

U.S. Mortality Trends Through the Pandemic

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Topics

U.S. Industry Death Benefits

Total Deaths and Rates in U.S., all-cause mortality

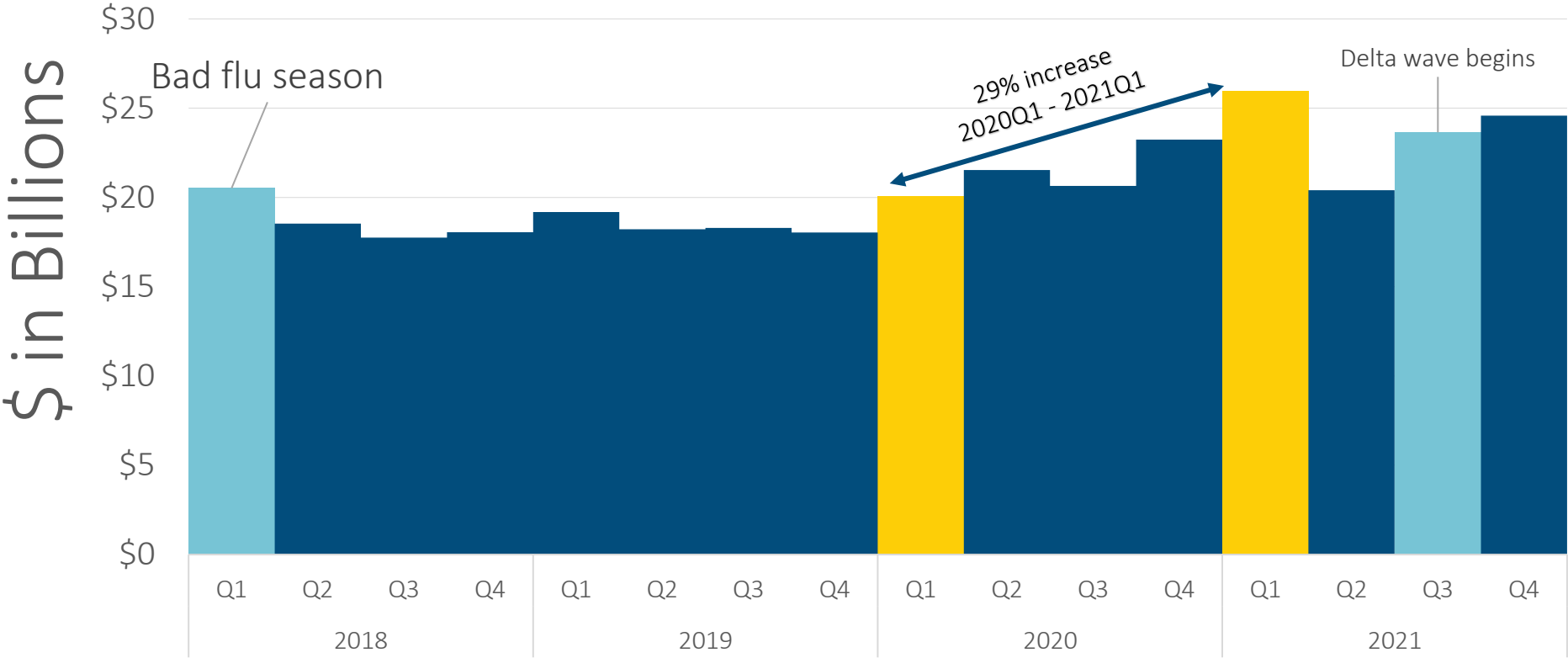
COVID trends

Non-COVID trends

U.S. Life Insurance Impact



LAH Death Benefits Tracking with Pandemic



Source: Prepared by Conning, Source: ©2022 S&P Capital IQ Pro.

Which Way Will Mortality Go?

Return to normal?

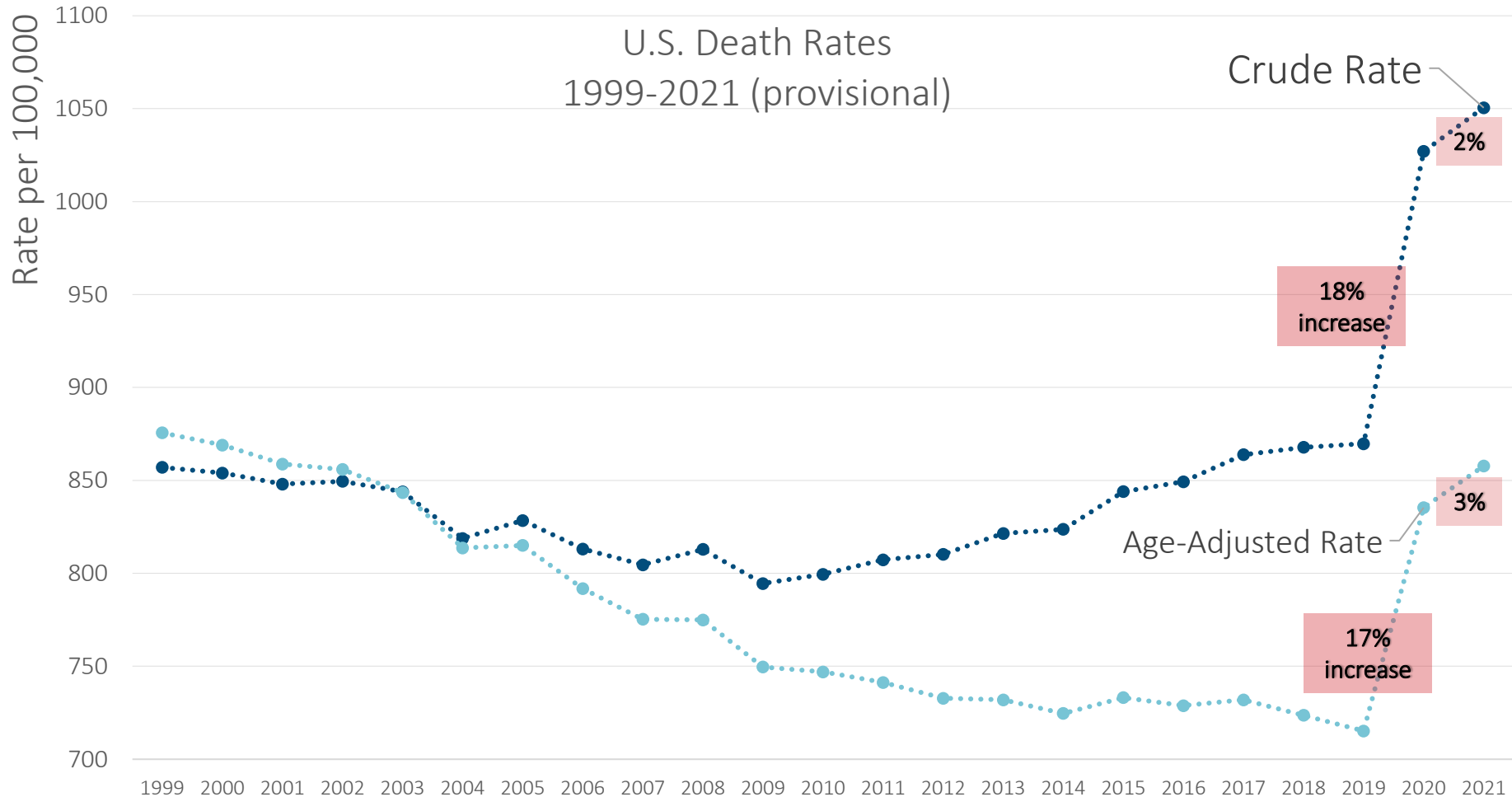
COVID part of seasonal mix of disease?

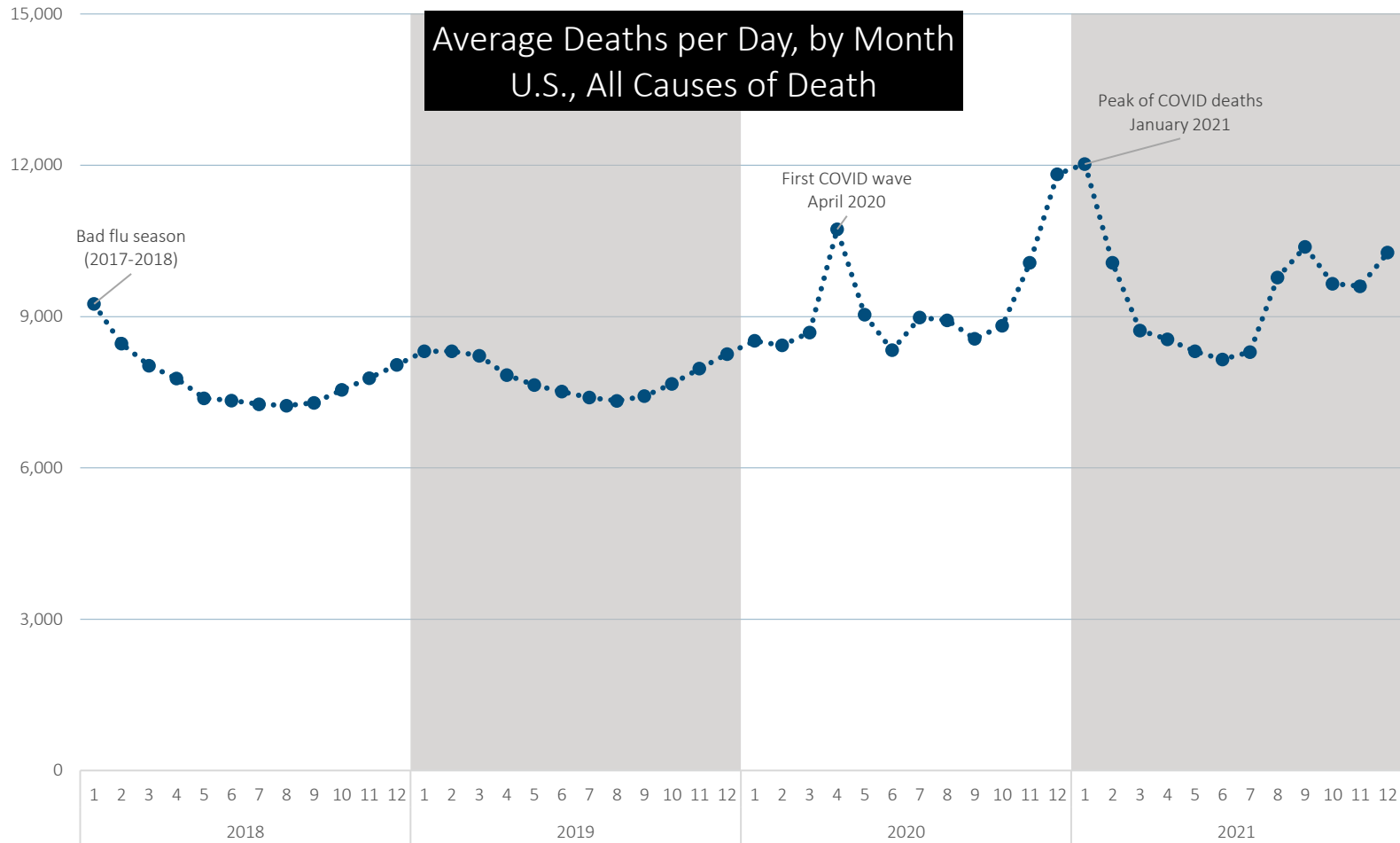
Heightened mortality for n years?

