SOA Research Institute

Mortality and Longevity

Quarterly Mortality Monitoring Report for the U.S. Population

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April 2026

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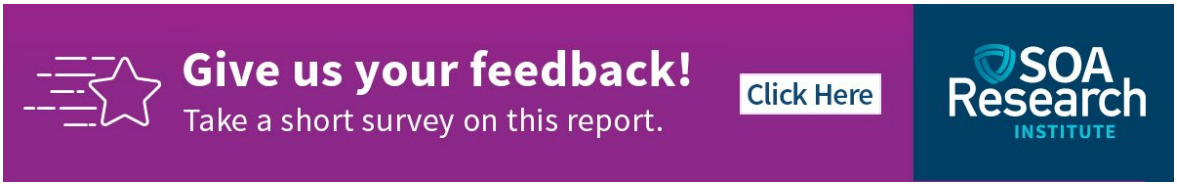

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April 2026

Executive Summary

The Quarterly Mortality Monitoring Report (QMMR) examines mortality trends in the United States (U.S.) general population. An updated QMMR report is issued every three months, reflecting the latest data. The prior QMMR covered data through September 2025, while this updated report covers data through December 2025.

The results presented in each QMMR report are developed using death count data downloaded from the CDC WONDER database (where "CDC" stands for "Centers for Disease Control and Prevention") and population counts downloaded from the Human Mortality Database (HMD). Because population counts and death counts for the recent past are subject to some uncertainty, the QMMR results should be viewed as estimates rather than fully complete data.

Due to seasonality, monthly death rates are volatile. Therefore, this report focuses primarily on death rates computed across 12-month periods. As explained in the Appendix, age-standardization is used to remove noise imparted by shifts in the population's age structure across time.

Key findings extracted from an analysis of data through December 2025 are as follows:

- For the U.S. population considered as a whole, the age-standardized death rate for the 12-month period from January to December 2025 was 828.9 (per 100,000 persons), compared to 835.3 for the 12-month period from October 2024 to September 2025. This is a decrease of 0.8%.
- The 0.8% decrease of the rolling 12-month death rate occurred because the death rate for the fourth quarter (Q4) of 2025 was 3.0% less than the rate for Q4-2024 (which dropped out of the 12-month rolling period).
- For each of the broad age groups examined in this report (ages 0-19, 20-49, 50-59 and 60+), the 2025-Q4 mortality rate was less than the corresponding rate for 2024-Q4. In percentage terms, the 20-49 age group experienced the largest improvement – a 7.0% drop in the Q4 mortality rate (relative to Q4 of 2024).

Along with this report, an updated version of the QMMR Excel/VBA workbook has been released. The updated workbook contains data from 2000 through December 2025, disaggregated by sex, single age, and 14 broad categories of mortality causes. The workbook provides several tools to facilitate the analysis of mortality trends, including interactive, parameterized graphs that make it easy to visualize trends in the data.

Data Sources

The death count data used in this analysis was downloaded from the CDC WONDER database ("Centers for Disease Control and Prevention") on April 1, 2026. Given this download date, the death counts for August 2025 and earlier are effectively complete. The authors of this report estimate that death counts for September 2025 are 99.9% complete, and 99.8%, 99.7% and 99.5% complete for October, November, and December 2025, respectively. For recent months, this analysis divides the death counts by the estimated completion rates, thereby producing estimates for final death counts. These estimates are subject to some uncertainty given that historical completion rates are not perfect predictors of future completion rates.

