

Comparison of US Deaths During 2020 and 2021 With Previous Years

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The Menges Group

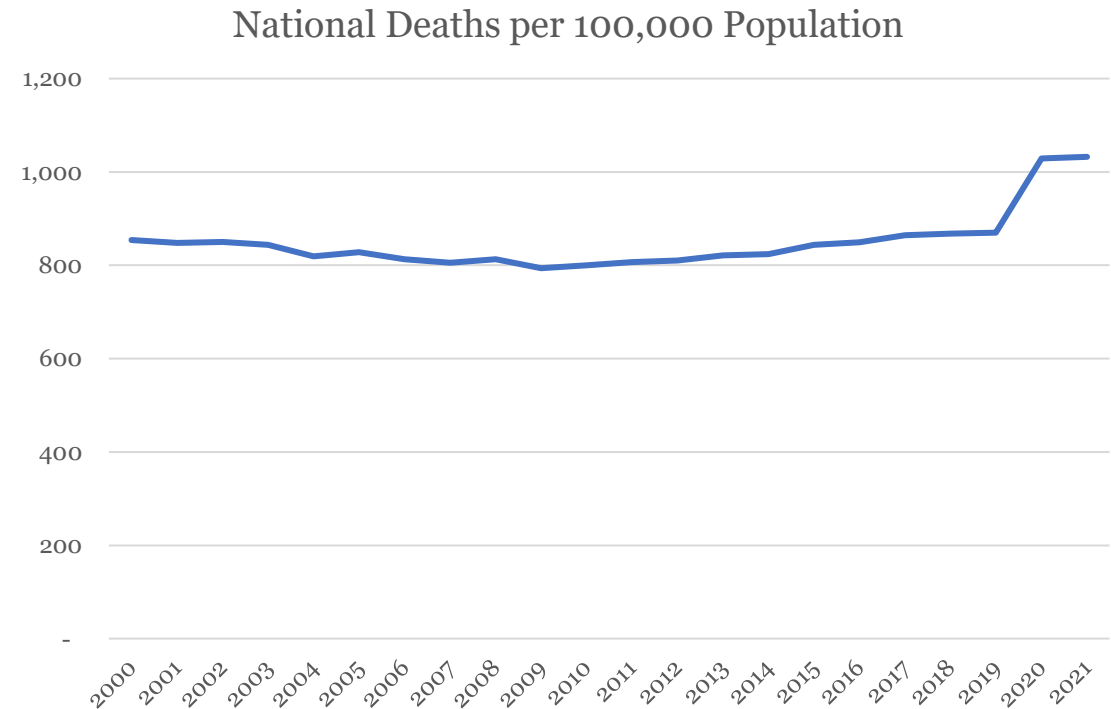
Strategic Health Policy & Care Coordination Consulting

Excess Death Estimates

- We calculate that **deaths in the US in 2020 and 2021 were 23.5% and 21.3% above the 2017-2019 annualized historical average, respectively.**
- We estimate total excess deaths during 2020 and 2021 to be 1.09 million, which is approximately **264,000 (32%) above the number of COVID attributed deaths (831,000)** during this same timeframe.
 - We calculate roughly 491,000 and 604,000 excess deaths in 2020 and 2021, respectively.
- Deaths beyond the normal volume are still accumulating due to the pandemic.

Review of Per Capita Nationwide Deaths

- **During 2020, deaths in the US increased by 534,262 over the number of deaths in 2019**, and deaths in 2021 increased over 2020 deaths by an additional 24,000.
 - Prior to 2020, the largest increase in deaths versus the prior year was 86,212 (this occurred between 2014 and 2015).
- Across the two decades prior to 2020, the nation's highest death rate occurred during 2019 (870 per 100,000 persons). **During 2020, the per capita death rate was 18.3% above 2019. In 2021, it was 18.6% above 2019.**
 - In stark contrast, the largest yearly percentage death rate increase between 2000 and 2019 was “only” 2.5% which also occurred between 2014 and 2015.
- Regardless of how this is assessed, nationwide deaths increased dramatically during 2020 and increased even further during 2021.



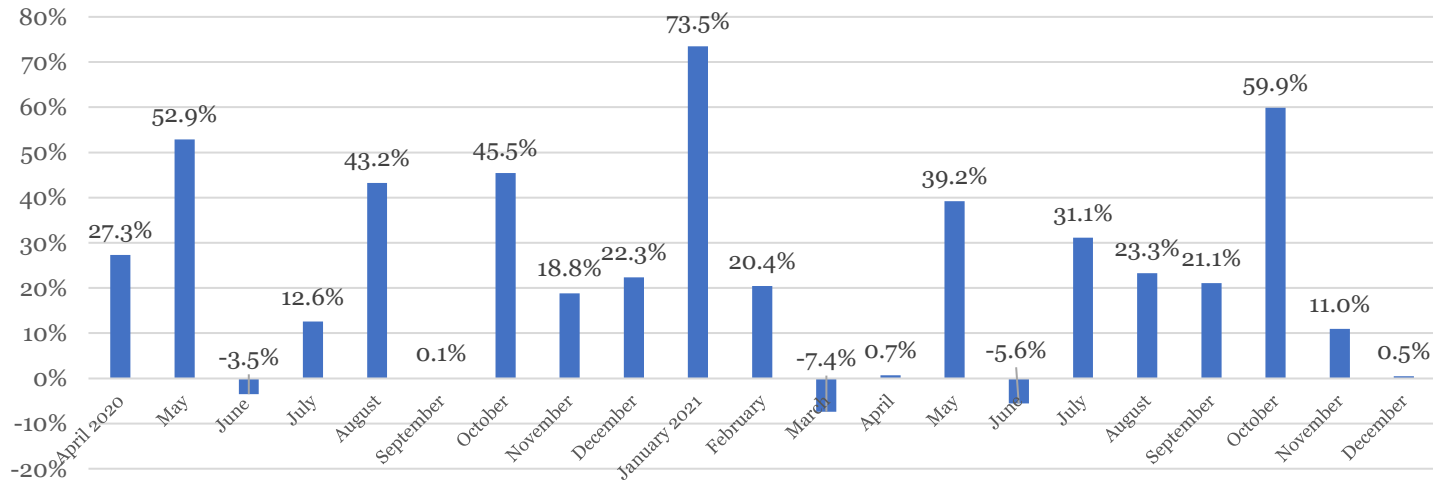
COVID-Attributed Death Counts are Significantly Undercounting COVID's Lethal Impacts

