Application for Estimating Excess Mortality

New tool now available
Link: https://zehangli.shinyapps.io/ExcessMortalityApp/

Excess mortality is the number of deaths during a given period that exceed the expected number. The analysis of excess mortality can provide valuable information on increased deaths in specific populations, especially during pandemics, disasters or other crises.

In particular, it can provide a more complete picture of the burden on a population than deaths that are confirmed to be from a specific cause during an outbreak or an epidemic.

The new application replaces the Excel-based Excess Mortality Calculator developed in May 2020 to estimate the changes in mortality during the COVID-19 pandemic.

This application is used to estimate excess mortality for a geographic population or facility. It addresses two key limitations of the first approach which:

- did not consider change in the population size
- calculated the 95% confidence interval based on the sample mean which can be unstable with historical data of only 5 – 10 years and therefore needs to be interpreted with caution

The open-source R package and associated Shiny application can be used to estimate monthly and weekly excess mortality by sex and age using aggregated data.

Additional documentation on the background, methods and discussion may be found on the 'Methodology' tab in the application.

Related Data Impact Program Resources:

- Estimating excess mortality from COVID-19
- Determination of Excess Mortality Job Aid – English / French / Portuguese / Spanish

Further Information:
Please contact dataforhealth@vitalstrategies.org

Bloomberg Philanthropies

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