All-cause mortality trends

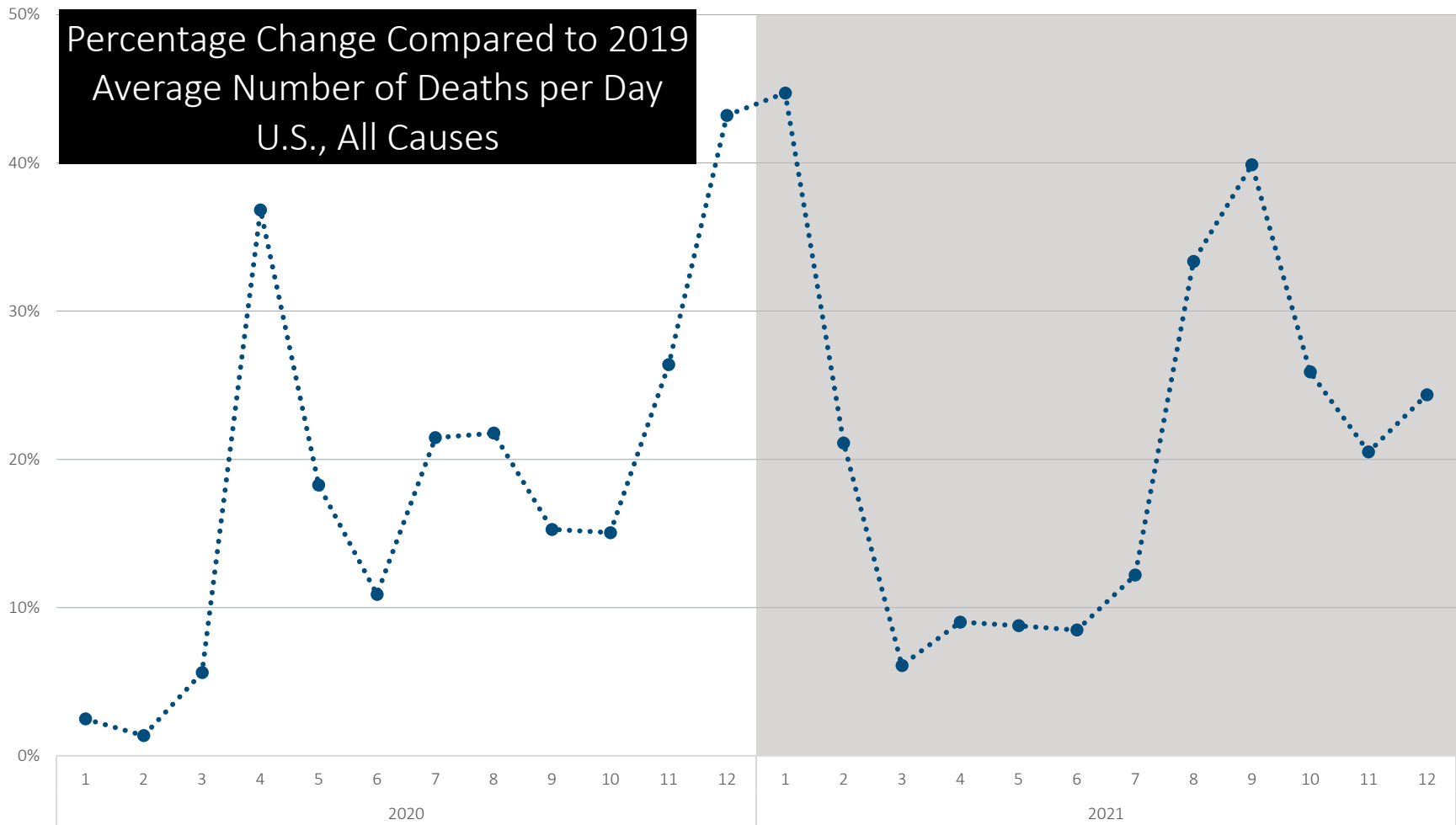


U.S. Death Rates 1999-2021 (provisional)





Percentage Change Compared to 2019 Average Number of Deaths per Day U.S., All Causes



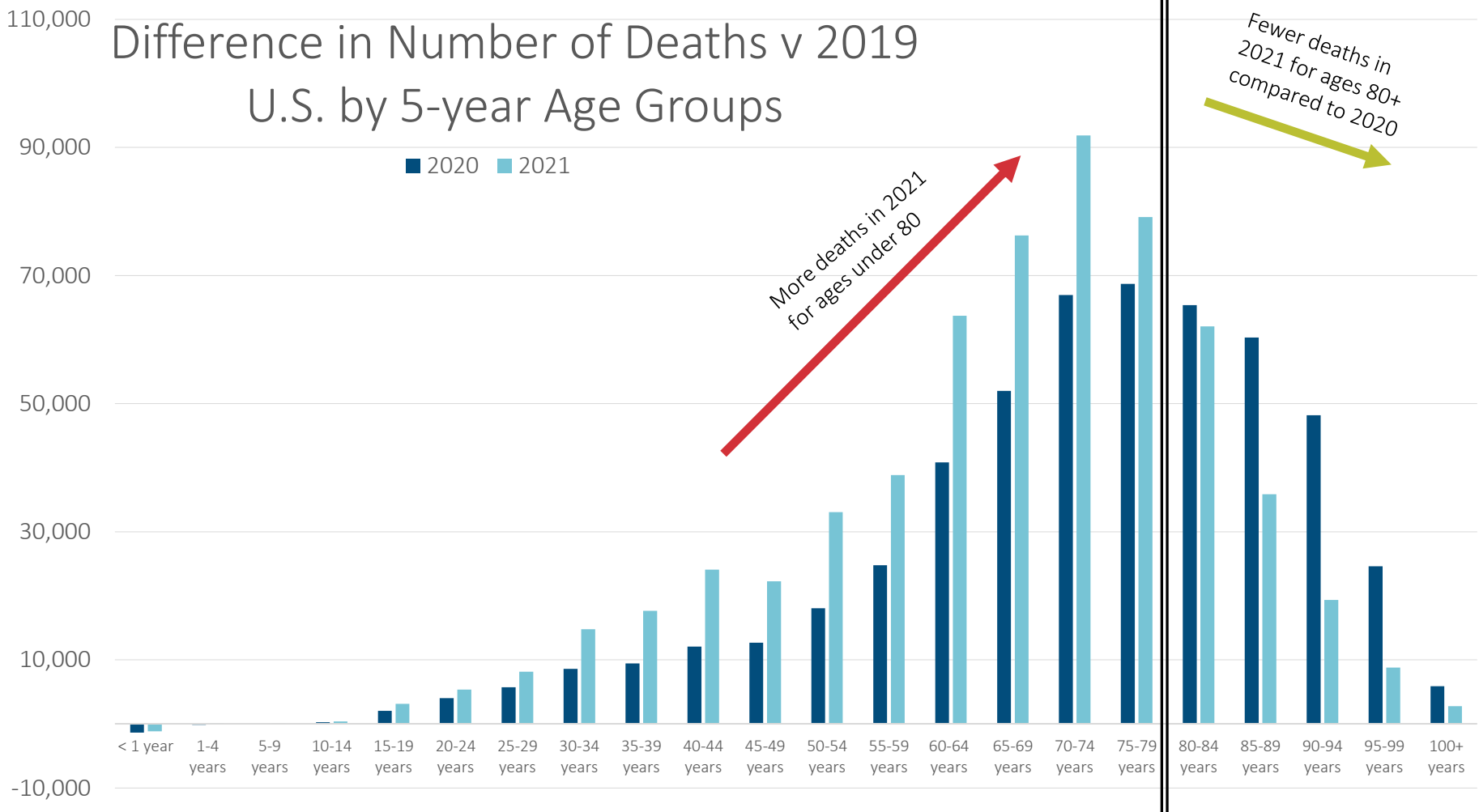
Source: CDC Wonder, data as of 6 May 2022