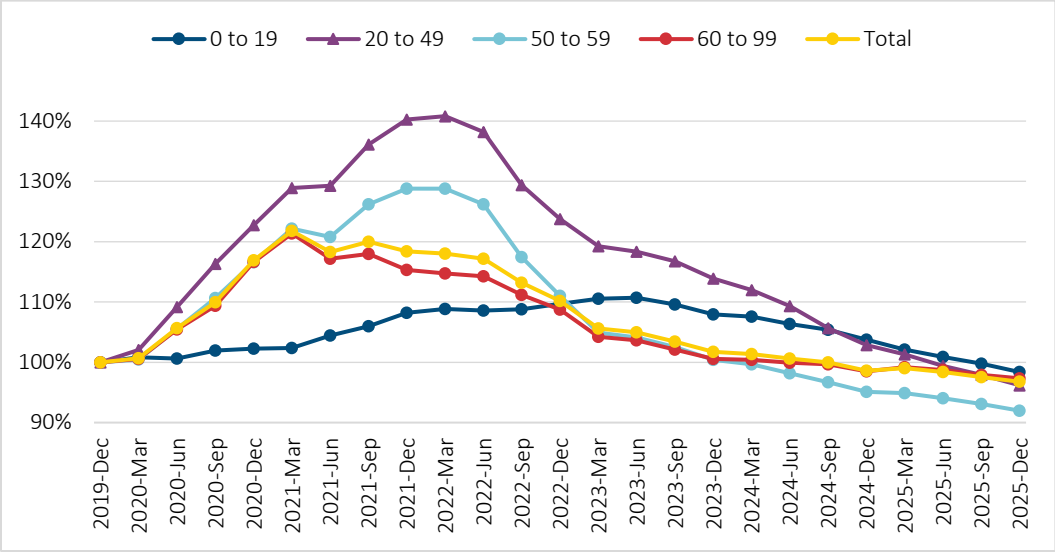
To compute death rates for this analysis, CDC death counts (by sex, single-age, and year) were divided by U.S. population estimates (by sex, single-age, and year) downloaded from the Human Mortality Database (HMD) in May 2025. The HMD data ends in January of 2024, but this report requires data through December 2025. Therefore, for this analysis, the HMD dataset was extended through December 2025 using the Social Security Administration's population projection (extracted from the 2025 OASDI Trustees Report) as a guide. The cell formulas used to extrapolate the HMD counts appear in the "Exposure Counts" worksheet of the QMMR workbook.

Analysis of Recent Mortality Data by Sex and Age Group

Figures 1, 2 and 3 present age-standardized (or "age-adjusted") national-level death rates for 12-month trailing periods, expressed as a percent of the corresponding death rates calculated using 2019 data. By definition, a value of 100% indicates that a death rate is equal to the level observed in 2019. Figure 1 captures the last six years of data, while Figure 2 focuses solely on the period from December 2024 to December 2025 (keep in mind that each data point in these figures reflects the trailing 12 months of data, so the result for June 2025 reflects data from July 2024 through June 2025). Figure 3 presents sex-specific results for the final 12-month period (January to December 2025) considered in this analysis.

Figure 1

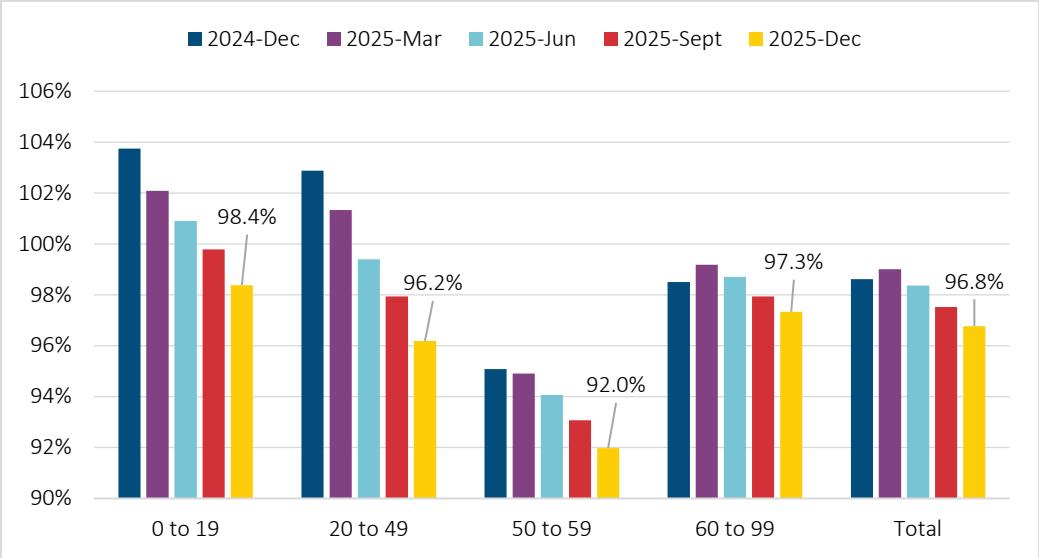
DEATH RATES BY AGE GROUP FOR TRAILING 12-MONTH PERIODS, AS % OF THE CORRESPONDING 2019 DEATH RATE



Each result presented in this figure reflects the trailing 12-month period. For example, the results for "2025-Jun" reflect the period from July 2024 to June 2025.

