Supplementary material for

“Estimates of mpox effective reproduction number in Spain, April-August 2022”

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**Sensitivity analysis**

Figure S1 shows the variations in Rt estimate for different choices of smoothing window. As expected, wider windows lead to smoother curves, while shorter curves yield noisier estimates.



Figure S1. Rt curves resulting from a sensitivity analysis on the length of the smoothing window, ranging from a 3- to a 13-day long window.

**Mobility-based communities**

Rt estimates were computed for “communities” in Spain, based on a mobility-based analysis [30]. Table S1 shows the cumulative number of mpox cases reported at each of these communities during the study period. Figures S2 and S3 show the geographic disitribution of the communities and their epidemic curves, respectively. Figure 4 shows Rt estimates for each of these communities, computed from the series of cases shown in Figure S3.

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| Community | Provinces | Number of MPX cases, April 25 – August 19, 2022 |
| Canary Islands | Las Palmas, Santa Cruz de Tenerife | 143 |
| Central East | Albacete, Alicante, Ciudad Real, Cuenca, Guadalajara, Illes Balears, Madrid, Soria, Toledo, Valencia | 2796 |
| Central West | Asturias, Ávila, Cáceres, León, Palencia, Salamanca, Segovia, Valladolid, Zamora | 113 |
| North | Araba, Bizkaia, Burgos, Cantabria, Guipuzkoa, Navarra, La Rioja  | 264 |
| Northeast | Barcelona, Castellón, Girona, Huesca, Lleida, Tarragona, Teruel, Zaragoza | 1925 |
| Northwest | A Coruña, Lugo, Orense, Pontevedra | 98 |
| South | Almería, Badajoz, Cádiz, Córdoba, Granada, Huelva, Jaén, Málaga, Murcia, Sevilla | 824 |

Table S1. Mobility-based communities in Spain, provinces in each of these communities, and cumulative number of MPX cases during April 25 – August 19, 2022.



Figure S2. Mobility-based “communities” in Spain, based in the results in [30].



Figure S3. MPX cases by mobility-based community in Spain, April 25 - August 19, 2022.