

Quantifying the years of life lost due to COVID-19 in Colombia: preliminary estimates

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Abstract

To estimate the years of life lost (YLLs) due to COVID-19 in Colombia and assess its economic impact by valuing the potential years of productive life lost (PYLLs). We conducted an ecological study to estimate the number of premature deaths associated with COVID-19 and calculate the present value of their expected future earnings using a discount rate of 3%. We considered deaths occurred from March to November 9, 2020. We used the modified criteria in the 2010 Global Burden of Disease (GBD) Study to estimate YLLs, adding the deaths for each age group and multiplied by the life expectancy of the respective age group up to the age limit considered. From the human capital approach, we estimated PYLLs to show the number of years of premature deaths caused by COVID-19, when fatalities occurred between 15-64 years old, the timeframe of economically active life for all estimates. We present results in 2020 U.S. dollars. The 32,974 deaths from COVID-19 have produced 697,512 YLLs, of which 66.0% are in men. Around 76.2% of these YLLs occur in people >50 years. On average, each death from COVID-19 contributed 21.2 YLL. The YLLs rate is 1,385 (women: 963; men: 1,787) per 100,000 inhabitants. The mean rate of YLLs in people aged ≥ 50 years is about ten times that of those <50 years (5,059 vs. 561 per 100,000). Premature deaths in the Colombian economically active population accounted for 89,667 PYLLs (74.6% in men). 58.8% of the PYLLs occurred in the population aged 40-64 years. The economic burden associated with this goes from US\$168 to US\$306 million (0.05-0.10% of the 2019 gross domestic product). At the end of 2020, COVID-19 would be the leading cause of death in Colombia and the most critical disease burden factor, above cardiovascular diseases, and neonatal disorders.

Keywords

COVID-19, Loss of life, Colombia