

Heat-related mortality amplified during the COVID-19 pandemic

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Supplementary Material

Daily mortality (older age groups) - Portugal

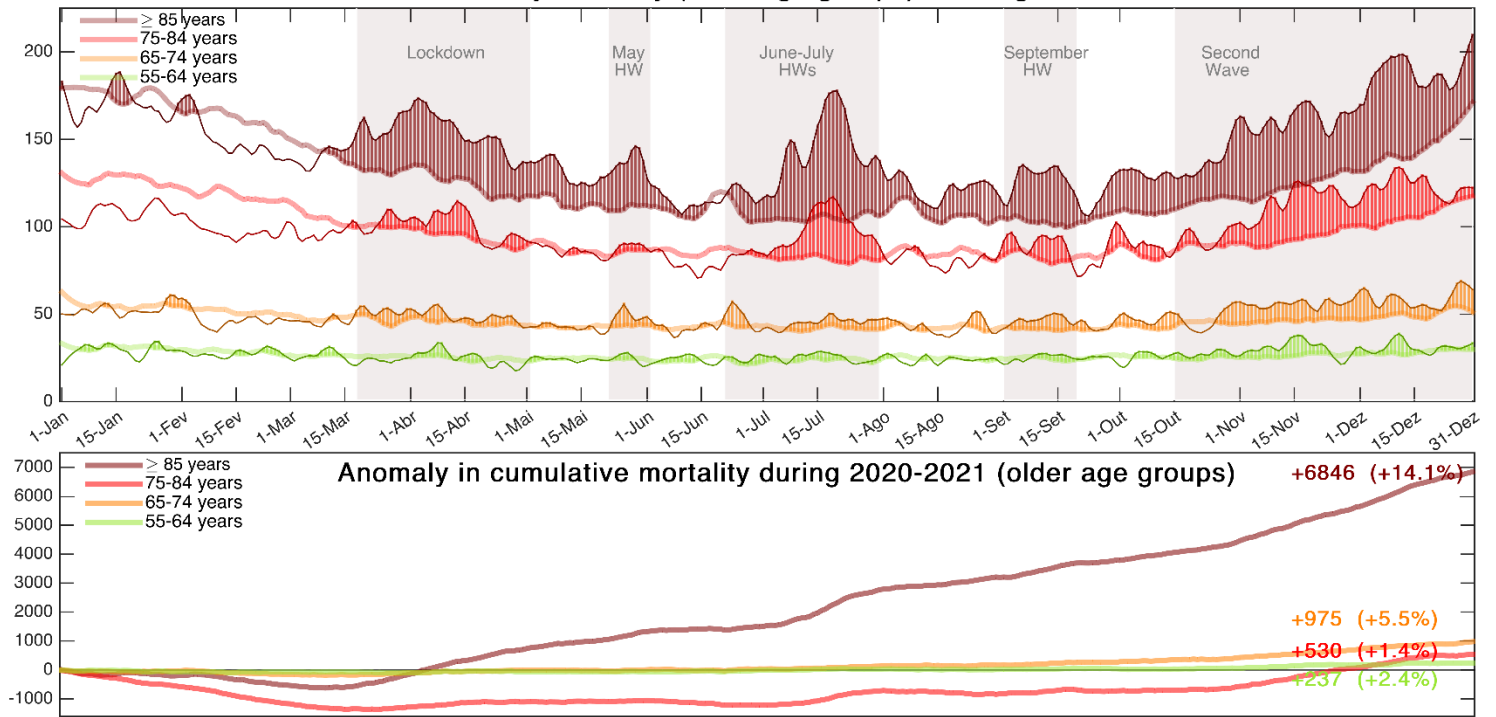


Figure S1 Mortality in older age groups - Top) Evolution of daily mortality in Portugal during 2020 distinguishing age groups above 55 years old. Shaded areas denote values above the average 2014-2019 reference period (represented by the thicker lines). Bottom) Same as above, but only for cumulative mortality anomalies.

