

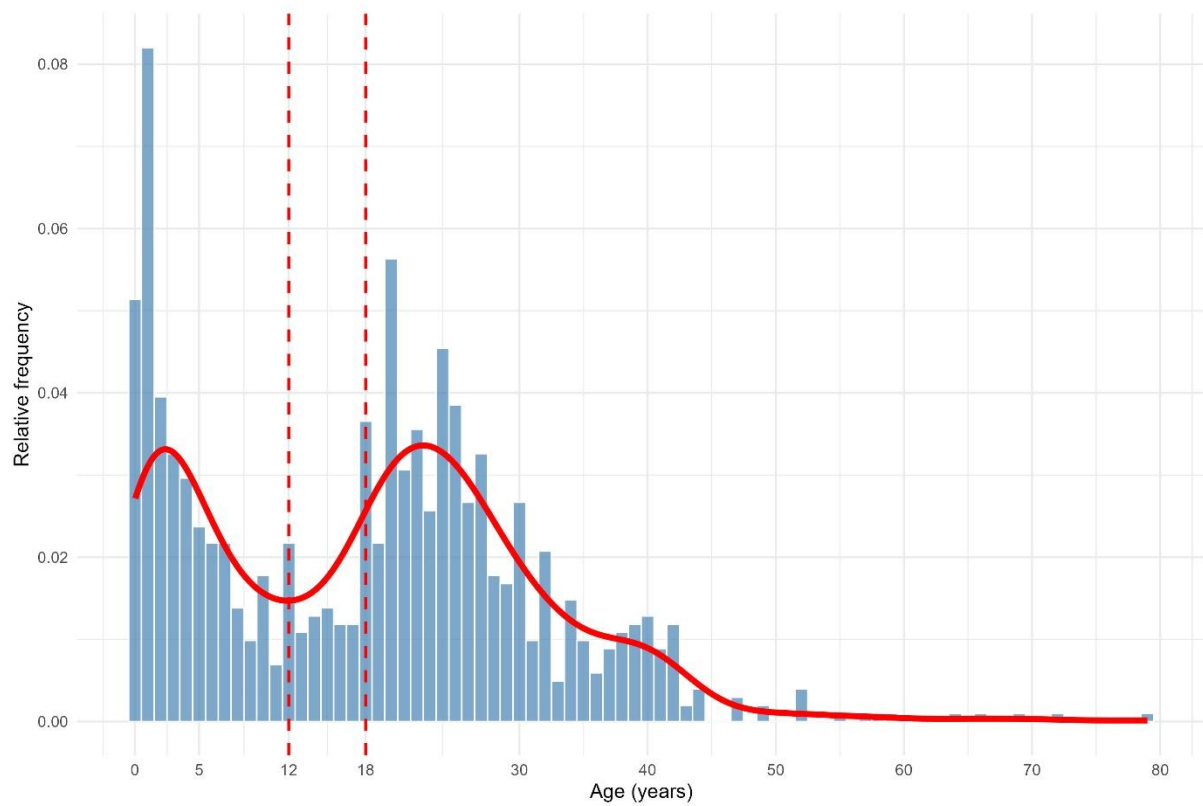
**Supplementary Table S1. Number of participants from Kamituga and Goma in specific categories used for the analyses.**

|                                                                                 | Kamituga (N = 650) | Goma (N = 363) |
|---------------------------------------------------------------------------------|--------------------|----------------|
| <b><i>Demographics</i></b>                                                      |                    |                |
| Female                                                                          | 328 (50.46%)       | 175 (48.21%)   |
| Adults ≥18y                                                                     | 417 (64.15%)       | 161 (44.35%)   |
| Children 12-17y                                                                 | 39 (6.00%)         | 40 (11.02%)    |
| Children <12y                                                                   | 194 (29.85%)       | 162 (44.63%)   |
| Children <15y                                                                   | 214 (32.92%)       | 187 (51.52%)   |
| <b><i>Contact tracing</i></b>                                                   |                    |                |
| Symptom onset available                                                         | 638 (98.15%)       | 362 (99.73%)   |
| Reported contact with an mpox patient                                           | 344 (52.92%)       | 71 (19.56%)    |
| Reported contact with another study participant                                 | 157 (24.15%)       | 16 (4.41%)     |
| Reported contact with only one study participant                                | 110 (16.92%)       | 14 (3.86%)     |
| Reported only one contact + known date of last contact                          | 81 (12.46%)        | 33 (9.09%)     |
| <b><i>Number of sexual contacts in serial interval estimation (N = 110)</i></b> |                    |                |
| Scenario 1                                                                      | 50 (45.46%)        | NA             |
| Scenario 2                                                                      | 48 (43.64%)        | NA             |
| Scenario 3                                                                      | 49 (44.55%)        | NA             |
| <b><i>Number of children in serial interval estimation (N = 110)</i></b>        |                    |                |
| Children <12y                                                                   | 22 (20.00%)        | NA             |
| Children <15y                                                                   | 25 (22.73%)        | NA             |
| <b><i>Cycle threshold (Ct) values</i></b>                                       |                    |                |
| Ct value available                                                              | 647 (99.54%)       | 313 (86.23%)   |