All-cause mortality by age group



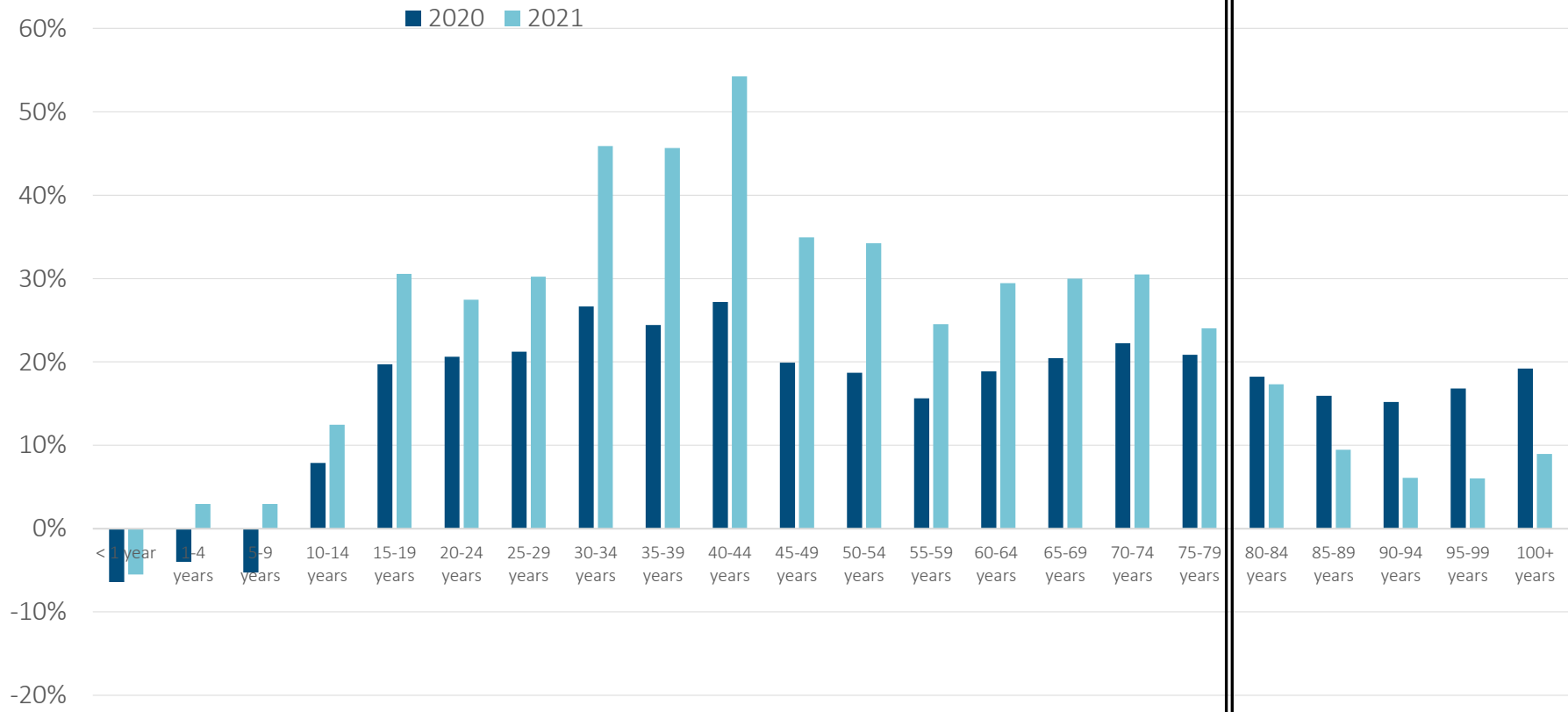
Difference in Number of Deaths v 2019

U.S. by 5-year Age Groups



Percentage Difference in Number of Deaths v 2019

U.S. by 5-year Age Groups

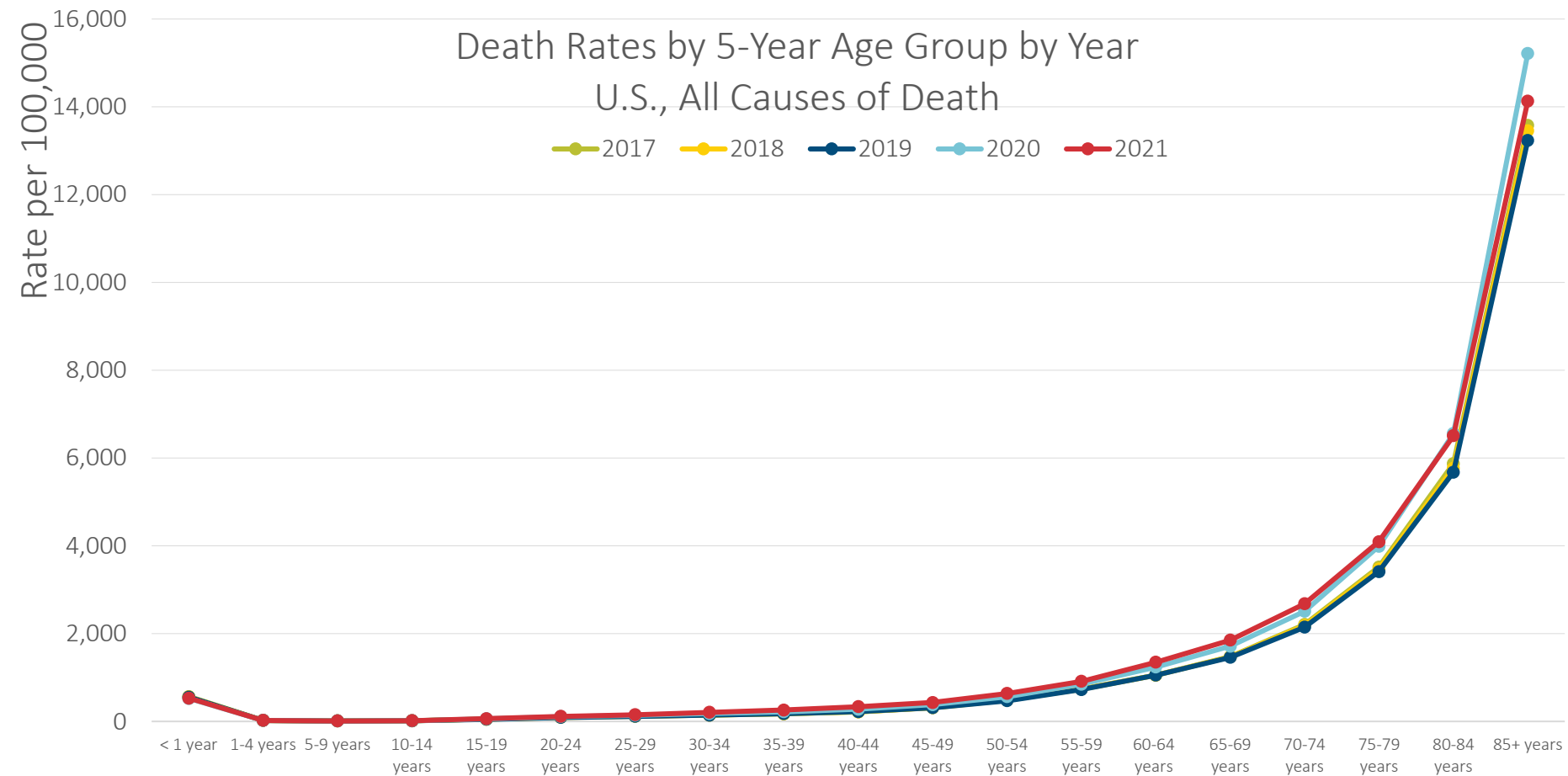


Source: CDC Wonder, data as of 6 May 2022

Death Rates by 5-Year Age Group by Year

U.S., All Causes of Death

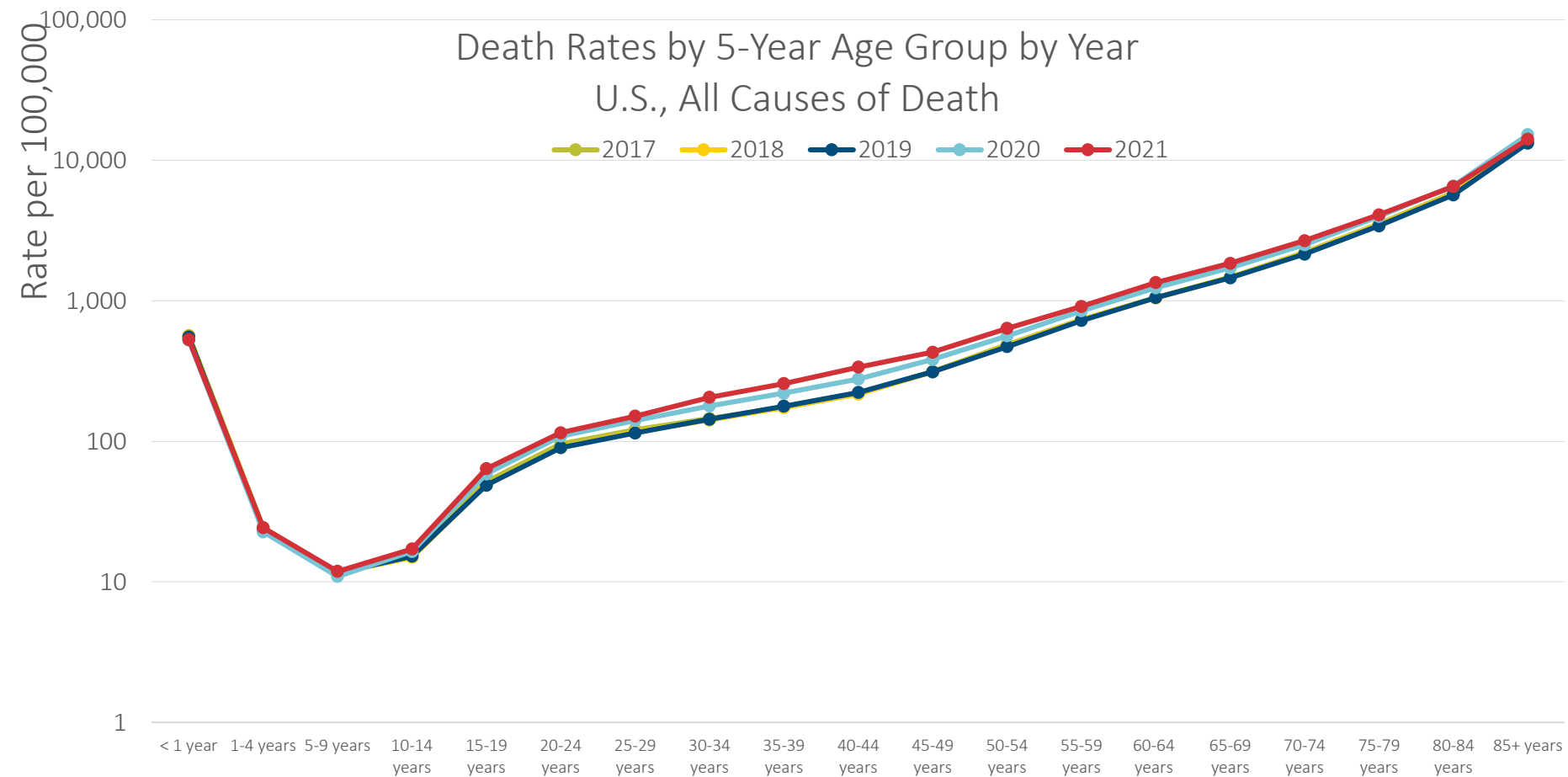
2017 2018 2019 2020 2021



Death Rates by 5-Year Age Group by Year

U.S., All Causes of Death

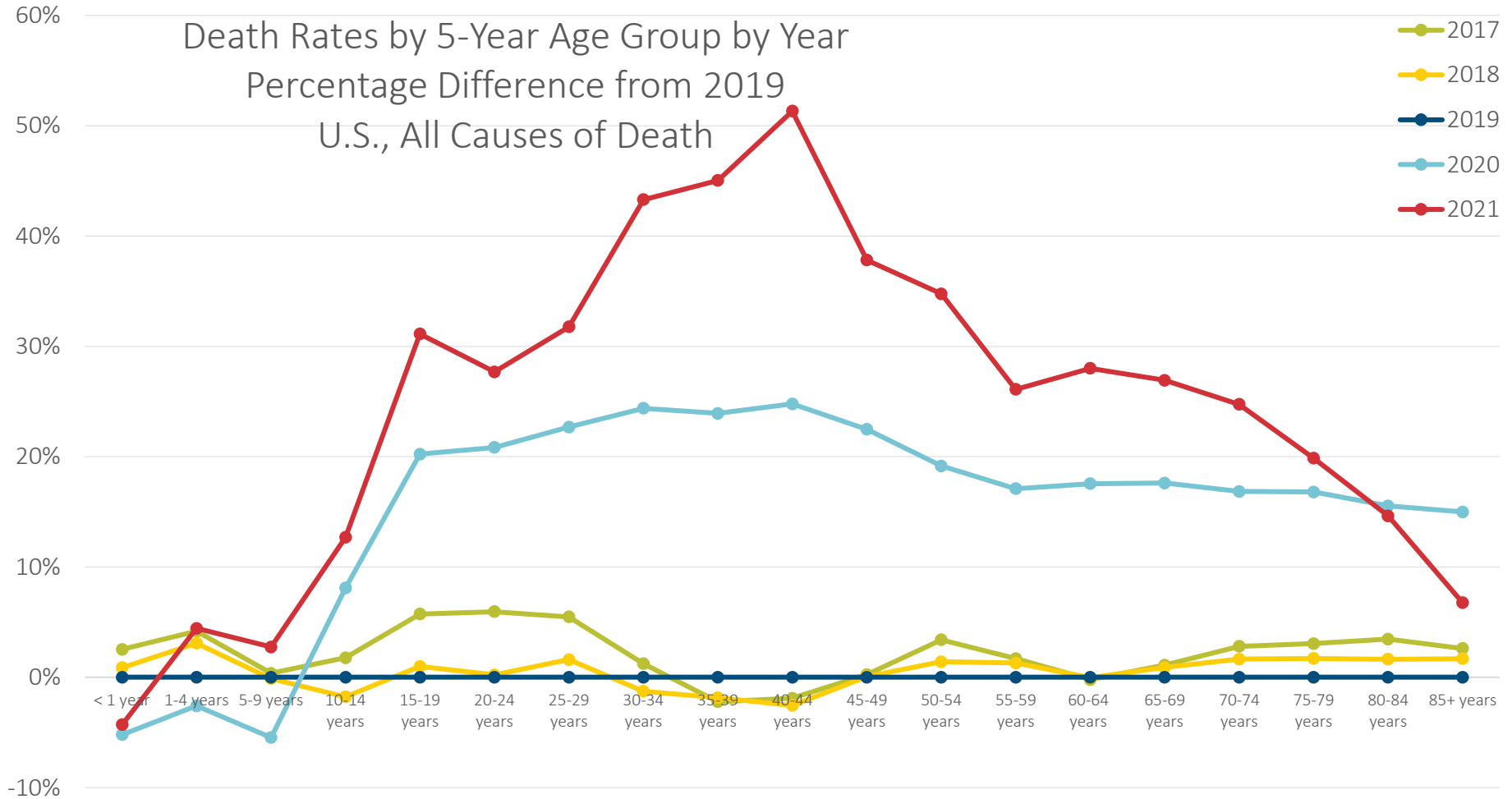
2017 2018 2019 2020 2021



Death Rates by 5-Year Age Group by Year

Percentage Difference from 2019

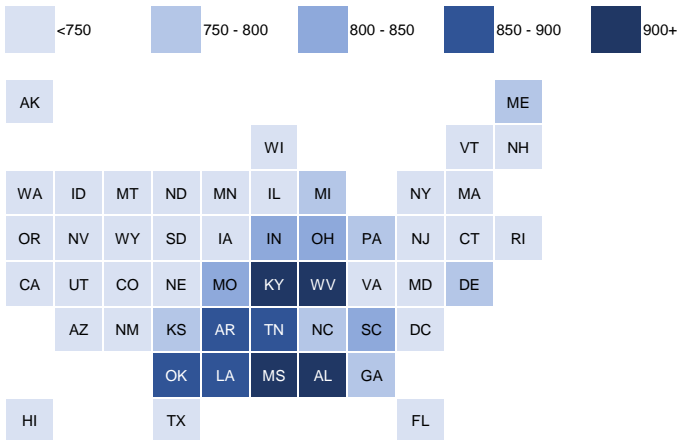
U.S., All Causes of Death



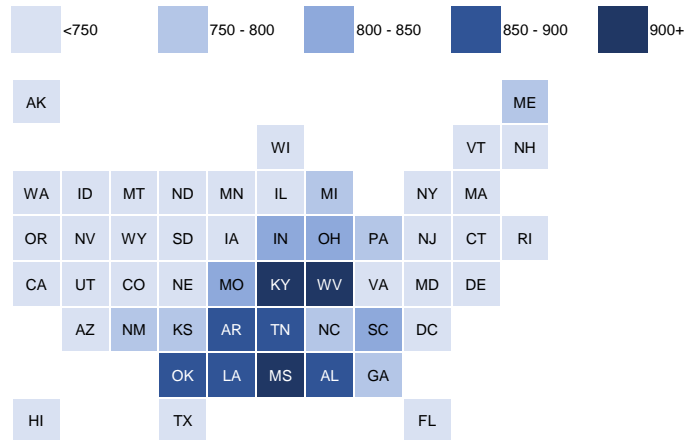
Geographic differences



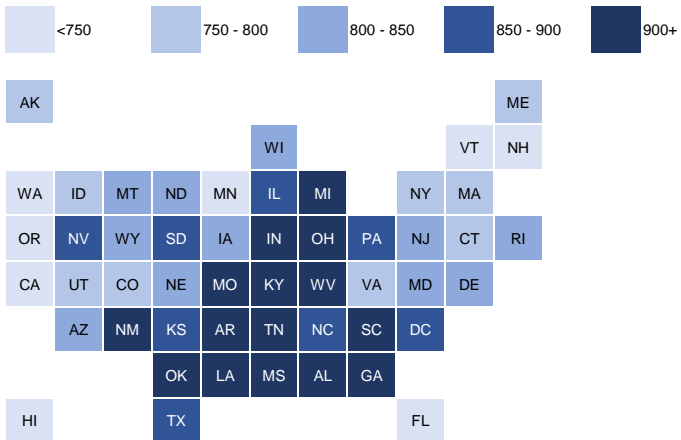
Age-Adjusted Death Rates, 2018, All Causes of Death



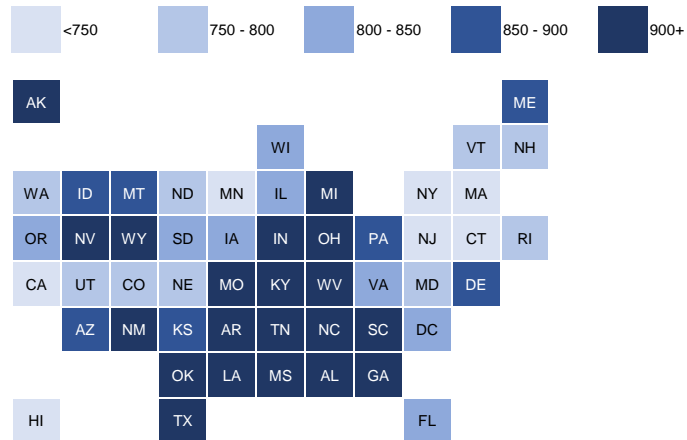
Age-Adjusted Death Rates, 2019, All Causes of Death



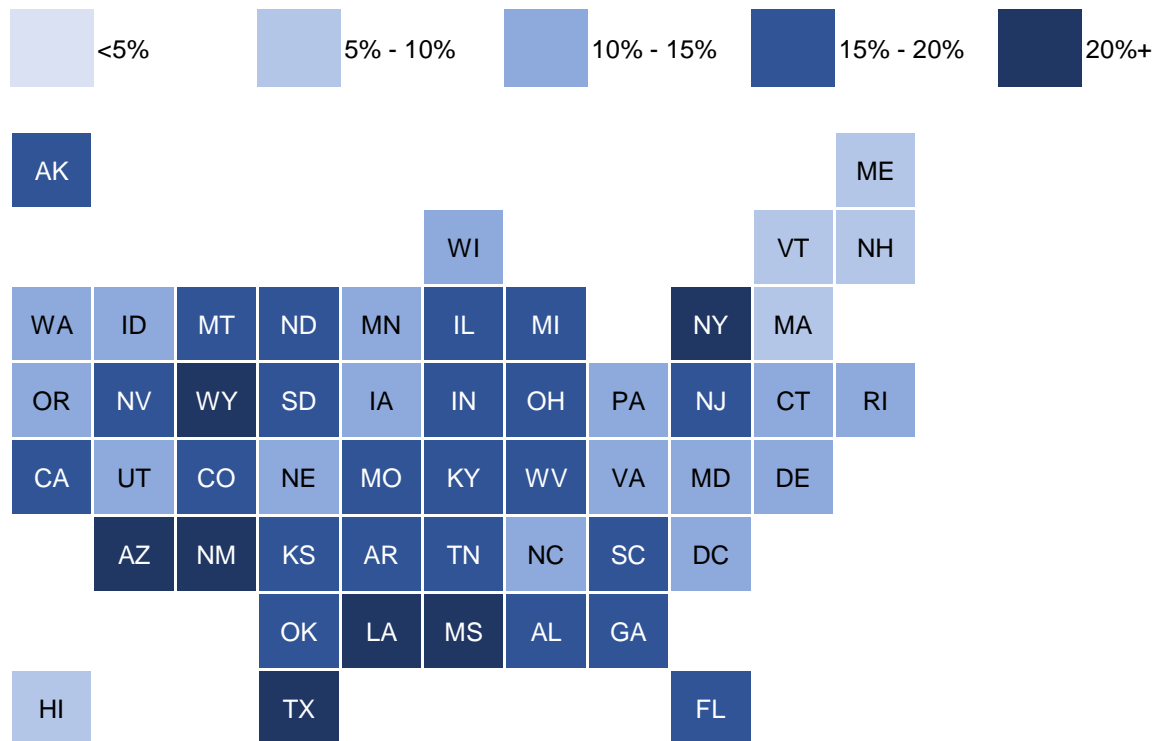
Age-Adjusted Death Rates, 2020, All Causes of Death



