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Information Resources on COVID-19 in Life Insurance Mortality
American Academy of Actuaries
Life Experience Committee
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The American Academy of Actuaries¹ Life Experience Committee is discussing how pandemics, and specifically COVID-19, should be reflected in certain projects, such as asset adequacy testing and principle-based reserves (PBR) testing. The committee determined that it would be helpful to provide a list of resources of information for actuaries working in life insurance.

Studies of COVID-19 on Mortality

1. “[Population Mortality Observations Updated with 2020 Experience](#)” published by the Society of Actuaries (SOA) Research Institute in January 2022. This paper discusses population mortality by age groups and quintiles of socioeconomic data. It shows the mortality by cause of death, and mortality improvement impact with and without COVID-19.
2. “[Mortality by Socioeconomic Category in the United States](#)” published by the SOA Research Institute in February 2022. This paper discusses population mortality by socioeconomic category. The data period ends with 2019, so this study does not cover COVID-19 deaths, but it shows the impact of socioeconomic factors on life expectancies.
3. “[2022 Cause of Death Report](#)” published by the SOA in April 2022. This paper consolidates the causes of death from the 31 available companies in the study into three main categories plus unknown cause of death. Each of those three main categories were split into four or eight subcategories. Summary tables are provided.
4. “[Estimating excess mortality due to the COVID-19 pandemic: a systematic analysis of COVID-19-related mortality, 2020–21](#)”—This article gives a geographic estimate of excess mortality by state for the USA and also for other countries around the world. This analysis could help companies that are heavily weighted in certain geographies to adjust industry-level experience to make it more appropriate to their blocks of business.

¹ The American Academy of Actuaries is a 19,500-member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

5. [“Evaluation of individual and ensemble probabilistic forecasts of COVID-19 mortality in the United States”](#)—This article discusses the COVID-19 forecasting models and their predictive performance. The article suggests that using a combination of models is better than a single model. This piece would be useful currently for predicting COVID-19 effects that may be ongoing. It would also be useful should another pandemic arise.
6. [U.S. Individual Life COVID-19 Reported Claims Analysis](#) —This site tracks insurance claims. There is a lag—e.g., on May 16, 2022, the latest report was published in February 2022, and was based on data through September 2021.

Underwriting/Product Issues

7. [“Dire Diagnosis”](#) by Hank George, published in the September/October 2020 *Contingencies* magazine. An article published relatively early in the pandemic, it discusses items to consider in underwriting during a pandemic.
8. [“Disruption of Life Insurance Profitability in the Aftermath of the COVID-19 Pandemic”](#)— This article provides a broad overview of the effects of COVID-19 on profitability of life insurance and annuities. It’s helpful for someone getting up to speed on the possible pricing effects of the COVID-19 pandemic.

Impact on Long-Term Care Insurance

9. [“COVID-19 Impact on Long-Term Care Insurance Report 2020 Survey”](#) published by the SOA in 2021. This paper discusses the results of a survey of 14 long-term care insurance carriers to show the impact of COVID-19 on mortality, morbidity, and lapse across various characteristics.

Modeling of COVID-19 Impact

10. [“The COVID Connection”](#) by Annmarie Geddes Baribeau, published in the May/June 2022 *Contingencies* magazine. This article on COVID-19’s impact suggests that insurers look into more sophisticated catastrophic modeling.

Useful Websites

11. https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm: This Centers for Disease Control and Prevention (CDC) webpage is updated weekly and tracks excess deaths associated with COVID-19.

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If you have any questions regarding this document, please contact the Academy's life policy analyst, Amanda Barry-Moilanen, at [barrymoilanen@actuary.org](mailto:barrymoilanen@actuary.org).

Donna Claire  
Chairperson  
Life Experience Committee  
American Academy of Actuaries