

## Dementia Mortality in Adults Age 65 and Older: United States, 2018–2022

By Ellen A. Kramarow, Ph.D., and Betzaida Tejada-Vera, M.S.

In 2022, 288,436 deaths among U.S. adults age 65 and older were attributed to dementia as the underlying cause of death. These deaths include vascular dementia, unspecified dementia, Alzheimer disease, and other degenerative diseases of nervous system (including Lewy body dementia) (1). Compared with earlier years, dementia mortality increased in 2020, the first year of the COVID-19 pandemic in the United States (2,3). This report updates a previous publication (4), presenting age-adjusted death rates by sex, race and Hispanic origin, and place of death for adults age 65 and older with dementia as the underlying cause of death during 2018–2022.

Between 2018 and 2019, age-adjusted death rates for dementia were stable. Between 2019 and 2020, the rate increased by 10.2%, from 520.1 deaths per 100,000 standard population to 572.9 (Figure 1, Table 1). Between 2019 and 2020, death rates increased for men by 7.1% (from 440.5 to 471.6) and for women by 11.8% (567.7 to 634.5). Between 2020 and 2022, dementia death rates overall declined to 548.9 but remained higher than the 2018 and 2019 rates. Dementia death rates for women declined each year from 2020 (634.5) to 2022 (599.6). For men, death rates declined from 2020 (471.6) to 2021 (465.3) but were stable from 2021 to 2022 (464.6). Dementia death rates were higher for women than men throughout the period.

During 2018–2022, dementia death rates were higher for White non-Hispanic (subsequently, White) adults age 65 and older compared with Black non-Hispanic (subsequently, Black) and Hispanic adults (Figure 2, Table 2). Death rates for all groups were stable between 2018 and 2019; from 2019 to 2020, death rates increased from 370.6 to 425.8 for Hispanic adults, from 502.9 to 582.7 for Black adults, and from 555.3 to 608.0 for White adults. Dementia death rates for Black and White adults declined from 2020 to 2022, while rates for Hispanic adults were stable between 2020 and 2022.

Between 2018 and 2022, changes occurred in the place where dementia deaths occur. The percentage of deaths occurring in nursing homes or long-term care facilities declined from 53.6% in 2018 to 44.6% in 2022 (Figure 3, Table 3). During this period, deaths occurring at home increased from 23.7% to 30.4% of all dementia deaths. The percentage of deaths in hospice facilities increased from 6.4% to 6.6%, and the percentage in hospitals declined from 8.2% to 7.6%.



## Data source and methods

Estimates in this report are based on the National Vital Statistics System mortality files, accessed via CDC WONDER (1). Dementia deaths are identified using the *International Classification of Diseases, 10th Revision* underlying cause-of-death codes F01, vascular dementia; F03, unspecified dementia; G30, Alzheimer disease; and G31, other degenerative diseases of nervous system, not elsewhere classified (5). Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population (6). Pairwise comparisons of rates were conducted using a *z* test with an alpha level of 0.05. Changes in the distribution of place of death were assessed using the Cochran–Armitage test for trends, a modified chi-squared test.