Age-Adjusted Death Rates, 2021, All Causes of Death



Percentage Change in Age-Adjusted Death Rates, (2020-2021) vs (2016-2019)



Average Age-Adjusted Death Rate, All Causes

Rank	State			Percentage Change
		2016-2019	2020-2021	
1	New Mexico	755	944	25.1%
2	Arizona	671	833	24.1%
3	Texas	729	889	22.0%
4	Mississippi	945	1,152	21.9%
5	Louisiana	870	1,052	21.0%
6	New York	627	756	20.6%
7	Wyoming	731	881	20.5%
8	Alabama	914	1,093	19.7%
9	Georgia	789	939	19.0%
10	Tennessee	889	1,058	19.0%

11	South Carolina	821	969	18.0%
12	West Virginia	950	1,121	18.0%
13	Alaska	714	842	17.9%
14	California	612	721	17.9%
15	New Jersey	666	784	17.7%
16	Oklahoma	891	1,047	17.5%
17	Nevada	752	884	17.5%
18	Montana	740	866	17.1%
19	North Dakota	695	814	17.0%
20	Florida	662	774	17.0%
21	Michigan	781	912	16.8%
22	Arkansas	887	1,032	16.4%
23	South Dakota	728	846	16.2%
24	Colorado	658	763	16.0%
25	Indiana	835	968	15.9%
26	Kentucky	925	1,071	15.8%
27	Ohio	837	968	15.7%
28	Kansas	766	886	15.6%
29	Missouri	813	939	15.5%
30	Illinois	717	828	15.4%