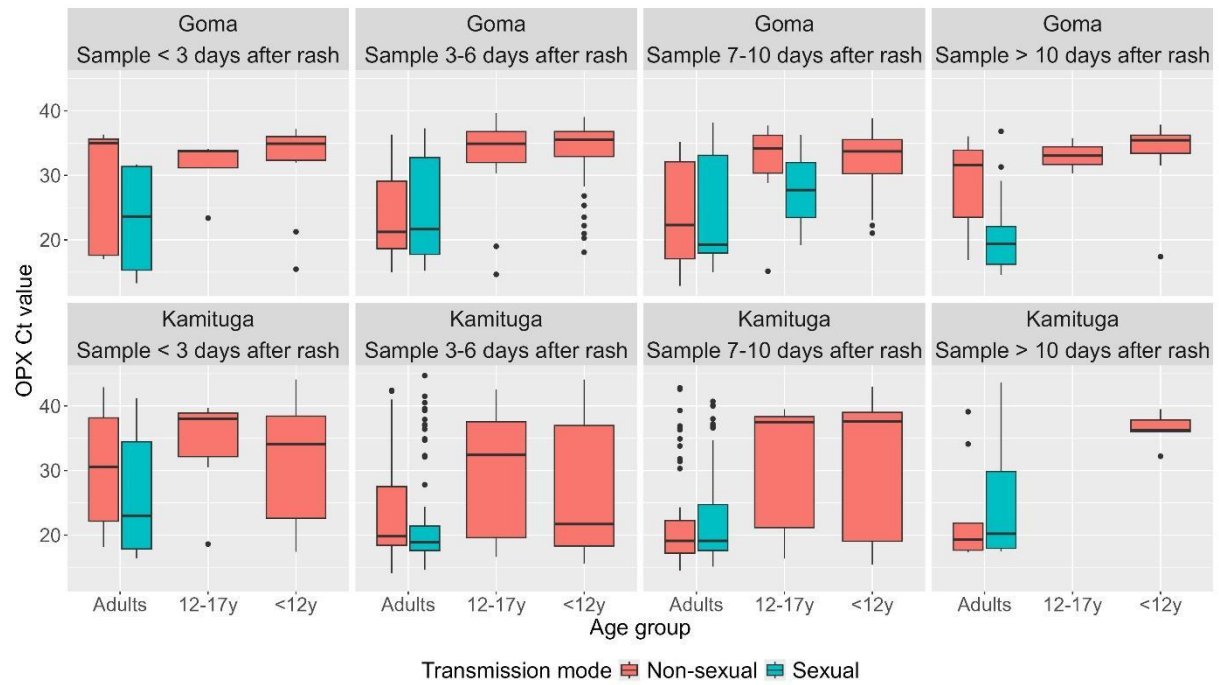
**Supplementary Table S2 . Estimated mean and standard deviation (SD) of the incubation period, based on a Weibull distribution accounting for censoring and right truncation. The lower bound of the exposure window was varied to be 21, 15, or 25 days before symptom onset.**