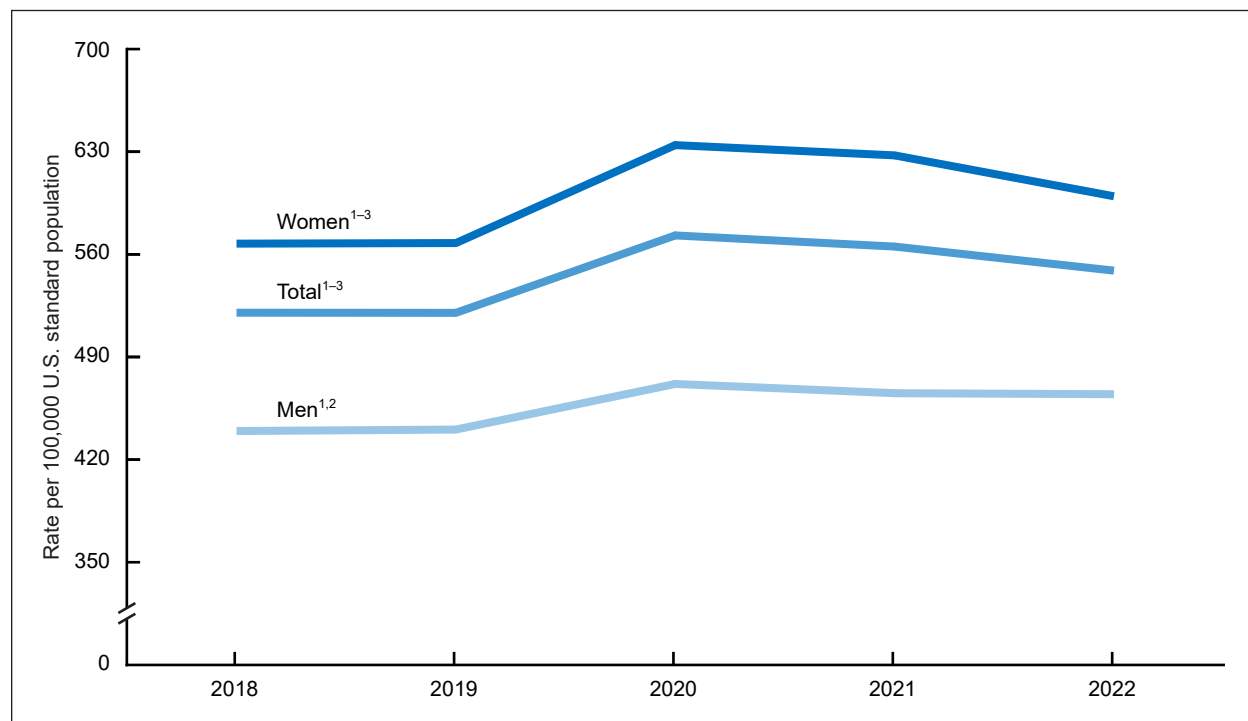
## References

1. Centers for Disease Control and Prevention. CDC WONDER. About underlying cause of death, 2018–2022, single race. Available from: <https://wonder.cdc.gov/ucd-icd10-expanded.html>.
2. Chen R, Charpignon ML, Raquib RV, Wang J, Meza E, Aschmann HE, et al. Excess mortality with Alzheimer disease and related dementias as an underlying or contributing cause during the COVID-19 pandemic in the US. *JAMA Neurol* 80(9):919–28. 2023. DOI: <https://doi.org/10.1001/jamaneurol.2023.2226>.
3. Gilstrap L, Zhou W, Alsan M, Nanda A, Skinner JS. Trends in mortality rates among Medicare enrollees with Alzheimer disease and related dementias before and during the early phase of the COVID-19 pandemic. *JAMA Neurol* 79(4):342–8. 2022. DOI: <https://doi.org/10.1001/jamaneurol.2022.0010>.
4. Kramarow EA, Tejada-Vera B. Dementia mortality in the United States, 2000–2017. National Vital Statistics Reports; vol 68 no 2. Hyattsville, MD: National Center for Health Statistics. 2019. Available from: [https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68\\_02-508.pdf](https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_02-508.pdf).
5. World Health Organization. International statistical classification of diseases and related health problems, 10th revision (ICD–10). 5th ed. 2016.
6. Anderson RN, Rosenberg HM. Age standardization of death rates: Implementation of the year 2000 standard. National Vital Statistics Reports; vol 47 no. 3. Hyattsville, MD: National Center for Health Statistics. 1998.

## Suggested citation

Kramarow EA, Tejada-Vera B. Dementia mortality in adults age 65 and older: United States, 2018–2022. NCHS Health E-Stats. 2024. DOI: <https://dx.doi.org/10.15620/cdc/165795>.