Temperature anomaly VS mortality anomaly (Portugal 2020)

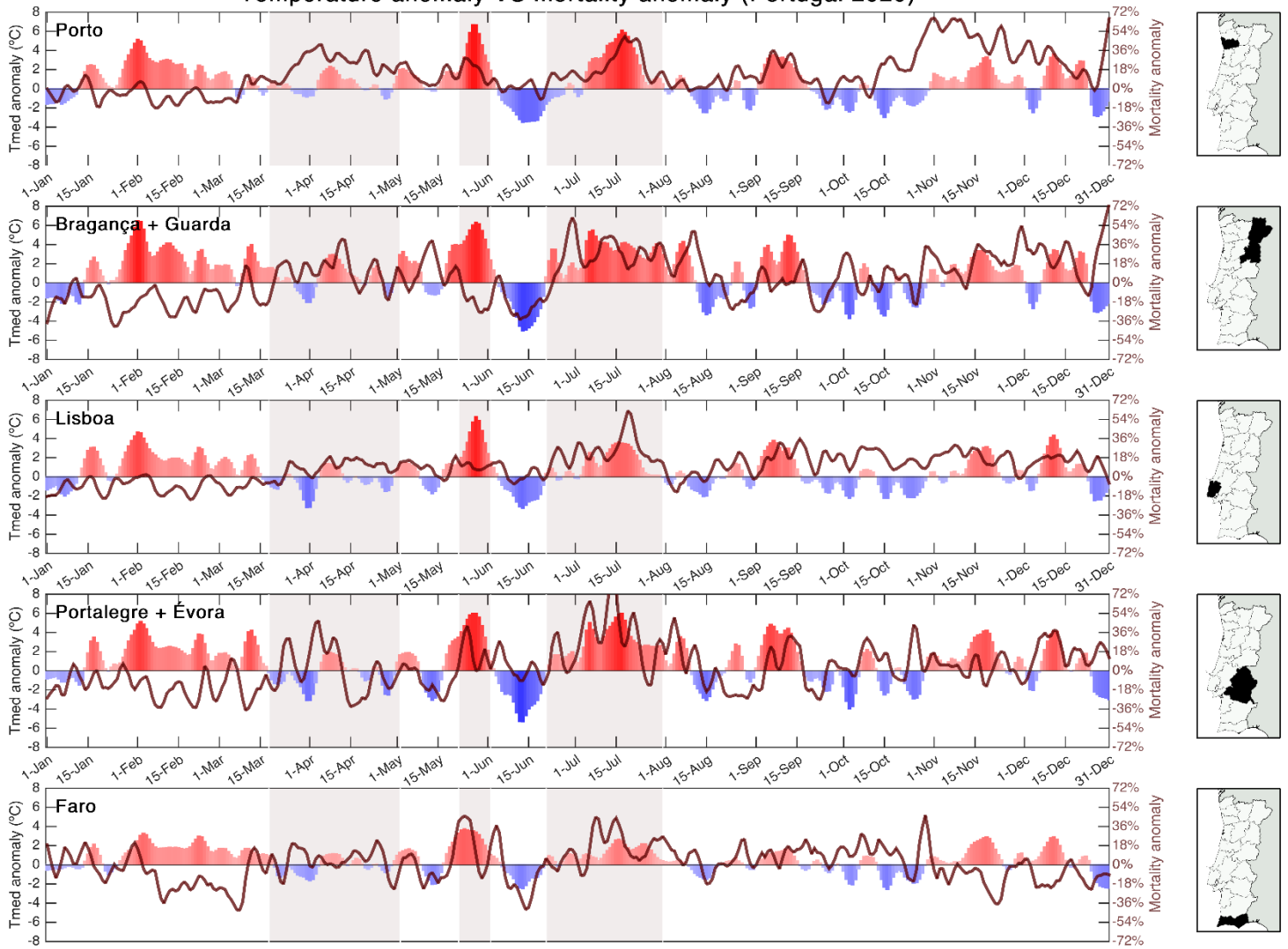


Figure S2 Regional mortality series in Portugal during 2020 - Same as Figure 2a), but for selected regions of Portugal, and relative to 2014-2019.

