Excess mortality

Excess mortality measures whether – and if so, the extent to which – the total number of deaths from all causes is over and above what could normally be expected for a given period. Here, deaths in 2020 and 2021 are compared against the expected number of deaths for these years following a model based on data between 2015 and 2019, or 2000-19 depending on the reporting periodicity in the country (WHO, 2022[1]). Excess mortality has been particularly useful in providing a fuller understanding of the impact of COVID-19 across countries, since it is unaffected by country-specific variations in the recording of COVID-19-specific deaths, and accounts for both deaths directly attributable to COVID-19 and deaths indirectly linked to the virus (Morgan et al., 2020[2]).

In 2020 and 2021, across LAC33 countries, over 1.1 million excess deaths per year were recorded, compared to the expected number of deaths based on previous years. In comparison, the 38 OECD member countries experienced more than 1.5 million excess deaths per year in the same period when considering the figures reported by the WHO.

More people died in 2020 and 2021 compared with what was expected (numbers adjusted for population growth) in all but four LAC countries. Yearly excess mortality in 2020 and 2021 was highest in Peru, where 437 excess deaths per 100 000 population were recorded on average. Excess deaths per 100 000 population were also relatively high in Bolivia (375), Mexico (242), Ecuador (228), Saint Vincent and the Grenadines (222) and Guyana (178), all of them above the LAC33 average of 174 excess deaths per 100 000 population. By contrast, there were fewer all-cause deaths in 2020 and 2021 compared to the expectation in Saint Kitts and Nevis, Grenada, Barbados, and Antigua and Barbuda – all countries experiencing relatively few COVID-19 deaths (Figure 3.4).

Regarding excess mortality by age groups, all LAC countries for which data was available experienced higher mortality in the group of people aged 70 and over, when compared to groups of people aged 0 to 39 and 40 to 69, except for Mexico, in which the group of people aged 40 to 69 exhibited the highest excess mortality for the years 2020 and 2021. In LAC, as was the case in the rest of the world, the majority of COVID-19 deaths occurred amongst older population groups (as well as amongst those with certain chronic conditions, such as cardiovascular diseases and diabetes). These are also the population groups with the highest underlying risk of mortality. In addition, countries like Bahamas, Costa Rica, Dominican Republic, Guatemala, Jamaica, Saint Lucia, Panama, and Trinidad and Tobago experienced negative excess mortality for the group of people aged 0 to 39 during the years 2020 and 2021, possibly driven by the reduction of deaths related to road traffic or injuries prevented during lockdown periods (Figure 3.5).

Definition and comparability

Excess mortality is defined here as the average number of total deaths from all causes in 2020 and 2021, compared to the average expected number of deaths for these years estimated by the WHO based on previous years. More information about the estimation method for expected deaths can be found in "Methods for estimating the excess mortality associated with the COVID-19 pandemic" (WHO, 2022[1]). Figures are adjusted for population growth in age groups over time. This adjusted baseline could still be considered a somewhat conservative estimate of the expected number of deaths, since an ageing population would also be expected to push up the number of deaths observed each year.

National variations in underlying death rates related to various events require caution when comparing excess mortality at a given point in time. For example, significant country-specific events such as severe flu seasons, heatwaves, and natural disasters during the previous five years may have had a large influence on the number of deaths, affecting the underlying average. However, choosing a five-year comparator period (or 20 years for some countries) helps to mitigate such variations.

Variations in the onset and duration of the various waves of the COVID-19 pandemic will have an impact on analysing the linkages between COVID-19 deaths and excess mortality across countries. Nevertheless, taking the whole of 2020 and 2021 as an overall timeframe is considered a suitable period of analysis to examine differences in the evolution of COVID-19 in LAC countries.