- The 2 x 2 matrix on the right shows in broad terms four possible outcomes juxtaposing cause of death and *categorization* of death.
- Arguments have been raised that we are “overcounting” COVID deaths due to the to the “Type 2 Error” represented in Quadrant C – that the death has been counted as a COVID death but was not actually caused by COVID. It seems a near certainty that this Type 2 categorization error occurs at least on occasion, given that a combination of factors contribute to many deaths.
- However, overall death counts indicate that the overwhelmingly larger categorization problem is the Type 1 Error depicted in Quadrant B. In this quadrant, deaths at least partially caused by COVID (deaths which would not have occurred when they did in the absence of COVID infection) have not been counted as COVID deaths.
- We find that roughly 260,000 excess deaths occurred across 2020 and 2021 *beyond all those that have been counted as COVID deaths.*
- **If the pandemic had not occurred at all, our tabulations indicate that well over one million Americans would not have died during 2020 and 2021.**

	Person's Death Was Counted as a COVID Death	Person's Death Was Not Counted as a COVID Death
Person's Death Was Caused by COVID	Quadrant A	Quadrant B (Type 1 Error)
Person's Death Was Not Caused by COVID	Quadrant C (Type 2 Error)	Quadrant D

Deaths by Month Since April 2020

Percent Deviation in US Deaths from Historical Monthly Average



Timeframe	Total US Deaths	Estimated Deaths Based on 2017-2019 Historical Average	Difference, Actual vs. Expected Deaths	Percent Difference	Confirmed COVID Deaths
Apr – Dec 2020	2,578,323	2,087,206	491,117	23.5%	363,767
Jan – Dec 2021	3,438,021	2,834,232	603,789	21.3%	467,310
Total	6,016,344	4,921,437	1,094,907	22.2%	831,077

- January 2021, October 2021, and May 2020 were the deadliest months regarding overall USA deaths as a percent of expected deaths (+73.5%, +59.9%, and 52.9% higher, respectively). These are the same months with the highest number of COVID-attributed deaths.
- **We estimate there were roughly 22% more deaths in the US than expected between April 2020 and December 2021.**
- In 2020 and 2021, 7 months had more than 300,000 overall deaths (5 months in 2020 and 2 months in 2021), whereas no month had this many deaths during the 2017-2019 timeframe.

Deaths Not Attributable to COVID Have Increased in Some Categories

- We tabulated deaths from suicide, homicide, motor vehicle accidents, and drug overdoses in 2020, where complete data are available. Compared to the 2017-2019 average for each category there were:
 - 5,416 *more* **homicides**
 - 1,773 *fewer* **suicides**
 - 2,616 *more* **motor vehicle accidents**
 - 22,469 *more* **drug overdoses**
- There were 491,117 excess deaths in 2020, 363,767 of which were confirmed to be caused by COVID (meaning 127,000 additional excess deaths occurred). Collectively, the net number of excess deaths in the above four categories was about 28,700 deaths, or only about **one-quarter of the remaining excess deaths (after counting the COVID-attributed deaths)**.

Data Sources and Methodology Notes

- We use all-cause observed deaths data from the Centers for Disease Control and Prevention (CDC). These data are provisional, meaning recent death counts are likely incomplete, and the degree of completeness varies considerably by jurisdiction and time.
- Data can be incomplete because of the time lag between when the death occurred and when the death certificate is completed, submitted to the National Center for Health Statistics (NCHS), and reported. This delay can range from 1 week to 8 weeks or more, depending on the jurisdiction and cause of death.
- More recent death figures are adjusted to account for incomplete data, based on completeness of provisional data in prior years.

5 Slide Series Overview

Our 5 Slide Series is typically a monthly publication whereby we briefly discuss/address a selected topic outside the confines of our client engagements. Since March, we have produced dozens of editions tracking the COVID pandemic. The Menges Group has developed a variety of datasets that we use to support our 5 Slide Series and client projects.

To be added to our list to receive these as they are published (or to be removed), please email us at pcall@themengesgroup.com. If you have questions about the content or data sources we have available, please email us at jmenges@themengesgroup.com or call 571-312-2360.

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