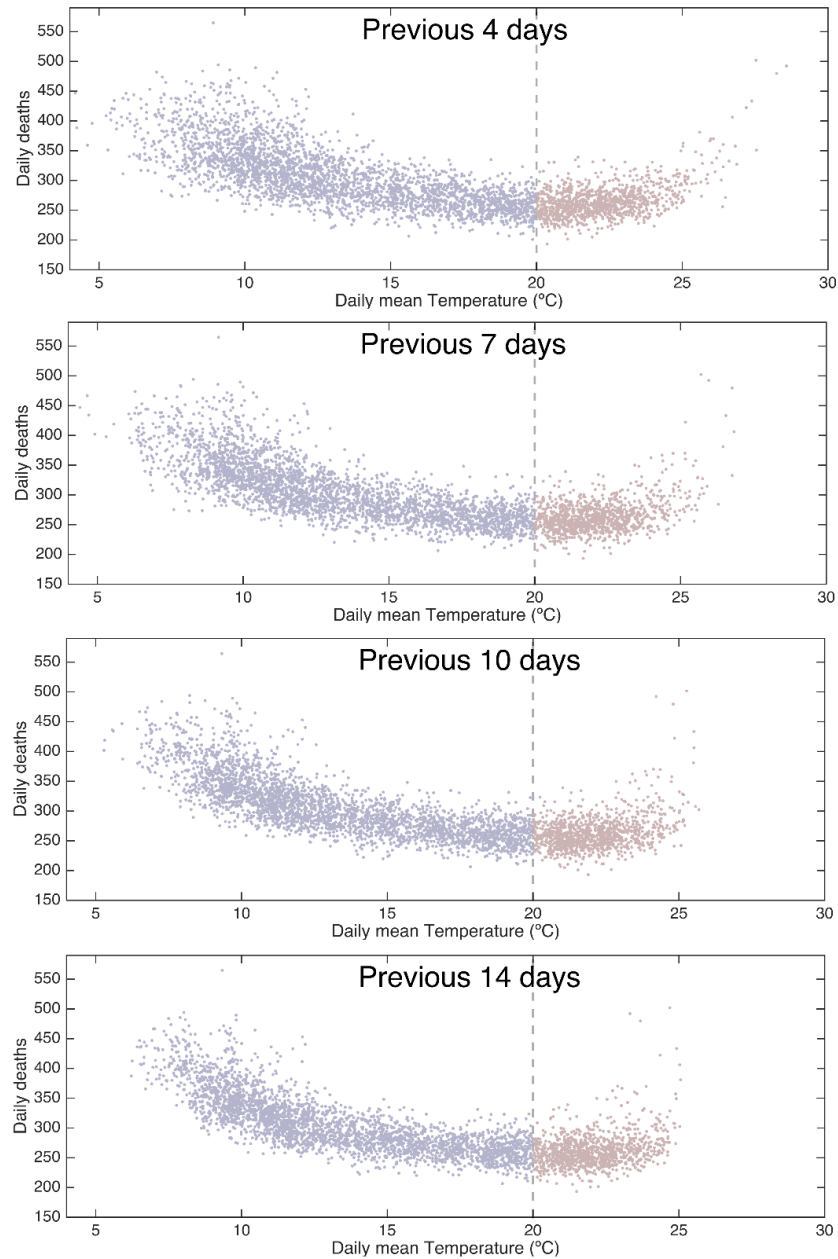


Figure S3 Calibration of the temperature-mortality statistical model - Scatter-plots for mortality during all days spanning 2009-2019 versus average daily temperature during the previous days, using different duration time-windows. The vertical dashed line depicts the estimated minimum mortality temperature (MMT) for Portugal.

