

I BEST OF THE WEEK (18 apr – 24 apr 2022)

D. Lewis

Perché l'OMS ha impiegato due anni per dire che COVID-19 si trasmette per via aerea

Nature, 12 aprile 2022

Abstract

All'inizio della pandemia, l'Organizzazione mondiale della Sanità ha dichiarato che SARS-CoV-2 non si trasmetteva attraverso l'aria. Quell'errore e il prolungato processo di correzione hanno seminato confusione e sollevano domande su che cosa accadrà nella prossima emergenza pandemica.

N. Brusselaers et al.

Evaluation of science advice during the COVID-19 pandemic in Sweden

Humanities and Social Sciences Communications, March 2022; doi.org/10.1057/s41599-022-01097-5

Abstract

Sweden was well equipped to prevent the pandemic of COVID-19 from becoming serious. Over 280 years of collaboration between political bodies, authorities, and the scientific community had yielded many successes in preventive medicine. Sweden's population is literate and has a high level of trust in authorities and those in power. During 2020, however, Sweden had ten times higher COVID-19 death rates compared with neighbouring Norway. In this report, we try to understand why, using a narrative approach to evaluate the Swedish COVID-19 policy and the role of scientific evidence and integrity. We argue that that scientific methodology was not followed by the major figures in the acting authorities—or the responsible politicians—with alternative narratives being considered as valid, resulting in arbitrary policy decisions. In 2014, the Public Health Agency merged with the Institute for Infectious Disease Control; the first decision by its new head (Johan Carlson) was to dismiss and move the authority's six professors to Karolinska Institute. With this setup, the authority lacked expertise and could disregard scientific facts. The Swedish pandemic strategy seemed targeted towards “natural” herd-immunity and avoiding a societal shutdown. The Public Health Agency labelled advice from national scientists and international authorities as extreme positions, resulting in media and political bodies to accept their own policy instead. The Swedish people were kept in ignorance of basic facts such as the airborne SARS-CoV-2 transmission, that asymptomatic individuals can be contagious and that face masks protect both the carrier and others. Mandatory legislation was seldom used; recommendations relying upon personal responsibility and without any sanctions were the norm. Many elderly people were administered morphine instead of oxygen despite available supplies, effectively ending their lives. If Sweden wants to do better in future pandemics, the scientific method must be re-established, not least within the Public Health Agency. It would likely make a large difference if a separate, independent Institute for Infectious Disease Control is recreated. We recommend Sweden begins a self-critical process about its political culture and the lack of accountability of decision-makers to avoid future failures, as occurred with the COVID-19 pandemic.

COVID-19 Excess Mortality Collaborators

Estimating excess mortality due to the COVID-19 pandemic: a systematic analysis of COVID-19-related mortality, 2020–21

Lancet, March 2022; doi.org/10.1016/S0140-6736(21)02796-3

Abstract

Background

Mortality statistics are fundamental to public health decision making. Mortality varies by time and location, and its measurement is affected by well known biases that have been exacerbated during the COVID-19 pandemic. This paper aims to estimate excess mortality from the COVID-19 pandemic in 191 countries and territories, and 252 subnational units for selected countries, from Jan 1, 2020, to Dec 31, 2021.

Methods

All-cause mortality reports were collected for 74 countries and territories and 266 subnational locations (including 31 locations in low-income and middle-income countries) that had reported either weekly or monthly deaths from all causes during the pandemic in 2020 and 2021, and for up to 11 year previously. In addition, we obtained excess mortality data for 12 states in India. Excess mortality over time was calculated as observed mortality, after excluding data from periods affected by late registration and anomalies such as heat waves, minus expected mortality. Six models were used to estimate expected mortality; final estimates of expected mortality were based on an ensemble of these models. Ensemble weights were based on root mean squared errors derived from an out-of-sample predictive validity test. As mortality records are incomplete worldwide, we built a statistical model that predicted the excess mortality rate for locations and periods where all-cause mortality data were not available. We used least absolute shrinkage and selection operator (LASSO) regression as a variable selection mechanism and selected 15 covariates, including both covariates pertaining to the COVID-19 pandemic, such as seroprevalence, and to background population health metrics, such as the Healthcare Access and Quality Index, with direction of effects on excess mortality concordant with a meta-analysis by the US Centers for Disease Control and Prevention. With the selected best model, we ran a prediction process using 100 draws for each covariate and 100 draws of estimated coefficients and residuals, estimated from the regressions run at the draw level using draw-level input data on both excess mortality and covariates. Mean values and 95% uncertainty intervals were then generated at national, regional, and global levels. Out-of-sample predictive validity testing was done on the basis of our final model specification.

Findings

Although reported COVID-19 deaths between Jan 1, 2020, and Dec 31, 2021, totalled 5·94 million worldwide, we estimate that 18·2 million (95% uncertainty interval 17·1–19·6) people died worldwide because of the COVID-19 pandemic (as measured by excess mortality) over that period. The global all-age rate of excess mortality due to the COVID-19 pandemic was 120·3 deaths (113·1–129·3) per 100 000 of the population, and excess mortality rate exceeded 300 deaths per 100 000 of the population in 21 countries. The number of excess deaths due to COVID-19 was largest in the regions of south Asia, north Africa and the Middle East, and eastern Europe. At the country level, the highest numbers of cumulative excess deaths due to COVID-19 were estimated in India (4·07 million [3·71–4·36]), the USA (1·13 million [1·08–1·18]), Russia (1·07 million [1·06–1·08]), Mexico (798 000 [741 000–867 000]), Brazil (792 000 [730 000–847 000]), Indonesia (736 000 [594 000–955 000]), and Pakistan (664 000

[498 000–847 000]). Among these countries, the excess mortality rate was highest in Russia (374·6 deaths [369·7–378·4] per 100 000) and Mexico (325·1 [301·6–353·3] per 100 000), and was similar in Brazil (186·9 [172·2–199·8] per 100 000) and the USA (179·3 [170·7–187·5] per 100 000).

Interpretation

The full impact of the pandemic has been much greater than what is indicated by reported deaths due to COVID-19 alone. Strengthening death registration systems around the world, long understood to be crucial to global public health strategy, is necessary for improved monitoring of this pandemic and future pandemics. In addition, further research is warranted to help distinguish the proportion of excess mortality that was directly caused by SARS-CoV-2 infection and the changes in causes of death as an indirect consequence of the pandemic.