogen might explain the dynamics of the Mpox outbreak rather than circulation within undetected at-risk populations, such as MSM or transgendered persons (like in most of non-Africa cases). Since passive surveillance implies a late-stage detection, active efforts shall be enhanced to detect early stages cases and the contacts of these cases. Further studies should review the negative cases to determine the effectiveness of both surveillance practices with the hopes of enhancing detection methods for future outbreaks.

**Table 1. Epidemiologic and Clinical Characteristics of PCR-confirmed MPOX Cases-Dominican Republic (N=71)**

| Characteristics | n | % |
|---|---|---|
| **Demographics** | | |
| Mean age, yrs (range) | 26.5 (1-73) | |
| **Sex** | | |
| Male | 48 | 32 |
| Female | 23 | 68 |
| **Age distribution** | | |
| 0-18 | 16 | 22.5 |
| 19-44 | 38 | 53.5 |
| 45-64 | 12 | 17 |
| 65 or older | 1 | 1.4 |
| **Clinical** | | |
| Interval from illness onset to testing, days, median (IQR) | 14 days (IQR = 7–35 days) | |
| **HIV-positive or immunocompromised** | 9 | 13 |
| Yes, HIV-positive | 6 | 8.5 |
| Yes, other immunocompromising conditions | 3 | 4.2 |
| No | 62 | 87.3 |
| **Type of Care** | | |
| Ambulatory | 66 | 93 |
| Hospitalized** | 5 | 7 |

*Non-HIV immunocompromising conditions included renal transplant (one) and uncontrolled diabetes
**Only one HIV-positive person required in-hospital care.


MPOX Confirmed Cases, Dominican Republic, 2022-2023
PCR Confirmed 0 — 27


MPOX Suspected Cases, Dominican Republic, 2022-2023
Suspected 1 — 125