Supplementary Materials

Our main focus in carrying out this study was to create an easy to use risk calculator that could be implemented for a large set of countries with the least amount of internet bandwidth needed. To test out whether the data we extracted as well as the workflow we followed was effective in accurately estimating risks associated with carrying out a daily life activity for an individual. We carried out a secondary test taking the example of Delhi, India.

Risk of infection in the case of Delhi, India

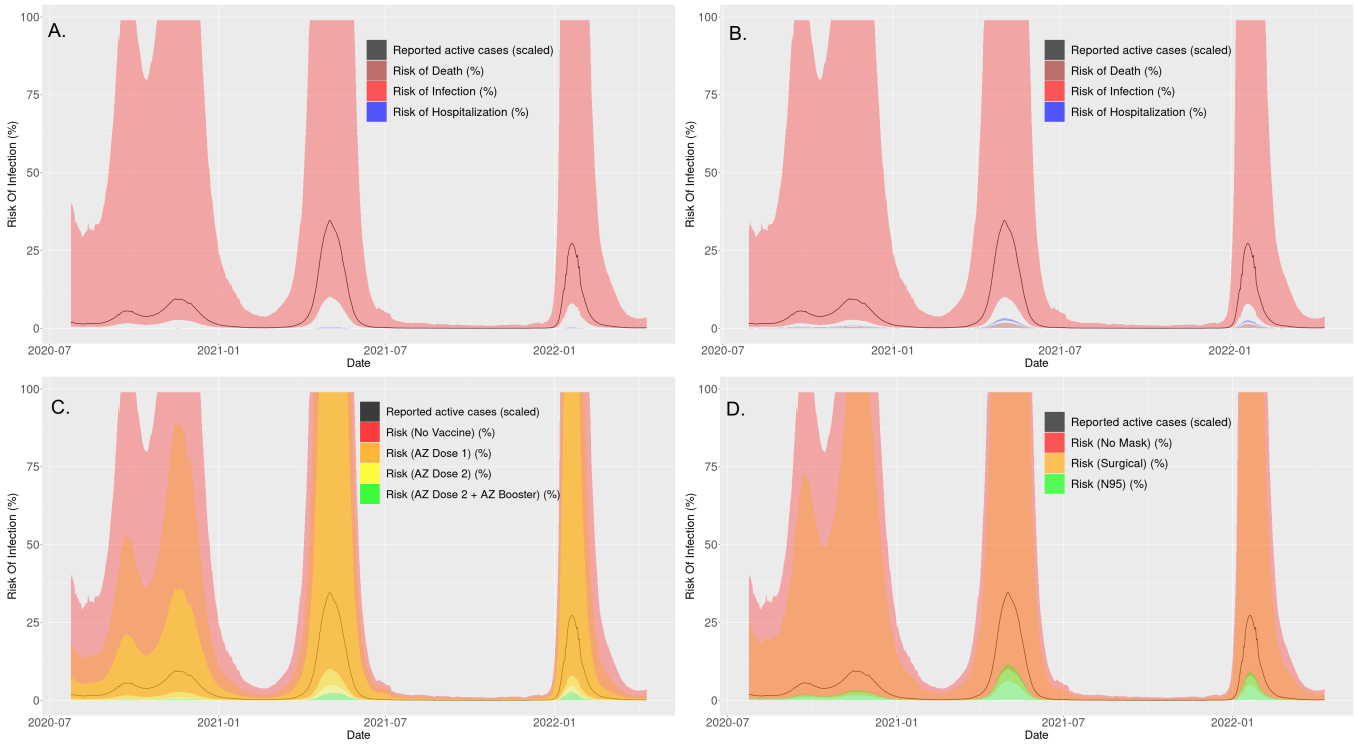

Figure S1. For a non-vaccinated unmasked 30 year old male with no chronic illness and 10 people passed outdoors and 5 people passed indoors, we calculate for Delhi, India the A. Change in different risk factors with change in active cases, B. We calculate different risks for a 60 year old non-vaccinated unmasked male with 10 outdoor and 5 indoor people passed C. Change in risk factor with different doses of Astrazeneca vaccine, D. Change in risk factor when wearing no mask, surgical mask and N95 Respirator.

In order to further check the robustness of our risk calculator for data from different countries, we carried out a secondary test where we used the location of Delhi, India, in order to estimate different risks associated with COVID for carrying out a daily life activity using our risk calculator. The test was very similar to the test previously performed for Franklin, MA, USA. In case of Delhi, India, we did not have county level information therefore, we carried out the test on a city level. We first calculated the risk of infection, hospitalization, and death with change time for a 30-year-old and 70-year-old male living in Delhi, India, with no chronic illness, no vaccination, no mask, five people passed indoors, and ten people passed outdoors (see Supplementary Figure S1 A. B.). We then conducted the same test but only taking the case of a 30 year old male when Astrazeneca vaccination first, second and booster doses were taken in order to check the reduced risk of infection. (see Supplementary Figure S1 C.). We then also carried out the tests related to reduction in risk of infection when different types of masks are used (see Supplementary Figure S1 D.).

As we can see with our results, we were able to observe an increase in risk of hospitalization and risk of death with increase in age of the user. Furthermore, there is a high risk of hospitalization and death during the second wave (when delta variant was observed) compared to the third wave (when omicron variant was observed). There is also a reduction in risk of infection when different doses of vaccination are taken by the user which is similar to what we observed in the case for Franklin, MA, USA. Furthermore, thee reduction in risk is also very high when different types of masks are used by the user which is analogous to the results that we previously obtained. Using this test we were able to clearly check the validity of our risk calculator for different regions and countries across the world. It helped us in ensuring that the calculator is useful for estimating several individual level risks related to carrying out any specific activity during COVID for 203 countries in the world.