Figure 2

DEATH RATES BY AGE GROUP FOR TRAILING 12-MONTH PERIODS, AS % OF CORRESPONDING 2019 DEATH RATE



Each result presented in this figure reflects the trailing 12-month period. For example, the results for "2025-Jun" reflect the period from July 2024 to June 2025.

Figure 3

SEX-SPECIFIC DEATH RATES BY AGE GROUP FOR THE 12-MONTH PERIOD FROM JAN TO DEC 2025, AS % OF CORRESPONDING 2019 DEATH RATE

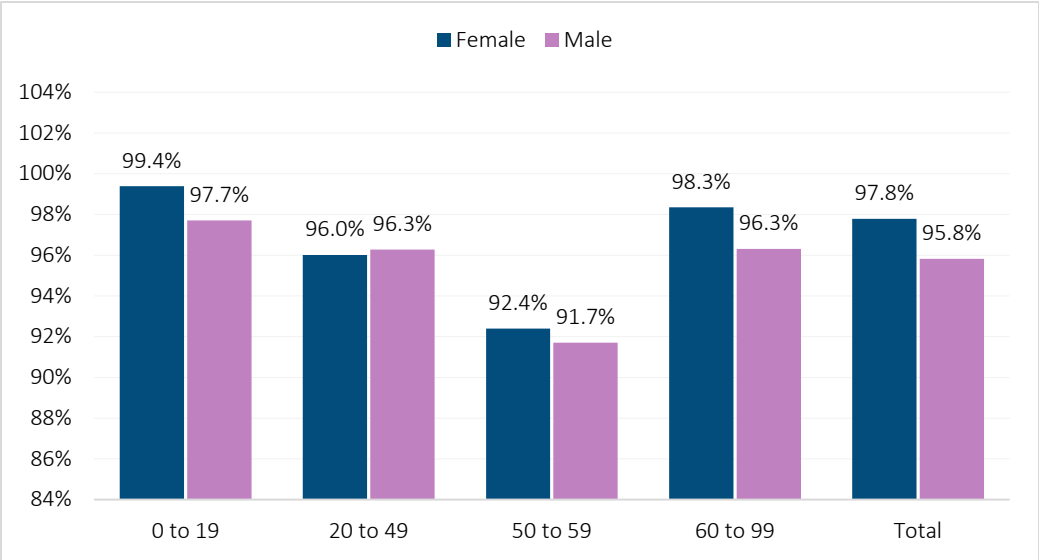


Table 1 presents key data points extracted from Figure 1, and Table 2 presents the same results but in deaths-per-100K persons (rather than as a percent of the 2019 death rate). For readers seeking data with greater granularity, the Appendix provides tables by 10-year age groups.

Table 1
DEATH RATES BY AGE GROUP, AS A % OF THE CORRESPONDING 2019 DEATH RATE

Start of 12-Month Period	End of 12-Month Period	Ages 0 to 19	Ages 20 to 49	Ages 50 to 59	Ages 60+	Total Population
2019-Jan	2019-Dec	100.0%	100.0%	100.0%	100.0%	100.0%
2020-Jan	2020-Dec	102.3%	122.8%	116.6%	116.6%	116.9%
2021-Jan	2021-Dec	108.2%	140.3%	128.8%	115.3%	118.4%
2022-Jan	2022-Dec	109.7%	123.7%	111.0%	108.8%	110.2%
2023-Jan	2023-Dec	107.9%	113.9%	100.4%	100.6%	101.7%
2024-Jan	2024-Dec	103.7%	102.9%	95.1%	98.5%	98.6%
2025-Jan	2025-Dec	98.4%	96.2%	92.0%	97.3%	96.8%

