

The Number of Corona Virus Infections in 2020

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Abstract : Seroprevalence studies can provide an estimation of the Infection Fatality Rate (IFR), the probability of death given infection. Measuring the seroprevalence and reported deaths of an area within a given time frame an IFR can be estimated. With this IFR calculation, we can then observe COVID-19 death figures in different countries around the world and estimate the number of cases since the onset of the pandemic. There is a large range for estimated COVID-19 infections across different countries. This ranged from 0.659 million infections in Hong Kong to 277 million infections in India. The largest estimated share of the population infected is 63% in Peru and the lowest is 3% in Norway. For younger populations, COVID-19 is most fatal in South America; for older populations, it is most fatal in North America. The Asian regions stand out with significantly lower IFRs in older populations: at 80 years old, COVID-19 is about three times as fatal than in South Asia and about twelve times as fatal than in East Asia. The weighted average for the share of the population infected, the sum of infections divided by the sum of populations across all countries, is 23%.

Keywords : epidemiology, seroprevalence, covid-19, infection fatality rate

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