

Appendix C

Community transmission of SARS-CoV-2 in the first weeks of the COVID-19 pandemic and its association with adjusted excess death rates in the regions of Spain

The date of reporting the first 100 confirmed cases has been used as the start date of an epidemic with a critical mass of cases demonstrating community transmission.¹

Figure C.1 illustrates the cumulative cases of COVID-19 by number of days since 22 January 2020, the date on which WHO recognised human-to-human transmission of SARS-CoV-2,² in three selected regions of Spain with high, moderate, and no excess death rates. The days to reach 100 cases of COVID-19 represent differences in the timing of community circulation of the virus: 22 days in Madrid, 38 days in the Community of Valencia and 44 days in the Canary Islands. Although the Canary Islands reported the first confirmed case in Spain, case detection, contact tracing and quarantines succeeded in delaying community transmission. In the Valencian Community, the virus was introduced by a group of people attending a football game in northern Italy, but these subjects were tested on their return, cases were detected and isolated and contacts were traced and quarantined. These curves suggest that intense surveillance activities in the Valencian Community and the Canary Islands delayed community transmission for a few days or weeks, which was essential to prepare primary care and hospital care services and avoid hospital collapse. In Madrid, where we found no evidence of such intense epidemiologic surveillance, community transmission became widespread by mid-February,³ primary care and many regional hospitals were rapidly overwhelmed and more than 500 COVID-19 daily deaths were reported during the peak mortality period in late March.

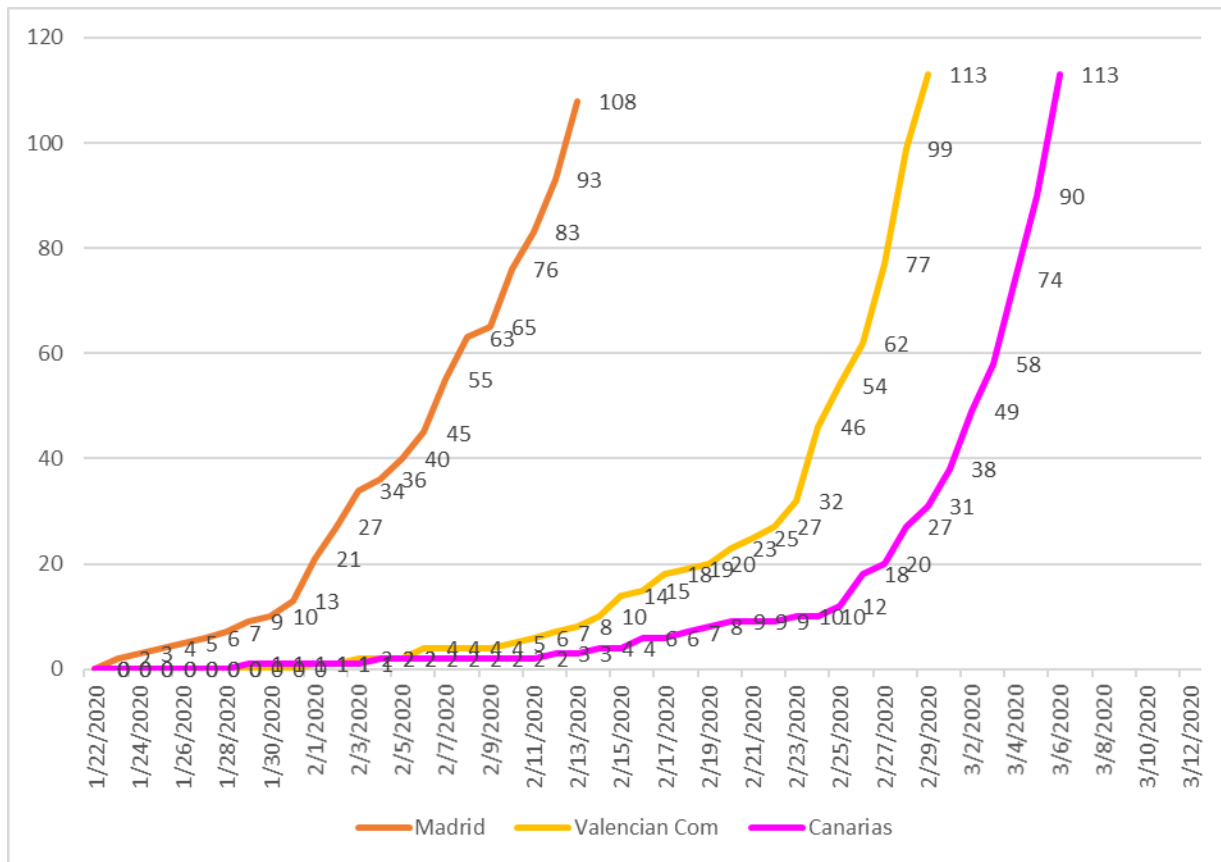


Figure C.1. First 100 COVID-19 cases since 22 January 2020 in selected regions in Spain. (Source: Epidemiology National Centre: <https://cnecovid.isciii.es/covid19/>.)

References

1. Ylli A, Wu YY, Burazeri G, et al. The lower COVID-19 related mortality and incidence rates in Eastern European countries are associated with delayed start of community circulation. *PLoS One*. 2020;15:e0243411.
2. World Health Organization. Novel coronavirus (2019-nCoV). Mission summary: WHO Field Visit to Wuhan, China 20-21 January 2020. 2020. (Accessed on 25/06/2024.) Available at: <https://www.who.int/china/news/detail/22-01-2020-field-visit-wuhan-china-jan-2020>.

3. Dirección General de Salud Pública, Consejería de Sanidad, Comunidad de Madrid. Informe epidemiológico. Vigilancia de COVID-19. Datos acumulados hasta el 10 de mayo de 2020. Red de Vigilancia Epidemiológica. Última actualización 2 de agosto de 2020. (Accessed on 25/06/2024.) Available at: https://www.comunidad.madrid/sites/default/files/doc/sanidad/epid/informe_historico_hasta_10mayo_covid_actualizado_4-8-2020.pdf.