**Figure 1. Age-adjusted dementia death rate among adults age 65 and older, by sex: United States, 2018–2022**



<sup>1</sup>Significantly lower in 2018 and 2019 than in 2020, 2021, and 2022 ( $p < 0.05$ ).

<sup>2</sup>Significantly higher in 2020 than in 2021 and 2022 ( $p < 0.05$ ).

<sup>3</sup>Significantly higher in 2021 than in 2022 ( $p < 0.05$ ).

NOTES: Dementia deaths are identified according to the *International Classification of Diseases, 10th Revision* underlying cause-of-death codes: F01 (vascular dementia), F03 (unspecified dementia), G30 (Alzheimer disease), and G31 (other degenerative diseases of nervous system). Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

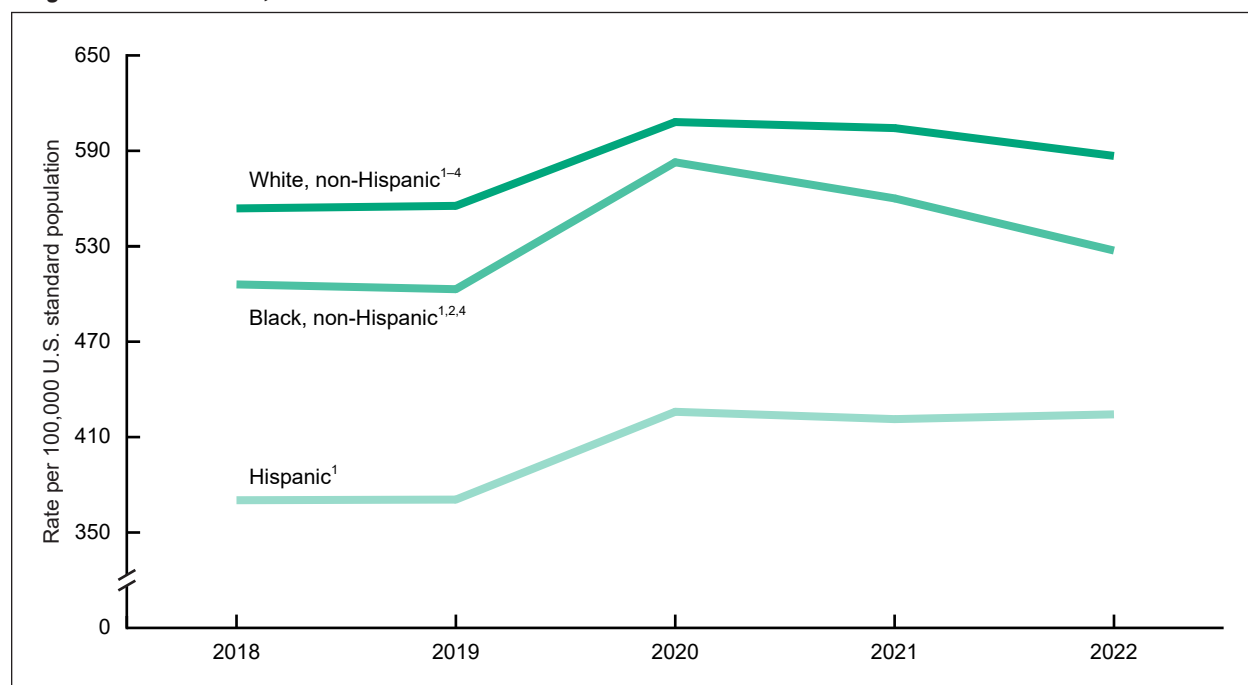
**Data table for Figure 1. Age-adjusted dementia death rate among adults age 65 and older, by sex: United States, 2018–2022**

