

Table S1. Parameters modified in the sensitivity analysis.

| Parameter | Base value | Lower limit | Upper limit |
|---|--|-------------|-------------|
| <i>Financial Mathematics</i> | | | |
| Interest rate | 0.7% | 0.63% | 0.77% |
| <i>App-related</i> | | | |
| Proportion of data donors | 58.6% | 52.7% | 64.5% |
| Rate of shared positive test results | 60.1% | 54.1% | 66.1% |
| Rate of performed tests after red warning | 87.0% | 78.3% | 95% |
| Share of active users in total downloads | 59.9% | 53.9% | 65.9% |
| Cost of the app | Varying over time, UL/LL modeled with $\pm 10\%$ | | |
| <i>Disease evolution and demographics</i> | | | |
| R-value | Varying over time, UL/LL correspond to 95% CI | | |
| New infections/day | Varying over time, UL/LL correspond to 95% CI | | |
| Proportion of employed persons in infections | Varying over time, UL/LL modeled with $\pm 10\%$ | | |
| Probability per year for a retiree to die independent of COVID-19 | 4.96% | 4.46% | 5.5% |
| Monthly average pension | 1,012 € | 911 € | 1,113 € |
| Share of retirees in deaths | 89.5% | 80.6% | 95% |
| Proportion of employed persons in deaths | 10.3% | 9.3% | 11.3% |
| <i>R-value modeling</i> | | | |
| Constant f used to estimate R-value reduction by the CWA | 0.8741 | 0.3651 | 1.383 |
| Regression to estimate the infection rate from R_{hyp} | | | |
| Slope | 0.1064 | 0.1034 | 0.1095 |
| y-intercept | -0.04353 | -0.04669 | -0.04038 |
| <i>Indirect health care costs</i> | | | |
| Isolation period | 22 days | 14 days | 28 days |
| GDP per capita per year | 36,600 € | 32,940 € | 40,260 € |
| <i>Direct health care costs</i> | | | |
| Share of patients requiring hospitalization | Varying over time, UL/LL modeled with $\pm 10\%$ | | |
| Share of patients requiring intensive care | Varying over time, UL/LL modeled with $\pm 10\%$ | | |
| Hospitalization costs per patient | 6,600 € | 5,940 € | 7,260 € |
| Intensive care costs per patient | 26,000 € | 23,400 € | 28,600 € |
| Daily wage for rehabilitation | 211 € | 189.90 € | 232.10 € |
| Duration of rehabilitation | 27 days | 21 days | 33 days |
| Proportion of employed persons requiring rehabilitation | 85.2% | 83.7% | 86.7% |
| Proportion of intensive care patients in need of rehabilitation | 100% | 90% | 100% |
| Proportion of hospitalized patients in need of rehabilitation | 50% | 30% | 70% |
| Cost per PCR test | 53.54 € | 48.19 € | 58.89 € |
| Cost per rapid test | 11.50 € | 10.35 € | 12.65 € |
| Test positivity rate | Varying over time, UL/LL modeled with $\pm 10\%$ | | |

UL/LL: Upper Limit/Lower Limit. CI: Confidence interval.