Table 2
DEATHS PER 100,000 PERSONS

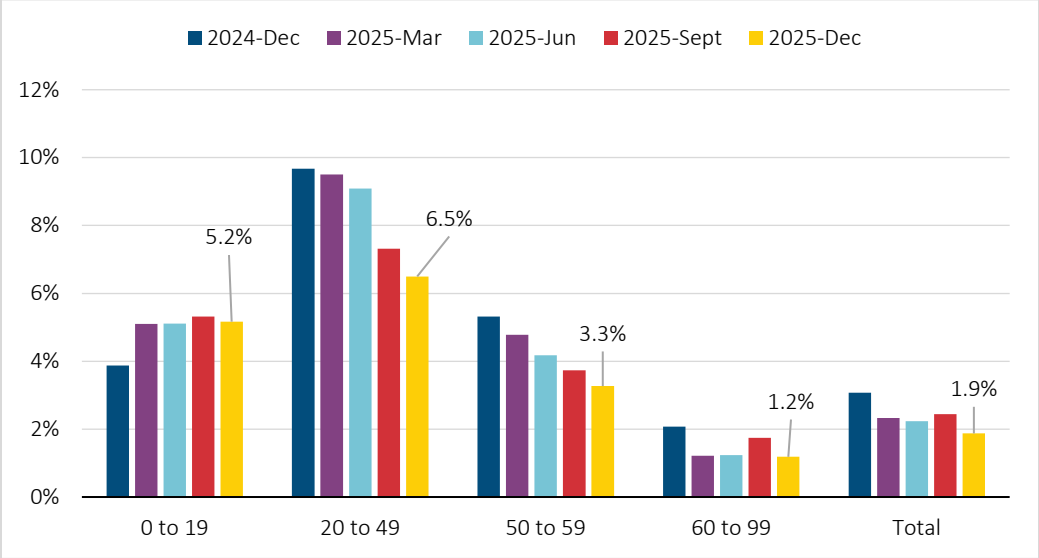
Start of 12-Month Period	End of 12-Month Period	Ages 0 to 19	Ages 20 to 49	Ages 50 to 59	Ages 60+	Total Population
2019-Jan	2019-Dec	49.4	173.5	599.0	3,123.5	856.6
2020-Jan	2020-Dec	50.6	213.0	698.4	3,642.9	1,001.4
2021-Jan	2021-Dec	53.5	243.4	771.4	3,601.3	1,014.4
2022-Jan	2022-Dec	54.2	214.7	664.8	3,396.9	943.7
2023-Jan	2023-Dec	53.4	197.6	601.5	3,141.9	871.5
2024-Jan	2024-Dec	51.3	178.5	569.5	3,076.9	844.8
2025-Jan	2025-Dec	48.6	166.9	550.9	3,040.5	828.9

As explained in the Appendix, the death rates in these exhibits are age-standardized using the age/sex structure of the 2019 population. Without standardization, a death rate computed across the total population (or across an age group) will increase if a population's average age increases, even if age/sex specific death rates remain unchanged. Standardization neutralizes this issue by "freezing" the age-sex structure of the population in a specific "standard" year. This report uses 2019 as the standard year, but this choice is arbitrary. If a different year were used (say, 2010), the absolute level of the death rates in Table 2 would change, but their relative change across time would not be significantly affected.

Figure 4 has a parallel structure to Figure 2, but it presents rates of mortality improvement as opposed to mortality rates. Each improvement rate was determined by comparing the death rate for the trailing 12 months against the corresponding death rate for the trailing 13 to 24 months. For example, the death rate for the total population for January through December 2025 was 828.9 per 100K, while the death rate for January through December 2024 was 844.8 per 100K. Comparing these two values produces an improvement rate of 1.00 minus 828.9/844.8, or 1.9%.

Figure 4

ANNUALIZED RATES OF MORTALITY IMPROVEMENT COMPUTED ACROSS TRAILING 24-MONTH PERIODS



Each result presented in this figure is equal to 1.00 minus A divided by A_lag, where "A" = the mortality rate computed across the trailing 12 months, and A_lag = the mortality rate computed across the preceding 13 to 24 months. For example, the value for September 2025 is equal to 1.00 minus the mortality rate for October 2024 through September 2025, divided by the mortality rate for October 2023 through September 2024.

