II. Model estimation and results

In each scenario, different levels and durations of intervention lead to different isolation.

Intermediate level of governmental intervention: more intense interventions introduced by the government include social distancing, closure of sports, cultural and religious events, universities and schools, and the restriction of human mobility. The interventions lead to 10% isolation during January 21-February 20, 15% isolation during February 20-March 10, and 30% isolation from March 11 till June 20, 2020. In this scenario, the epidemic growth rate would increase till April 10 and then start decreasing, leading to 1,200 new cases per day in June 20, 2020 (95% UL: 100 – 4,200).

High-level governmental intervention: interventions are more intense than scenario IV, but they still lack military interventions. The added interventions include ban of within/between city transportations, city quarantine, and isolation and contact tracing of suspected cases. The interventions lead to 10% isolation during January 21-February 20, 15% isolation during February 20-March 10, and 40% isolation from March 11 till June 20, 2020. In this scenario, the epidemic growth rate would considerably decrease early in April, leading to 450 new cases per day from this time on (95% UL: 25 – 1,800).

Conclusions

Interventions leading to increased isolation rate have a profound effect on the spread of infection and epidemic growth rate. Maximum interventions require harmonized intra/inter sectoral collaborations. The more severe the interventions become, the slower the incidence of the disease and the slope of the epidemic curve will be.