Year	Number of deaths			Death rate		
	Total	Women	Men	Total	Women	Men
2018	263,172	177,280	85,892	520.2	567.3	439.5
2019	267,914	179,406	88,508	520.1	567.7	440.5
2020	299,834	202,684	97,150	572.9	634.5	471.6
2021	275,538	185,229	90,309	565.3	627.5	465.3
2022	288,436	193,143	95,293	548.9	599.6	464.6

NOTES: Rates are per 100,000 standard population. Dementia deaths are identified according to the *International Classification of Diseases, 10th Revision* underlying cause-of-death codes: F01 (vascular dementia), F03 (unspecified dementia), G30 (Alzheimer disease), and G31 (other degenerative diseases of nervous system). Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

**Figure 2. Age-adjusted dementia death rate among adults age 65 and older, by race and Hispanic origin: United States, 2018–2022**



<sup>1</sup>Significantly lower in 2018 and 2019 than in 2020, 2021, and 2022 ( $p < 0.05$ ).

<sup>2</sup>Significantly higher in 2020 than in 2021 and 2022 and significantly higher in 2021 than in 2022 ( $p < 0.05$ ).

<sup>3</sup>Significantly higher than Black non-Hispanic adults for all years ( $p < 0.05$ ).

<sup>4</sup>Significantly higher than Hispanic adults for all years ( $p < 0.05$ ).

NOTES: Dementia deaths are identified according to the *International Classification of Diseases, 10th Revision* underlying cause-of-death codes: F01 (vascular dementia), F03 (unspecified dementia), G30 (Alzheimer disease), and G31 (other degenerative diseases of nervous system). Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population. Race groups are single race. People of Hispanic origin may be of any race.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

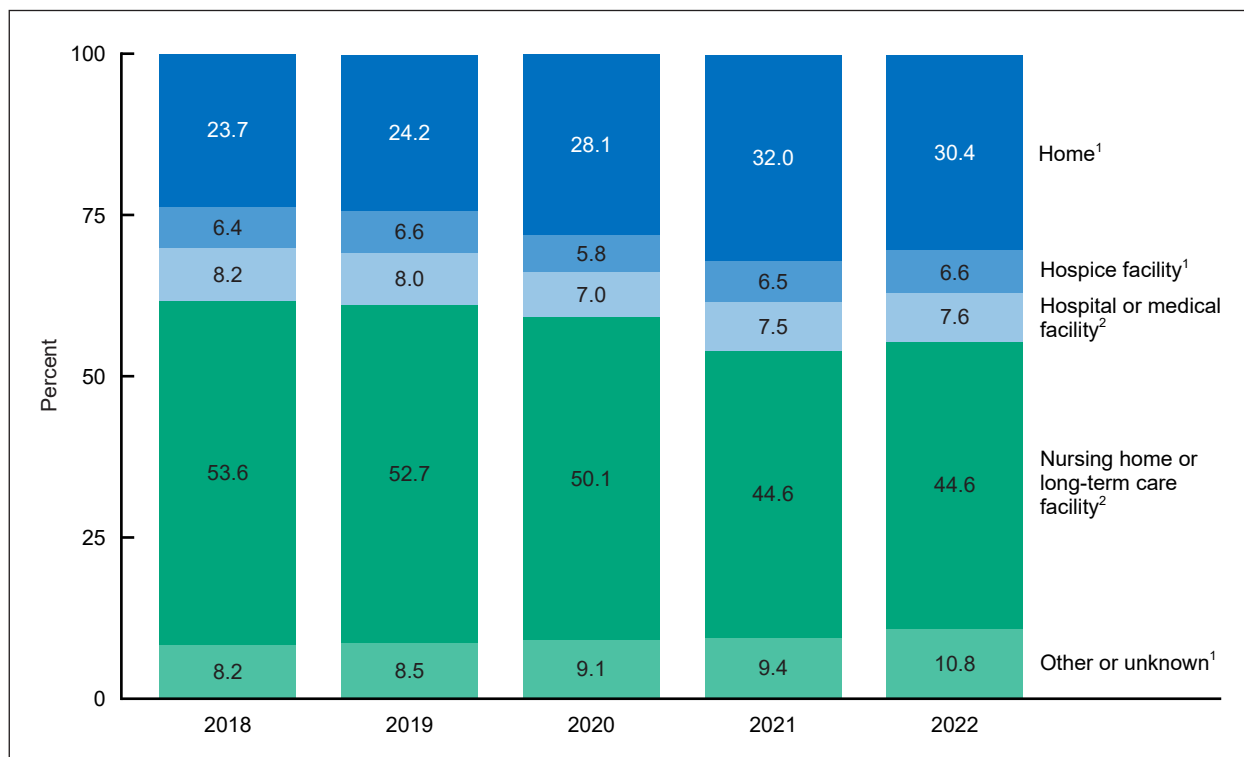
**Data table for Figure 2. Age-adjusted dementia death rate among adults age 65 and older, by race and Hispanic origin: United States, 2018–2022**