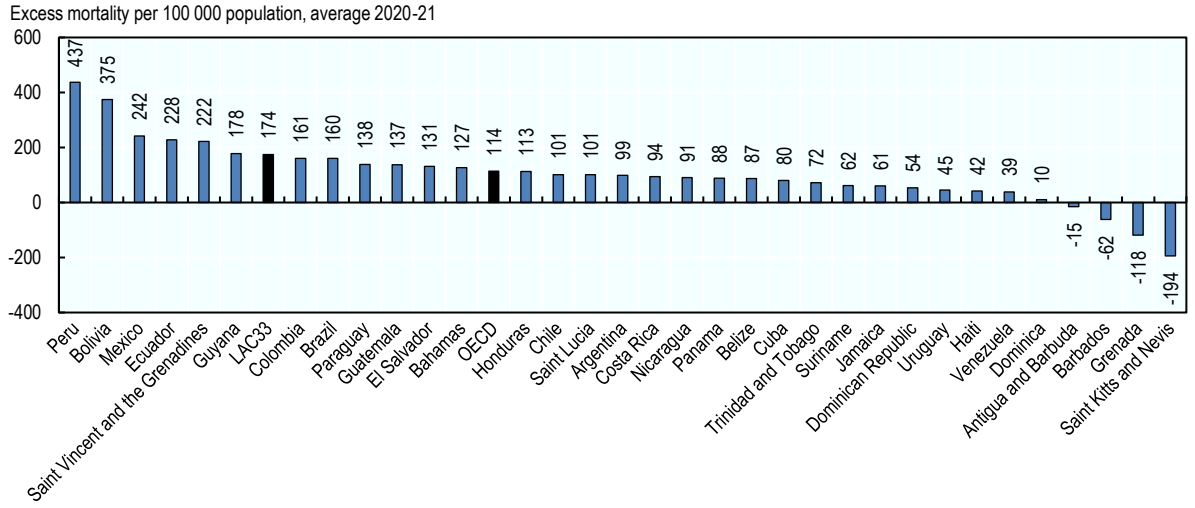
References

Morgan, D. et al. (2020), "Excess mortality: Measuring the direct and indirect impact of COVID-19", *OECD Health Working Papers*, No. 122, OECD Publishing, Paris, https://doi.org/10.1787/c5dc0c50-en. [2]

WHO (2022), *Global excess deaths associated with COVID-19 (modelled estimates)*, https://www.who.int/data/sets/global-excess-deaths-associated-with-covid-19-modelled-estimates. [3]

WHO (2022), *Methods for estimating the excess mortality associated with the COVID-19 pandemic*, World Health Organization, https://www.who.int/publications/m/item/methods-for-estimating-the-excess-mortality-associatedwith-the-covid-19-pandemic. [1]

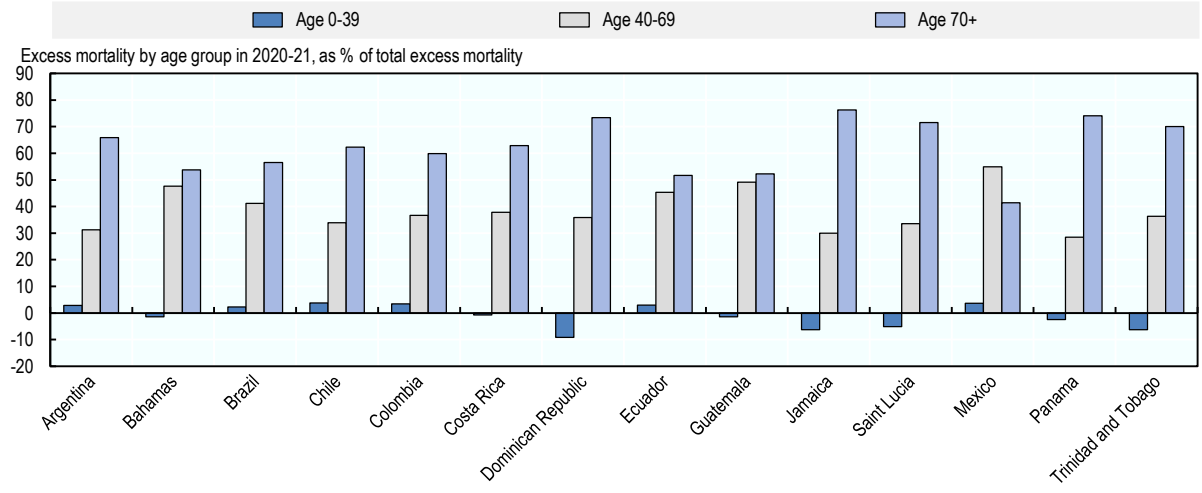
Figure 3.4. Excess mortality per 100 000 population, 2020 and 2021



Source: WHO (2022[3]), "Global excess deaths associated with COVID-19 (modelled estimates)", as of 25 March 2022, https://www.who.int/data/sets/global-excess-deaths-associated-with-covid-19-modelled-estimates.

StatLink https://stat.link/s8rfvb

Figure 3.5. Excess mortality by age group, 2020 and 2021



Source: WHO (2022[3]), "Global excess deaths associated with COVID-19 (modelled estimates)", as of 25 March 2022, https://www.who.int/data/sets/global-excess-deaths-associated-with-covid-19-modelled-estimates.

StatLink https://stat.link/dh0q2z