Appendix

DEATHS RATES BY 10-YEAR AGE GROUPS

Figures 1 through 3 and Tables 1 and 2 present death rates by broad age group. For readers seeking data with greater granularity, Tables A1 and A2 present death rates by 10-year-age groups. Like other results in this report, these results are age-standardized to remove noise caused by gradual changes in the population's age structure.

Table A1

DEATH RATES BY 10-YEAR AGE GROUP, AS A % OF 2019 DEATH RATES: FEMALES

Age	2019	2020	2021	2022	2023	2024	2025
0 to 9	100.0%	95.6%	101.8%	105.2%	103.3%	104.1%	99.3%
10 to 19	100.0%	109.6%	121.9%	119.8%	115.2%	107.5%	99.8%
20 to 29	100.0%	121.2%	133.4%	120.6%	107.1%	92.4%	85.3%
30 to 39	100.0%	118.9%	138.4%	121.6%	110.8%	100.8%	93.6%
40 to 49	100.0%	119.2%	139.4%	119.7%	109.4%	103.7%	100.8%
50 to 59	100.0%	115.0%	127.4%	111.0%	99.9%	95.4%	92.4%
60 to 69	100.0%	116.3%	125.5%	113.4%	104.5%	102.4%	101.0%
70 to 79	100.0%	116.2%	118.1%	110.0%	100.7%	98.5%	97.6%
80 to 89	100.0%	116.6%	111.6%	108.7%	101.9%	100.6%	99.2%
90 to 99	100.0%	115.2%	105.8%	105.6%	99.3%	97.3%	96.2%
Total	100.0%	116.0%	116.2%	109.8%	101.8%	99.4%	97.8%

Table A2

DEATH RATES BY 10-YEAR AGE GROUP, AS A % OF 2019 DEATH RATES: MALES

Age	2019	2020	2021	2022	2023	2024	2025
0 to 9	100.0%	95.8%	99.0%	104.3%	102.5%	100.2%	94.9%
10 to 19	100.0%	118.3%	125.5%	119.7%	119.7%	107.4%	102.4%
20 to 29	100.0%	123.4%	132.7%	119.0%	109.0%	93.7%	83.3%
30 to 39	100.0%	125.8%	144.3%	130.9%	121.2%	106.1%	96.5%
40 to 49	100.0%	124.1%	143.7%	124.9%	116.4%	107.5%	102.7%
50 to 59	100.0%	117.6%	129.6%	111.0%	100.7%	94.9%	91.7%
60 to 69	100.0%	117.3%	123.8%	110.4%	101.4%	98.2%	97.4%
70 to 79	100.0%	118.3%	118.8%	109.1%	99.4%	97.5%	96.4%
80 to 89	100.0%	117.1%	113.7%	108.8%	100.9%	99.0%	97.4%
90 to 99	100.0%	114.7%	106.4%	103.6%	95.3%	92.6%	91.8%
Total	100.0%	117.8%	120.5%	110.5%	101.7%	97.9%	95.8%

DEATH RATES BY CAUSE OF DEATH

The QMMR workbook can disaggregate death data into 14 mutually exclusive cause-of-death categories. Together, these categories sum to total deaths. Using the workbook, disaggregation by cause can be applied to total U.S. deaths or to deaths within user-defined sex and age groups. In Table A3, the total age-standardized U.S. death rate is disaggregated by cause of death. Because the reporting lag for some causes of death (such as suicides and accidents) is significantly greater than for other causes, Table A3 reflects data only through 2024. Table A4 has the same structure as Table A3, but the death rates are expressed relative to their corresponding 2019 levels. Table A4 provides no results for COVID because the 2019 COVID death rate was zero.