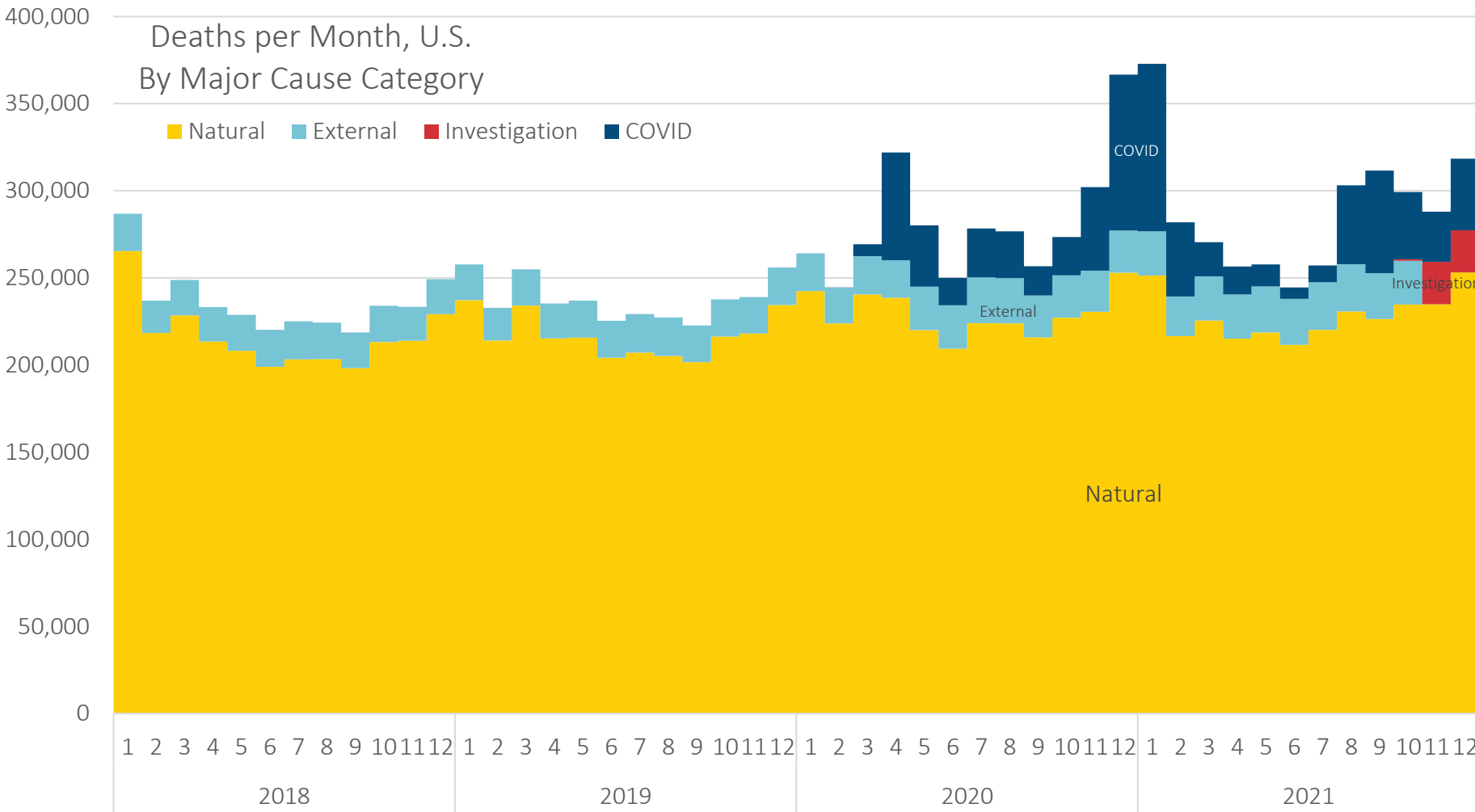
31	District of Columbia	728	837	15.0%
32	Virginia	712	818	14.9%
33	North Carolina	776	889	14.5%
34	Iowa	729	831	14.1%
35	Idaho	727	829	14.1%
36	Pennsylvania	764	869	13.7%
37	Wisconsin	721	820	13.7%
38	Delaware	745	845	13.3%
39	Minnesota	650	737	13.2%
40	Maryland	714	808	13.2%
41	Connecticut	650	734	13.1%
42	Rhode Island	703	791	12.6%
43	Nebraska	716	806	12.6%
44	Utah	698	782	12.0%
45	Oregon	703	785	11.7%
46	Washington	674	742	10.1%
47	Massachusetts	668	730	9.3%
48	Maine	761	827	8.7%
49	Vermont	704	764	8.5%
50	Hawaii	576	610	5.9%
51	New Hampshire	713	751	5.4%

Cause of Death: Major Categories



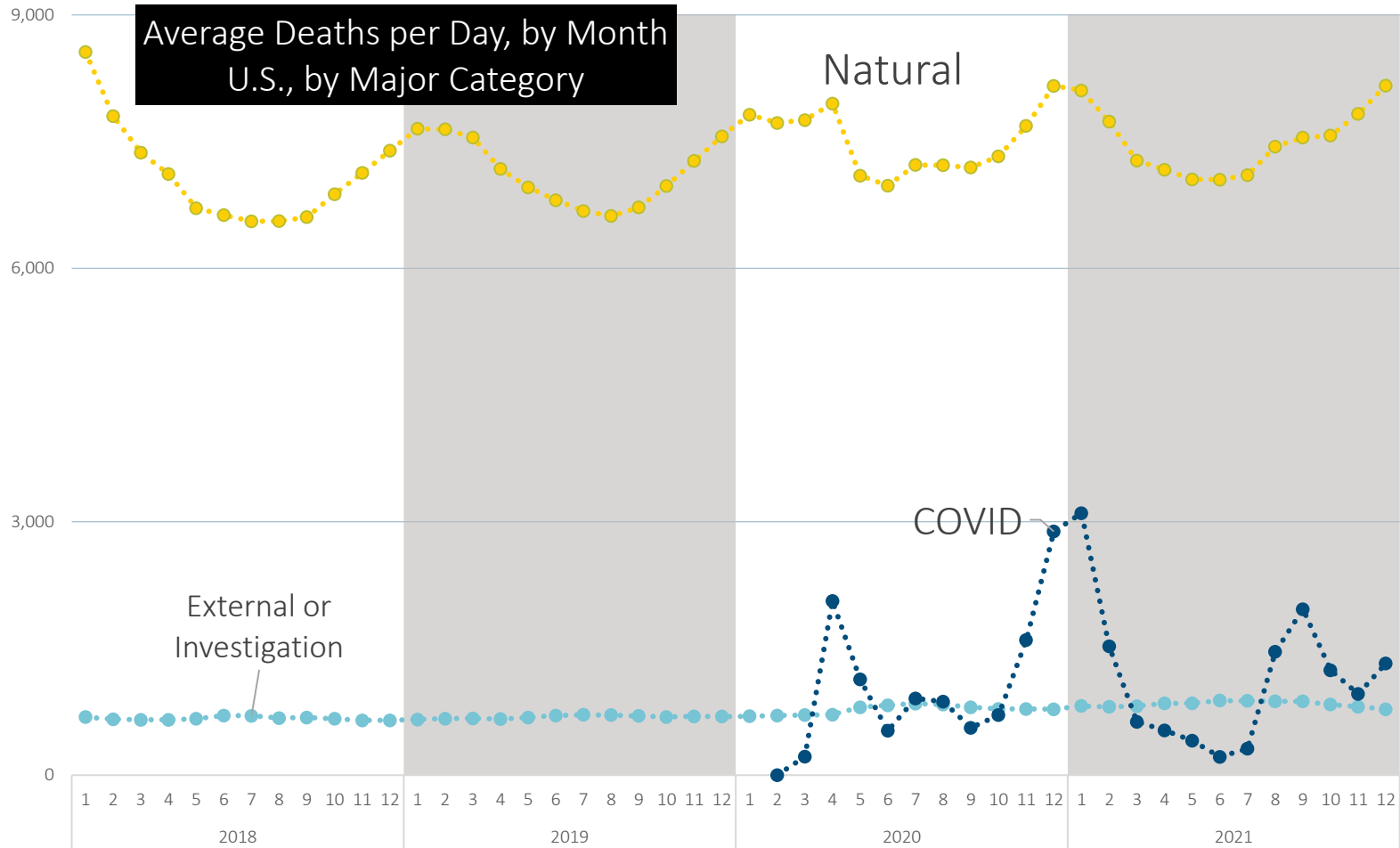
Deaths per Month, U.S. By Major Cause Category

■ Natural ■ External ■ Investigation ■ COVID



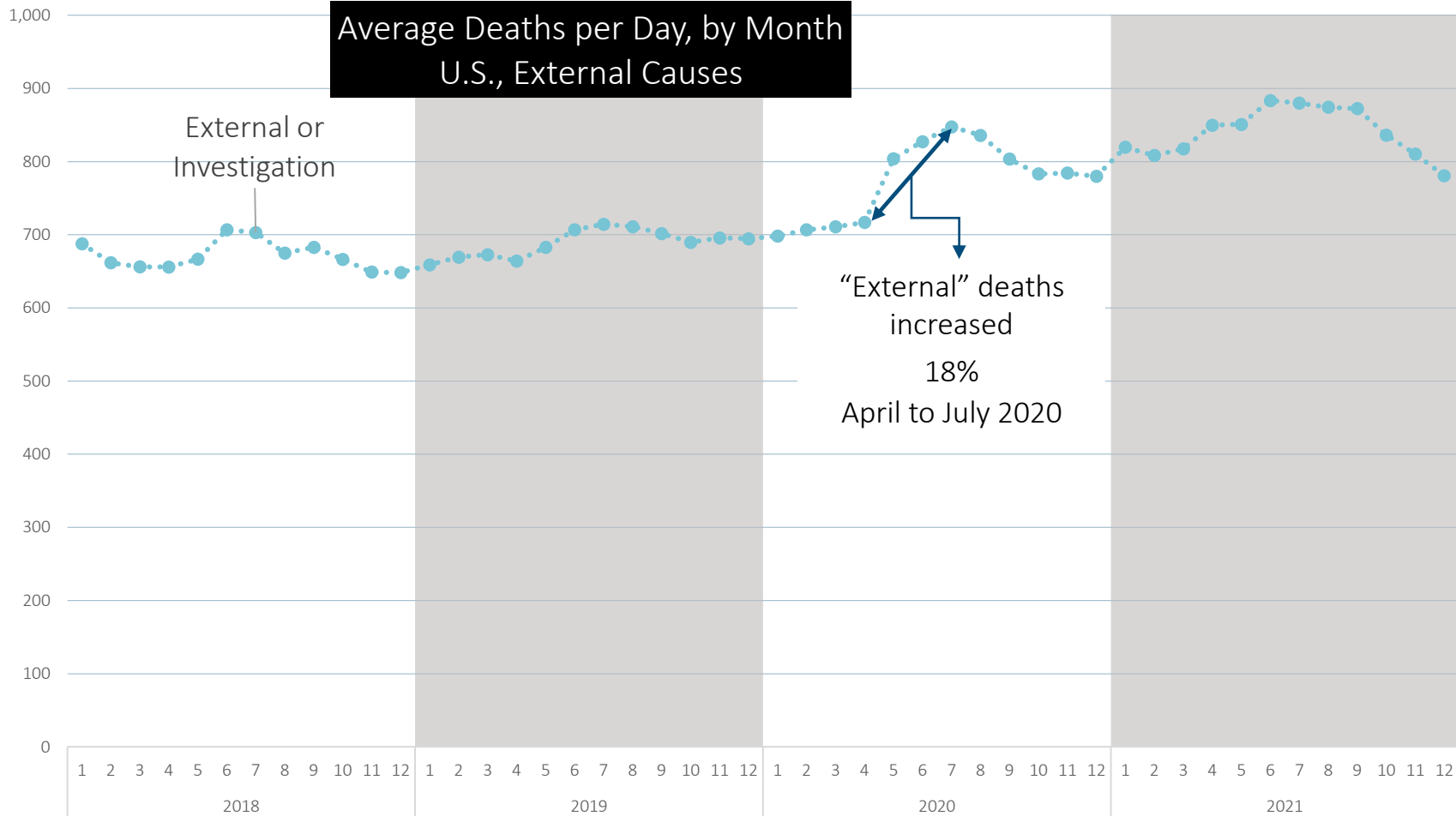
Source: CDC Wonder, data as of 6 May 2022

Average Deaths per Day, by Month U.S., by Major Category



Source: CDC Wonder, data as of 6 May 2022

Average Deaths per Day, by Month U.S., External Causes



Total Death Rate	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
	0.55%	0.02%	0.01%	0.07%	0.13%	0.20%	0.39%	0.88%	1.76%	4.31%	13.23%

Death Rate by Leading Causes of Death by Age Group, 2019, U.S.