Year	Number of deaths			Death rate		
	Hispanic	Black, non-Hispanic	White, non-Hispanic	Hispanic	Black, non-Hispanic	White, non-Hispanic
2018	14,609	20,566	220,612	370.2	505.9	553.7
2019	15,127	21,120	223,916	370.6	502.9	555.3
2020	18,222	25,235	247,155	425.8	582.7	608.0
2021	17,523	23,144	226,060	421.2	560.0	604.2
2022	18,802	22,973	236,850	424.2	527.2	586.7

NOTES: Rates are per 100,000 standard population. Dementia deaths are identified according to the *International Classification of Diseases, 10th Revision* underlying cause-of-death codes: F01 (vascular dementia), F03 (unspecified dementia), G30 (Alzheimer disease), and G31 (other degenerative diseases of nervous system). Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population. Race groups are single race. People of Hispanic origin may be of any race.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

**Figure 3. Percent distribution of dementia deaths in adults age 65 and older, by place of death: United States, 2018–2022**



<sup>1</sup>Significant increasing trend by year ( $p < 0.05$ ).

<sup>2</sup>Significant decreasing trend by year ( $p < 0.05$ ).

NOTES: Dementia deaths are identified according to the *International Classification of Diseases, 10th Revision* (ICD–10) underlying cause-of-death codes: F01 (vascular dementia), F03 (unspecified dementia), G30 (Alzheimer disease), and G31 (other degenerative diseases of nervous system). Percentages may not add to 100 because of rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

**Data table for Figure 3. Percent distribution of dementia deaths in adults age 65 and older, by place of death: United States, 2018–2022**

Year	Total		Home		Hospice facility		Hospital or medical facility		Nursing home or long-term care facility		Other or unknown	
	Number of deaths	Percent	Number of deaths	Percent	Number of deaths	Percent	Number of deaths	Percent	Number of deaths	Percent	Number of deaths	Percent
2018 . . .	263,172	100.1	62,327	23.7	16,716	6.4	21,587	8.2	140,995	53.6	21,547	8.2
2019 . . .	267,914	100.0	64,780	24.2	17,574	6.6	21,509	8.0	141,221	52.7	22,830	8.5
2020 . . .	299,834	100.1	84,268	28.1	17,272	5.8	21,047	7.0	150,071	50.1	27,176	9.1
2021 . . .	275,538	100.0	88,157	32.0	17,867	6.5	20,553	7.5	122,991	44.6	25,970	9.4
2022 . . .	288,436	100.0	87,755	30.4	19,144	6.6	22,026	7.6	128,502	44.6	31,009	10.8

NOTES: Dementia deaths are identified according to the *International Classification of Diseases, 10th Revision* underlying cause-of-death codes: F01 (vascular dementia), F03 (unspecified dementia), G30 (Alzheimer disease), and G31 (other degenerative diseases of nervous system). Percentages may not add to 100 because of rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.