Table A3

AGE-STANDARDIZED ANNUAL DEATH RATES PER 100,000 PERSONS, BY CAUSE OF DEATH

Category	2019	2020	2021	2022	2023	2024
Alz/Dem	35.9	39.4	34.9	34.5	32.0	31.6
Cancer	181.3	179.0	177.0	174.5	172.0	169.6
COVID	0.0	103.8	122.3	53.6	14.1	8.7
Diabetes	26.5	30.4	30.2	29.1	26.8	26.0
Flu/Pneum	15.0	15.9	12.4	13.6	12.8	13.3
Heart	196.8	205.1	202.5	201.0	190.7	186.4
Hypertension	10.9	12.3	12.5	12.4	11.9	11.6
Liver	13.4	15.4	16.7	16.1	15.1	14.9
Pulmonary	47.6	45.6	41.8	42.4	40.7	39.7
Stroke	44.9	47.4	47.7	47.6	45.7	45.7
Accidents	51.7	59.7	66.4	66.3	65.2	56.8
Assault	5.9	7.5	7.9	7.5	6.9	6.1
Suicide	14.3	13.7	14.3	14.6	14.6	14.3
Other	212.2	226.2	227.7	230.6	222.8	220.0
Total	856.6	1001.4	1014.4	943.7	871.5	844.8
Exclude COVID	856.6	897.6	892.1	890.1	857.4	836.1

Table A4

DEATH RATES BY CAUSE OF DEATH, AS A % OF THE CORRESPONDING 2019 DEATH RATE

Category	2019	2020	2021	2022	2023	2024
Alz/Dem	100.0%	109.6%	97.3%	96.1%	89.1%	87.9%
Cancer	100.0%	98.7%	97.6%	96.3%	94.9%	93.6%
COVID	NA	NA	NA	NA	NA	NA
Diabetes	100.0%	114.8%	114.2%	110.0%	101.3%	98.3%
Flu/Pneum	100.0%	105.9%	82.4%	90.7%	85.5%	88.7%
Heart	100.0%	104.2%	102.9%	102.2%	96.9%	94.8%
Hypertension	100.0%	112.9%	114.2%	113.2%	108.5%	105.7%
Liver	100.0%	114.9%	124.8%	119.6%	112.8%	111.3%
Pulmonary	100.0%	95.6%	87.8%	89.0%	85.5%	83.3%
Stroke	100.0%	105.5%	106.2%	105.9%	101.8%	101.6%
Accidents	100.0%	115.4%	128.4%	128.2%	126.0%	109.8%
Assault	100.0%	127.2%	133.6%	126.3%	116.9%	103.1%
Suicide	100.0%	95.8%	99.6%	101.7%	102.0%	100.0%
Other	100.0%	106.6%	107.3%	108.7%	105.0%	103.7%
Total	100.0%	116.9%	118.4%	110.2%	101.7%	98.6%
Exclude COVID	100.0%	104.8%	104.1%	103.9%	100.1%	97.6%

EXPOSURE DATA

The population count data used for this report was downloaded from the Human Mortality Database (HMD) webpage in May 2025. The URL for downloading the data is as follows (note that access to this file requires setting up an HMD account):

https://www.mortality.org/File/GetDocument/hmd.v6/USA/STATS/Population.txt

The population counts in this dataset are for the U.S. resident population as of January 1 of each year. For the analysis presented in this report, population data for the intervening months was determined via linear interpolation.

The HMD data ends in January of 2024, but this report requires data through December 2025. Therefore, for this analysis, the HMD dataset was extended through December 2025 using the Social Security Area

(SSA) population projection (extracted from the 2025 OASDI Trustees Report) as a guide. The cell formulas used to extrapolate the HMD counts appear in the QMMR workbook.

Like the SSA, the Census Bureau produces a population projection by sex and single age. However, the data extends only through age 85, which is insufficient for the analysis presented in this report. In contrast, the SSA's population projection runs through age 100, making it a better guide for extending the HMD data forward in time (from January 2024 to December 2025).

DEATH COUNT DATA

The death count data used for this report was downloaded from the CDC WONDER database on April 1, 2026. The interface for downloading CDC Wonder data is located here:

https://wonder.cdc.gov/mcd.html

Recent data is only partially complete. As explained earlier in this report, data for recent months was adjusted upward using completion factors (Table A5). The factors were developed for this report by comparing CDC datasets downloaded at various dates throughout 2024 and 2025. The factors apply to deaths summed across all causes (note that completion rates for various subcategories of death may differ from completion rates for all causes of death).