Rank	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
1	Perinatal period 0.272%	Accidents 0.007%	Accidents 0.004%	Accidents 0.028%	Accidents 0.053%	Accidents 0.058%	Cancer 0.087%	Cancer 0.263%	Cancer 0.543%	Cancer 1.006%	Heart disease 3.798%
2	Congenital anomalies 0.114%	Congenital anomalies 0.003%	Cancer 0.002%	Suicide 0.014%	Suicide 0.018%	Cancer 0.026%	Heart disease 0.076%	Heart disease 0.190%	Heart disease 0.389%	Heart disease 0.991%	Cancer 1.571%
3	Accidents 0.033%	Cancer 0.002%	Suicide 0.001%	Homicide 0.011%	Homicide 0.012%	Heart disease 0.025%	Accidents 0.057%	Accidents 0.059%	Chronic lower respiratory diseases 0.125%	Chronic lower respiratory diseases 0.318%	Alzheimers 1.191%
4	Heart disease 0.007%	Homicide 0.002%	Congenital anomalies 0.001%	Cancer 0.003%	Cancer 0.008%	Suicide 0.018%	Liver disease 0.020%	Chronic lower respiratory diseases 0.044%	Stroke 0.076%	Stroke 0.254%	Stroke 0.977%
5	Homicide 0.007%	Heart disease 0.001%	Homicide 0.001%	Heart disease 0.002%	Heart disease 0.008%	Homicide 0.008%	Suicide 0.020%	Diabetes 0.037%	Diabetes 0.073%	Alzheimers 0.210%	Chronic lower respiratory diseases 0.654%
6	Flu/pneumonia 0.004%	Flu/pneumonia 0.001%	Heart disease 0.0004%	Congenital anomalies 0.001%	Liver disease 0.002%	Liver disease 0.008%	Diabetes 0.016%	Liver disease 0.034%	Accidents 0.055%	Diabetes 0.139%	Accidents 0.377%
7	Septicemia 0.004%	Perinatal period 0.0004%	Chronic lower respiratory diseases 0.0004%	Diabetes 0.001%	Diabetes 0.002%	Diabetes 0.005%	Stroke 0.013%	Stroke 0.030%	Kidney disease 0.035%	Accidents 0.115%	Flu/pneumonia 0.295%
8	Stroke 0.003%	Septicemia 0.0003%	Flu/pneumonia 0.0003%	Flu/pneumonia 0.0004%	Stroke 0.001%	Stroke 0.004%	Chronic lower respiratory diseases 0.009%	Suicide 0.019%	Liver disease 0.033%	Parkinsons 0.093%	Diabetes 0.260%
9	Cancer 0.001%	Stroke 0.0003%	Stroke 0.0002%	Chronic lower respiratory diseases 0.0004%	Pregnancy-related 0.001%	Flu/pneumonia 0.002%	Kidney disease 0.006%	Kidney disease 0.014%	Septicemia 0.028%	Kidney disease 0.092%	Kidney disease 0.251%
10	Meningitis 0.001%	Benign neoplasms 0.0003%	Diabetes 0.0001%	Stroke 0.0004%	HIV/AIDS 0.001%	Septicemia 0.002%	Septicemia 0.005%	Septicemia 0.013%	Flu/pneumonia 0.027%	Flu/pneumonia 0.077%	Hypertension 0.227%

Source:
CDC
Wonder
finalized
data

Total Death Rate	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
	0.52%	0.02%	0.01%	0.08%	0.16%	0.25%	0.47%	1.04%	2.07%	5.00%	15.21%

Death Rate by Leading Causes of Death by Age Group, 2020, U.S.

Rank	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
1	Perinatal period 0.256%	Accidents 0.007%	Accidents 0.004%	Accidents 0.036%	Accidents 0.068%	Accidents 0.074%	Cancer 0.086%	Cancer 0.260%	Cancer 0.539%	Heart disease 1.017%	Heart disease 3.822%
2	Congenital anomalies 0.108%	Congenital anomalies 0.002%	Cancer 0.002%	Homicide 0.015%	Suicide 0.018%	Heart disease 0.029%	Heart disease 0.085%	Heart disease 0.209%	Heart disease 0.414%	Cancer 0.990%	COVID 1.645%
3	Accidents 0.032%	Homicide 0.002%	Suicide 0.001%	Suicide 0.014%	Homicide 0.015%	Cancer 0.025%	Accidents 0.069%	COVID 0.099%	COVID 0.234%	COVID 0.590%	Cancer 1.538%
4	Homicide 0.007%	Cancer 0.002%	Homicide 0.001%	Cancer 0.003%	Heart disease 0.009%	Suicide 0.017%	COVID 0.042%	Accidents 0.068%	Chronic lower respiratory diseases 0.118%	Chronic lower respiratory diseases 0.300%	Alzheimers 1.287%
5	Heart disease 0.006%	Heart disease 0.001%	Congenital anomalies 0.001%	Heart disease 0.002%	Cancer 0.008%	COVID 0.014%	Liver disease 0.024%	Chronic lower respiratory diseases 0.044%	Diabetes 0.084%	Stroke 0.263%	Stroke 1.018%
6	Flu/pneumonia 0.003%	Flu/pneumonia 0.001%	Heart disease 0.0004%	COVID 0.001%	COVID 0.005%	Liver disease 0.012%	Diabetes 0.019%	Diabetes 0.042%	Stroke 0.081%	Alzheimers 0.229%	Chronic lower respiratory diseases 0.613%
7	Septicemia 0.003%	Stroke 0.0004%	Chronic lower respiratory diseases 0.0004%	Congenital anomalies 0.001%	Liver disease 0.004%	Homicide 0.011%	Suicide 0.018%	Liver disease 0.038%	Accidents 0.057%	Diabetes 0.155%	Accidents 0.384%
8	Stroke 0.003%	Perinatal period 0.0003%	Flu/pneumonia 0.0003%	Diabetes 0.001%	Diabetes 0.003%	Diabetes 0.007%	Stroke 0.014%	Stroke 0.033%	Liver disease 0.037%	Accidents 0.113%	Diabetes 0.293%
9	Cancer 0.001%	Septicemia 0.0003%	Stroke 0.0002%	Chronic lower respiratory diseases 0.001%	Stroke 0.001%	Stroke 0.005%	Chronic lower respiratory diseases 0.009%	Suicide 0.017%	Kidney disease 0.035%	Parkinsons 0.105%	Flu/pneumonia 0.274%
10	Meningitis 0.001%	Benign neoplasms 0.0002%	Diabetes 0.0001%	Pregnancy-related 0.000%	Pregnancy-related 0.001%	Flu/pneumonia 0.003%	Homicide 0.006%	Flu/pneumonia 0.015%	Flu/pneumonia 0.032%	Kidney disease 0.089%	Hypertension 0.250%

Source:
CDC
Wonder
finalized
data

Total Death Rate	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
	0.53%	0.02%	0.01%	0.09%	0.18%	0.30%	0.53%	1.13%	2.22%	5.04%	14.13%

Death Rate by Leading Causes of Death by Age Group, 2021, U.S.

Rank	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
1	Perinatal period 0.249%	Accidents 0.007%	Accidents 0.004%	Accidents 0.031%	Accidents 0.062%	Accidents 0.071%	COVID 0.091%	Cancer 0.255%	Cancer 0.550%	Heart disease 1.027%	Heart disease 3.659%
2	Congenital anomalies 0.105%	Congenital anomalies 0.003%	Cancer 0.002%	Homicide 0.013%	Suicide 0.016%	COVID 0.038%	Heart disease 0.085%	Heart disease 0.210%	Heart disease 0.430%	Cancer 1.002%	Cancer 1.538%
3	Accidents 0.029%	Cancer 0.002%	Suicide 0.001%	Suicide 0.013%	Homicide 0.014%	Heart disease 0.030%	Cancer 0.083%	COVID 0.173%	COVID 0.315%	COVID 0.599%	COVID 1.213%
4	Heart disease 0.007%	Homicide 0.002%	Homicide 0.001%	COVID 0.003%	COVID 0.013%	Cancer 0.027%	Accidents 0.064%	Accidents 0.065%	Chronic lower respiratory disease 0.116%	Chronic lower respiratory disease 0.281%	Alzheimers 1.116%
5	Homicide 0.005%	Heart disease 0.001%	Congenital anomalies 0.001%	Cancer 0.003%	Heart disease 0.009%	Suicide 0.015%	Liver disease 0.026%	Diabetes 0.044%	Stroke 0.087%	Stroke 0.270%	Stroke 0.997%
6	Flu/pneumonia 0.003%	Perinatal period 0.000%	Heart disease 0.000%	Heart disease 0.002%	Cancer 0.008%	Liver disease 0.014%	Diabetes 0.019%	Liver disease 0.042%	Diabetes 0.086%	Alzheimers 0.211%	Chronic lower respiratory disease 0.539%
7	Septicemia 0.003%	Stroke 0.000%	COVID 0.000%	Congenital anomalies 0.001%	Liver disease 0.004%	Homicide 0.009%	Suicide 0.015%	Chronic lower respiratory disease 0.041%	Accidents 0.055%	Diabetes 0.158%	Accidents 0.324%
8	Stroke 0.003%	COVID 0.000%	Chronic lower respiratory disease 0.000%	Diabetes 0.001%	Diabetes 0.003%	Diabetes 0.007%	Stroke 0.014%	Stroke 0.034%	Liver disease 0.040%	Accidents 0.101%	Diabetes 0.278%
9	COVID 0.002%	Flu/pneumonia 0.000%	Stroke 0.000%	Pregnancy-related 0.000%	Pregnancy-related 0.002%	Stroke 0.005%	Chronic lower respiratory disease 0.008%	Septicemia 0.015%	Kidney disease 0.038%	Parkinsons 0.101%	Kidney disease 0.243%
10	Meningitis 0.001%	Benign neoplasms 0.000%	Benign neoplasms 0.000%	Stroke 0.000%	Stroke 0.001%	Septicemia 0.003%	Kidney disease 0.006%	Kidney disease 0.015%	Septicemia 0.032%	Kidney disease 0.094%	Hypertension 0.243%

Source: CDC Wonder
PROVISIONAL
data as of 7
May 2022

Total Deaths 19,767 3,784 5,960 38,263 82,113 124,693 215,739 477,532 723,668 829,208 940,504

Top Ten Leading Causes of Death by Age Group, 2021, U.S.