|                        | Mean (95% CrI)                        | SD (95% CrI)       | Mean (95% CrI)                     | SD (95% CrI)        |
|------------------------|---------------------------------------|--------------------|------------------------------------|---------------------|
| <i>Overall</i>         |                                       |                    |                                    |                     |
| <b>21 days</b>         | 9.56 (8.22 - 11.02)                   | 5.55 (4.60 - 6.84) |                                    |                     |
| <b>15 days</b>         | 8.12 (7.13 - 9.17)                    | 4.18 (3.56 - 5.05) |                                    |                     |
| <b>25 days</b>         | 10.59 (8.97 - 12.34)                  | 6.58 (5.44 - 8.17) |                                    |                     |
|                        | <i>Sexual transmission</i>            |                    | <i>Non-sexual transmission</i>     |                     |
| <b>Scenario 1</b>      | <i>N = 60</i>                         |                    | <i>N = 54</i>                      |                     |
| <b>21 days</b>         | 8.51 (6.84 - 10.54)                   | 5.06 (3.79 - 7.02) | 10.81 (8.75 - 12.96)               | 5.65 (4.41 - 7.65)  |
| <b>15 days</b>         | 7.52 (6.23 - 8.95)                    | 4.01 (3.19 - 5.33) | 8.95 (7.49 - 10.43)                | 4.16 (3.31 - 5.56)  |
| <b>25 days</b>         | 9.73 (7.70 - 12.23)                   | 6.38 (4.82 - 8.92) | 11.72 (9.40 - 14.34)               | 6.53 (5.02 - 9.03)  |
| <b>Scenario 2</b>      | <i>N = 48</i>                         |                    | <i>N = 66</i>                      |                     |
| <b>21 days</b>         | 8.59 (6.75 - 10.91)                   | 5.19 (3.79 - 7.51) | 10.42 (8.57 - 12.41)               | 5.57 (4.45 - 7.34)  |
| <b>15 days</b>         | 7.55 (6.12 - 9.17)                    | 4.13 (3.22 - 5.73) | 8.68 (7.31 - 10.06)                | 4.10 (3.34 - 5.32)  |
| <b>25 days</b>         | 9.13 (7.02 - 11.91)                   | 5.83 (4.04 - 8.72) | 11.68 (9.54 - 14.07)               | 6.74 (5.33 - 8.91)  |
| <b>Scenario 3</b>      | <i>N = 53</i>                         |                    | <i>N = 61</i>                      |                     |
| <b>21 days</b>         | 8.72 (6.92 - 10.88)                   | 5.10 (3.75 - 7.21) | 10.38 (8.48 - 12.42)               | 5.72 (4.53 - 7.69)  |
| <b>15 days</b>         | 7.65 (6.29 - 9.17)                    | 4.02 (3.18 - 5.44) | 8.64 (7.22 - 10.09)                | 4.23 (3.41 - 5.56)  |
| <b>25 days</b>         | 9.28 (7.18 - 11.92)                   | 5.74 (4.02 - 8.36) | 11.62 (9.39 - 14.08)               | 6.91 (5.42 - 9.35)  |
| <b>Non-sexual (S2)</b> | <i>Child (&lt;18y) secondary case</i> |                    | <i>Adult (≥18y) secondary case</i> |                     |
| <b>21 days</b>         | 11.41 (8.95 - 14.04)                  | 4.49 (3.35 - 6.31) | 10.14 (7.33 - 13.96)               | 7.02 (4.83 - 12.39) |
| <b>15 days</b>         | 9.24 (7.49 - 10.92)                   | 2.90 (2.10 - 4.07) | 8.69 (6.47 - 11.42)                | 5.47 (3.88 - 9.33)  |
| <b>25 days</b>         | 13.28 (10.16 - 16.44)                 | 5.83 (4.51 - 8.06) | 10.98 (7.78 - 15.44)               | 8.05 (5.36 - 15.04) |
| <b>Adults only</b>     | <i>Sexual transmission (S1)</i>       |                    | <i>Non-sexual transmission</i>     |                     |
| <b>21 days</b>         | 8.44 (6.54 - 10.82)                   | 5.23 (3.76 - 7.72) | 10.13 (7.33 - 13.92)               | 6.99 (4.79 - 12.71) |
| <b>15 days</b>         | 6.81 (5.19 - 8.54)                    | 4.21 (3.25 - 5.87) | 7.65 (5.12 - 10.23)                | 5.45 (3.89 - 9.44)  |
| <b>25 days</b>         | 8.95 (6.80 - 11.85)                   | 5.86 (4.03 - 8.97) | 10.98 (7.76 - 15.51)               | 8.05 (5.33 - 14.99) |
| <b>Gender</b>          | <i>Male</i>                           |                    | <i>Female</i>                      |                     |
| <b>21 days</b>         | 9.07 (7.23 - 11.27)                   | 5.72 (4.35 - 8.08) | 10.22 (8.38 - 12.26)               | 5.26 (4.13 - 7.02)  |

**Supplementary Figure S1. Age distribution of MPXV-infected individuals.** Bar plot of the age distribution of 1013 MPXV-infected individuals from Kamituga and Goma, with the density overlaid in red. Vertical dashed red lines indicate the cutoffs for children and adults. Bars represent the relative frequency (density) of participants by age, rather than raw counts.



**Supplementary Figure S2. OPX-Ct values.** OPX-Ct (cycle threshold) values by study site, transmission mode, age group, and time between rash onset and sample date (N = 960). Lower Ct values indicate a higher viral load.



**Supplementary Figure S3. MCMC convergence.** Trace plots of the parameters of the Bayesian regression model for the serial interval.