Table A5

COMPLETION FACTORS AS A FUNCTION OF AGE GROUP AND MONTH IN WHICH DEATH OCCURRED

Age	Sept 2025	Oct 2025	Nov 2025	Dec 2025
0 to 9	96.5%	96.4%	96.4%	94.3%
10 to 19	99.6%	99.5%	99.1%	97.8%
20 to 29	99.6%	99.5%	99.3%	98.5%
30 to 39	99.7%	99.2%	99.0%	98.2%
40 to 49	99.5%	99.5%	99.1%	98.6%
50 to 59	99.6%	99.6%	99.4%	98.9%
60 to 69	99.8%	99.7%	99.6%	99.2%
70 to 79	99.9%	99.8%	99.8%	99.5%
80 to 89	100.0%	99.9%	99.9%	99.8%
90 to 99	100.0%	99.9%	99.9%	99.9%

Note: these factors are applicable to data downloaded from CDC WONDER on April 1, 2026.

The factors increase from right to left across each row of the table, reflecting the maturation of data with the passage of time — that is, the greater the interval between the date the data was downloaded (April 1, 2026) and the month in which deaths were observed, the greater the completeness of the data. The factors also increase from top to bottom of each column, because data for older ages matures more quickly than data for younger ages.

CALCULATION OF AGE-STANDARDIZED DEATH RATES

To neutralize the effects of changes in the population's age structure, the death rates presented in this report are standardized by age. Age-standardized results are easy to interpret because the effects of changes in age structure are eliminated. If an age-standardized death rate increases (decreases) across time, this implies that age-specific death rates also increased (decreased).

This report used 2019 HMD population counts as weights for age standardization. In effect, this "freezes" the population's age structure at 2019 levels. Aggregate death rates are computed as the weighted average of age-specific death rates, using weights derived from 2019 population counts. For example, to compute the age-standardized death rate in 2023 for ages 60 to 69, the following calculation is employed:

$$\left(\sum_{x=60}^{69} \frac{\text{Deaths}(x)_{2023}}{\text{Population}(x)_{2023}} * \text{Population}(x)_{2019}\right) \div \sum_{x=60}^{69} \text{Population}(x)_{2019}$$

For presentational simplicity, the prior equation shows death and population data in annual time units. However, the underlying death data is monthly rather than annual, and the calculation process is adjusted accordingly. The population data consists of mid-year (July 1) estimates; to calculate estimates for other calendar months, the population at each age is assumed to vary linearly across the period between each of the mid-year estimates. Monthly death and population data facilitate calculations for rolling 12-month periods that straddle adjacent calendar years—for example, the period from April 2024 to March 2025.

MAPPING OF ICD CODES TO 14 CATEGORIES OF DEATH

Tables 3 and 4 in this report present death data disaggregated into 14 mutually exclusive cause-of-death categories. Note that 'Accidents' includes drug overdose deaths. The 14 categories correspond to the following ICD-10 codes:

Table A6

MAPPING OF ICD CODES TO THE BROAD CATEGORIES OF DEATH USED IN THIS REPORT

	Category	ICD Codes
1	Alzheimer's/Dementia	G30
2	Cancer	C00-C97
3	COVID	U071
4	Diabetes	E10-E14
5	Flu/Pneumonia	J09-J18
6	Heart Disease	I00-I09, I11, I13, I20-I51
7	Hypertension	I10, I12, I15
8	Chronic Liver Disease & Cirrhosis	K70, K73-K74
9	Pulmonary	J40-J47
10	Stroke	I60-I69
11	Accidents	V01-X59, Y85-Y86
12	Assault	U01-U02, X85-Y09, Y87.1
13	Suicide	U03, X60-X84, Y87.0
14	Other	All other ICD codes

Although some death certificates reflect multiple causes of death, one cause is identified as the primary or "underlying" cause. This report used the underlying cause to disaggregate deaths into the 14 categories shown in Table A6.

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At the SOA:

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- Barbara Scott, Senior Research Administrator
- Patrick Wiese, ASA, Lead Modeling Researcher

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