Rank	< 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
1	Perinatal period 9,297	Accidents 1,129	Accidents 1,450	Accidents 13,321	Accidents 28,644	Accidents 30,006	COVID 36,744	Cancer 107,941	Cancer 179,038	Heart disease 169,035	Heart disease 243,621
2	Congenital anomalies 3,928	Congenital anomalies 402	Cancer 795	Homicide 5,525	Suicide 7,356	COVID 15,952	Heart disease 34,341	Heart disease 88,951	Heart disease 139,905	Cancer 164,796	Cancer 102,391
3	Accidents 1,091	Cancer 281	Suicide 511	Suicide 5,411	Homicide 6,324	Heart disease 12,637	Cancer 33,537	COVID 73,480	COVID 102,410	COVID 98,577	COVID 80,753
4	Heart disease 259	Homicide 250	Homicide 394	COVID 1,398	COVID 6,130	Cancer 11,193	Accidents 26,025	Accidents 27,526	Chronic lower respiratory disease 37,892	Chronic lower respiratory disease 46,307	Alzheimers 74,321
5	Homicide 196	Heart disease 111	Congenital anomalies 345	Cancer 1,320	Heart disease 4,102	Suicide 6,521	Liver disease 10,475	Diabetes 18,562	Stroke 28,286	Stroke 44,490	Stroke 66,355
6	Flu/pneumonia 119	Perinatal period 66	Heart disease 188	Heart disease 924	Cancer 3,613	Liver disease 5,803	Diabetes 7,575	Liver disease 17,630	Diabetes 27,912	Alzheimers 34,711	Chronic lower respiratory disease 35,869
7	Septicemia 115	Stroke 54	COVID 134	Congenital anomalies 407	Liver disease 1,820	Homicide 3,990	Suicide 6,071	Chronic lower respiratory disease 17,569	Accidents 17,809	Diabetes 25,965	Accidents 21,584
8	Stroke 99	COVID 51	Chronic lower respiratory disease 97	Diabetes 344	Diabetes 1,260	Diabetes 2,942	Stroke 5,741	Stroke 14,599	Liver disease 12,919	Accidents 16,637	Diabetes 18,511
9	COVID 88	Flu/pneumonia 46	Stroke 92	Pregnancy-related 202	Pregnancy-related 733	Stroke 2,181	Chronic lower respiratory disease 3,161	Septicemia 6,479	Kidney disease 12,222	Parkinsons 16,612	Kidney disease 16,187
10	Meningitis 54	Benign neoplasms 37	Benign neoplasms 53	Stroke 187	Stroke 625	Septicemia 1,111	Kidney disease 2,513	Kidney disease 6,361	Septicemia 10,477	Kidney disease 15,544	Hypertension 16,179

Source: CDC Wonder
PROVISIONAL
 data as of 7
 May 2022

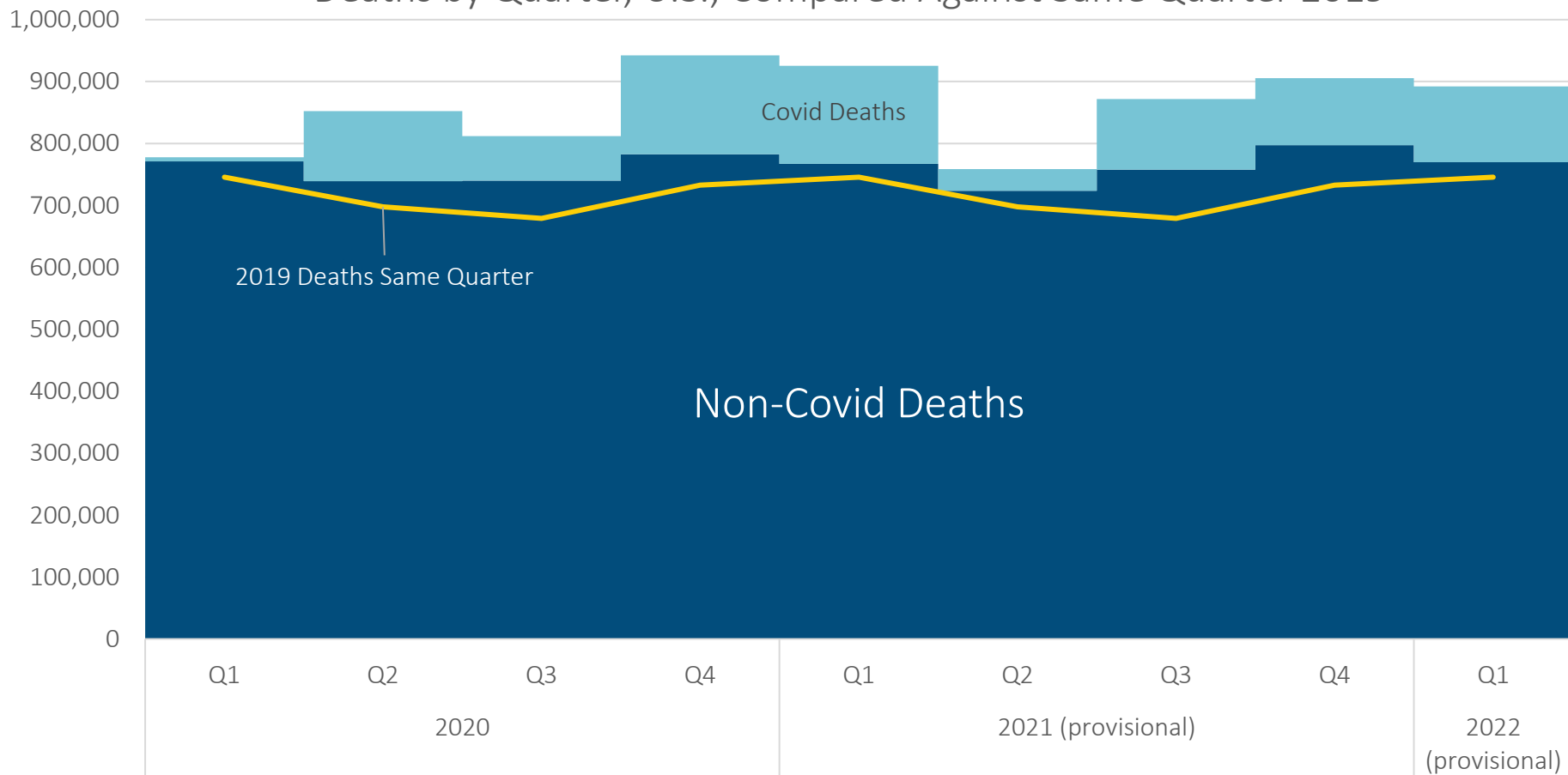
Cause of death: COVID



Counting COVID deaths

- Only counting where COVID is Underlying Cause of Death
- One and only one UCD per death certificate
- Contributing causes of death listed – from 0 up to 20
- Average number of CODs on death certificates has been rising in pre-pandemic years – averages over 3

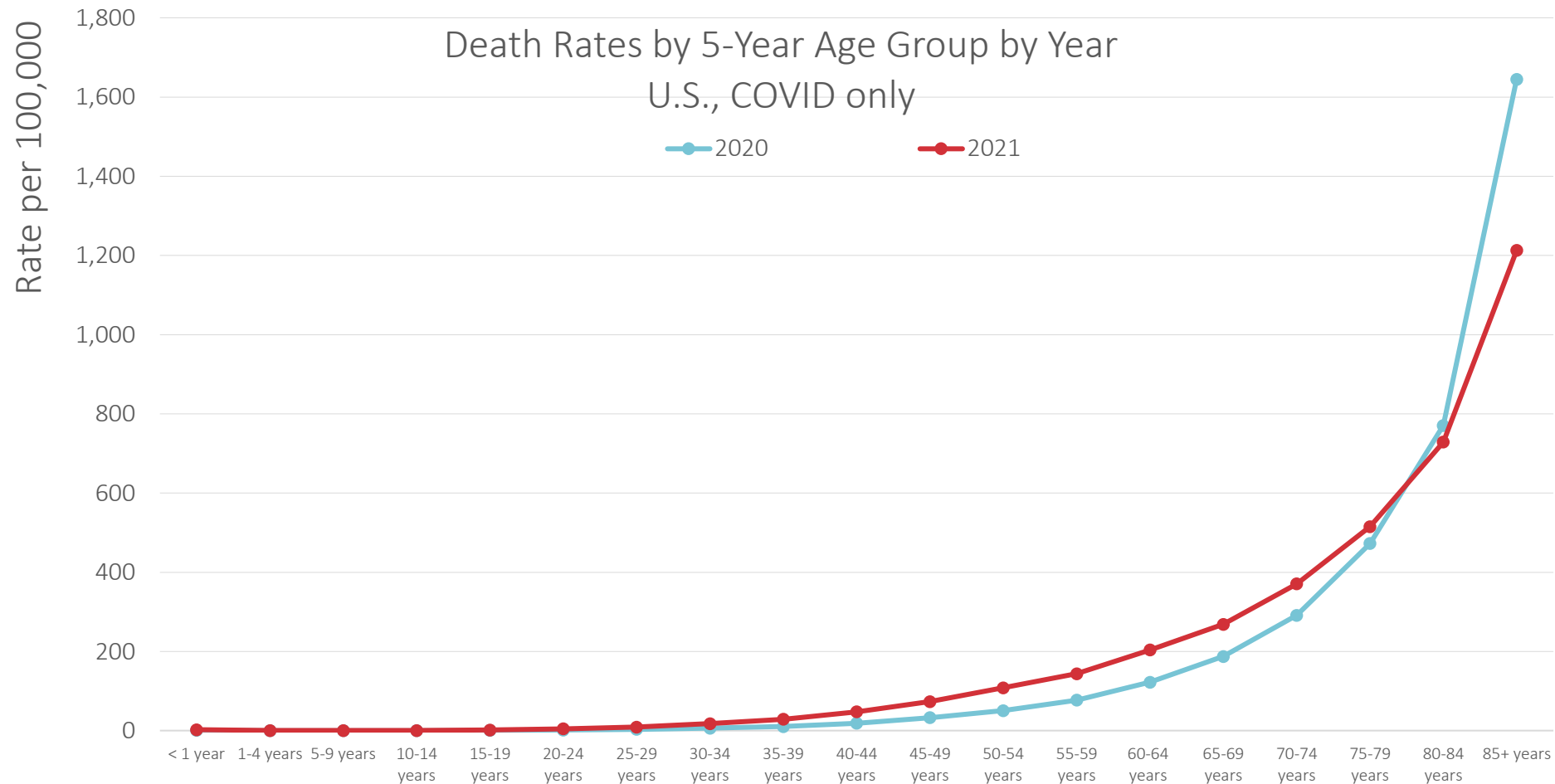
Deaths by Quarter, U.S., Compared Against Same Quarter 2019