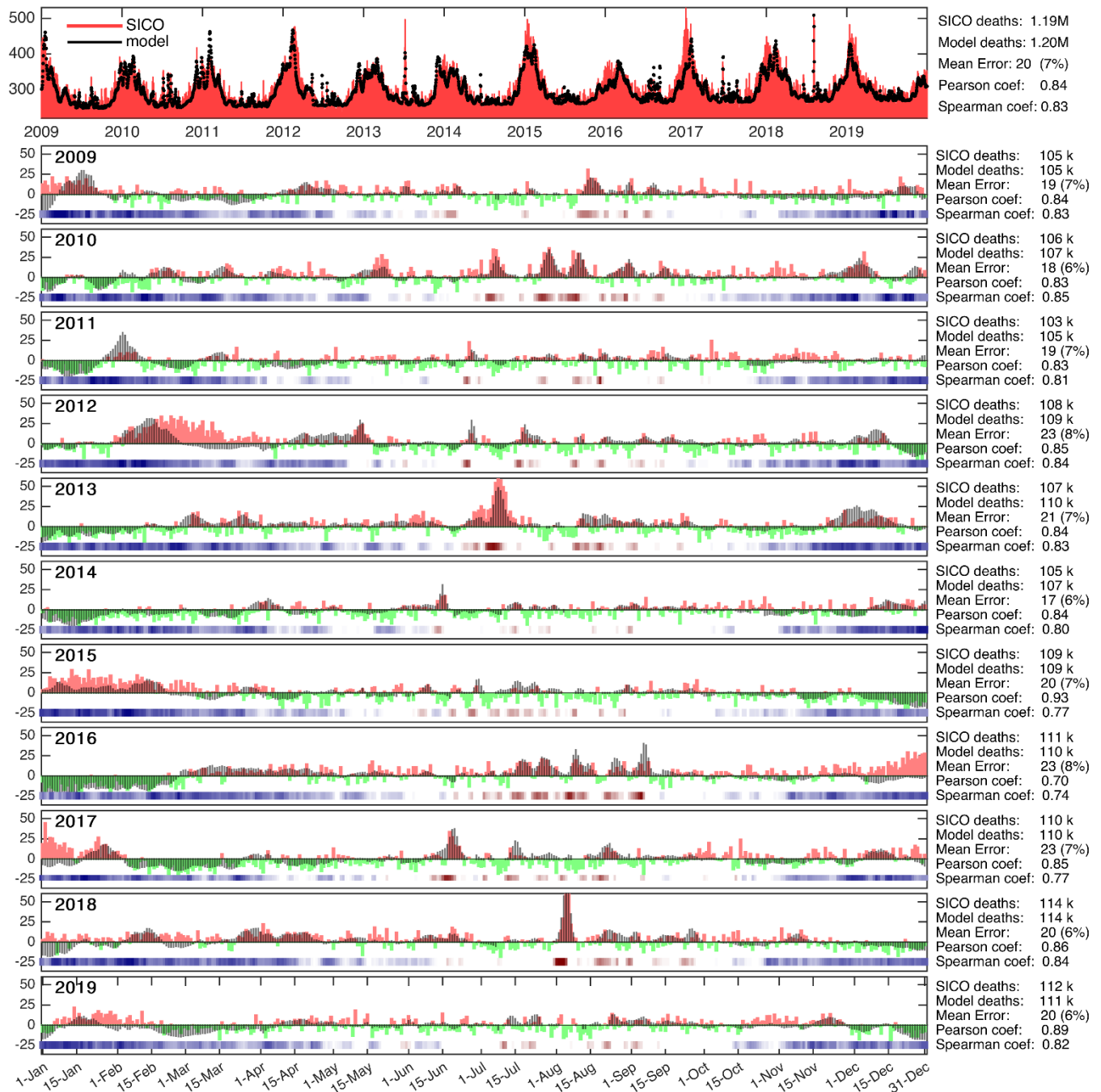


Figure S4 Verification of the temperature based model for estimated mortality in Portugal. Top panel compares absolute observed (SICO-GDS dataset) and modeled daily values throughout 2009-2019, and the remaining panels show observed/modeled relative anomalies in daily deaths for each year, with the color scale depicting daily temperatures, as in Fig.3c. Statistics for the performance of the model during the whole period and at yearly scales are presented next to each panel.