Death Rates by 5-Year Age Group by Year

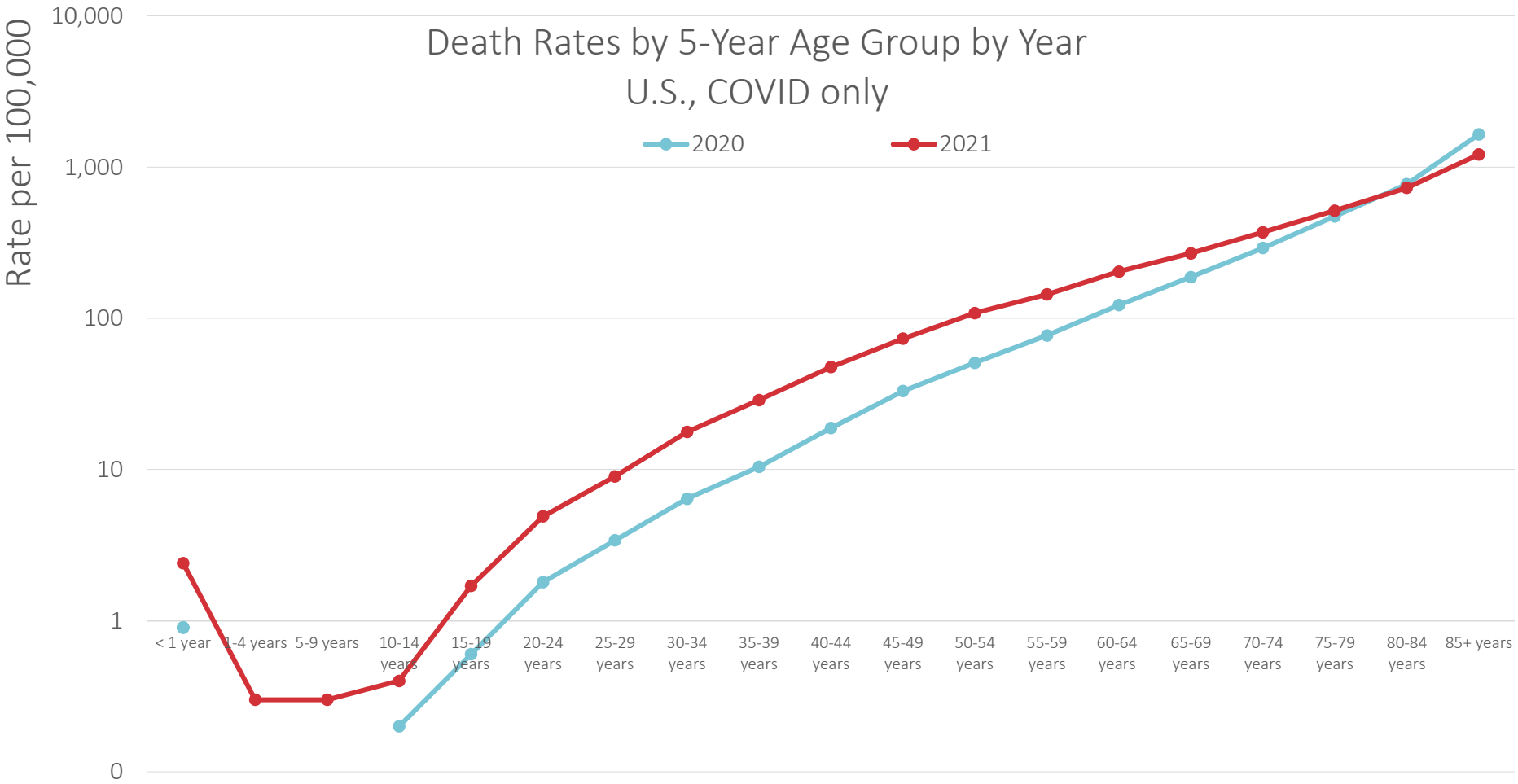
U.S., COVID only

—●— 2020 —●— 2021



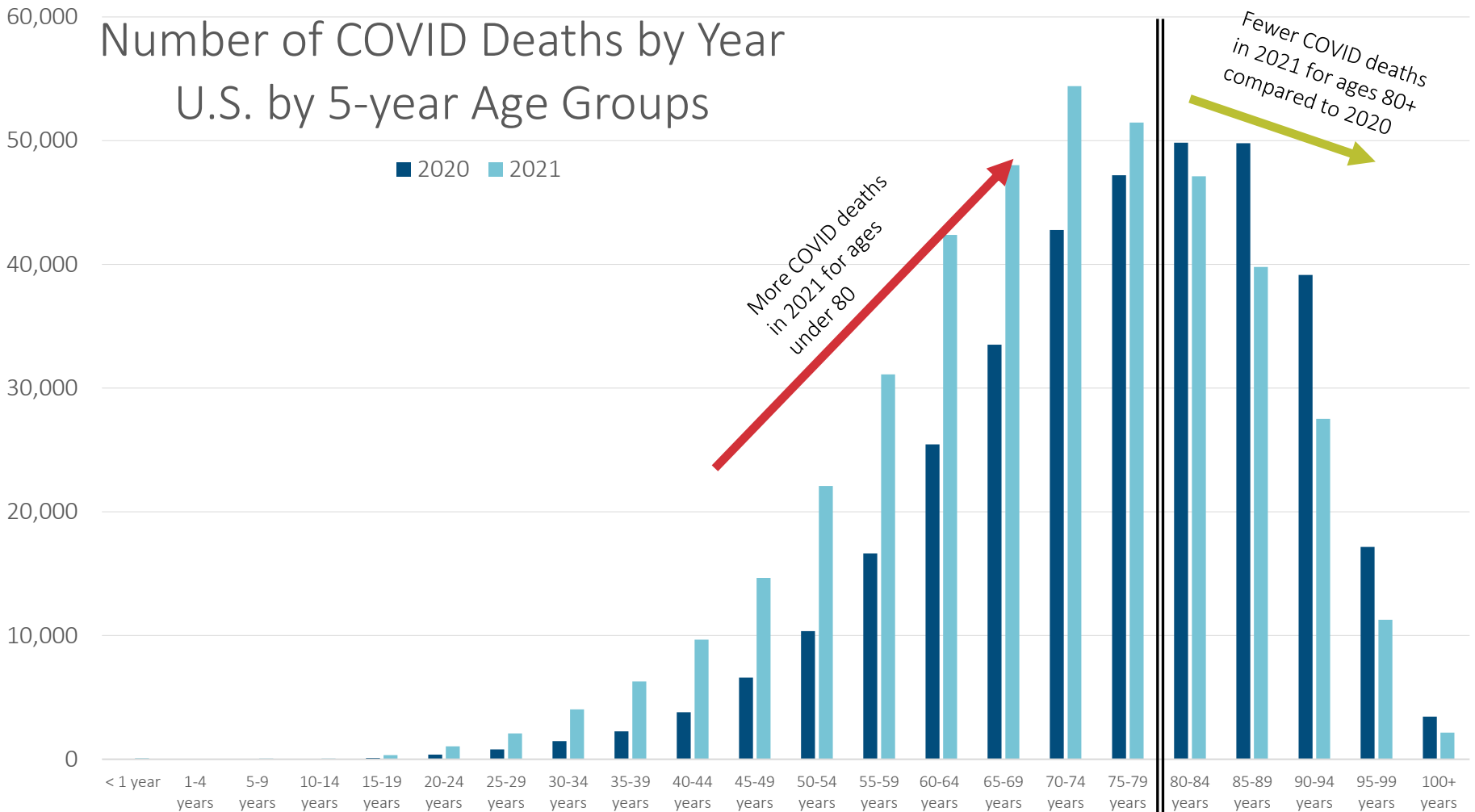
Death Rates by 5-Year Age Group by Year U.S., COVID only

2020 2021



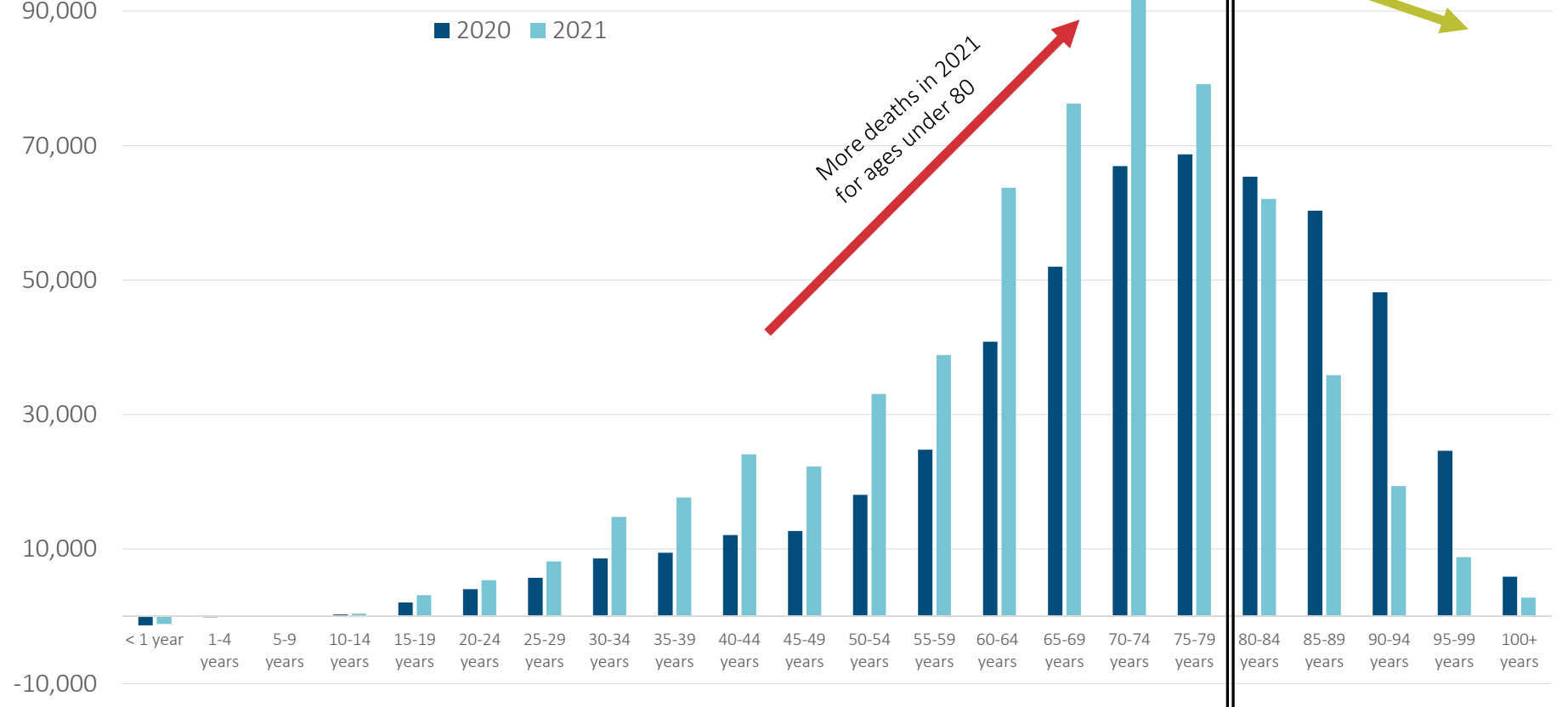
Source: CDC Wonder, data as of 6 May 2022

Number of COVID Deaths by Year U.S. by 5-year Age Groups



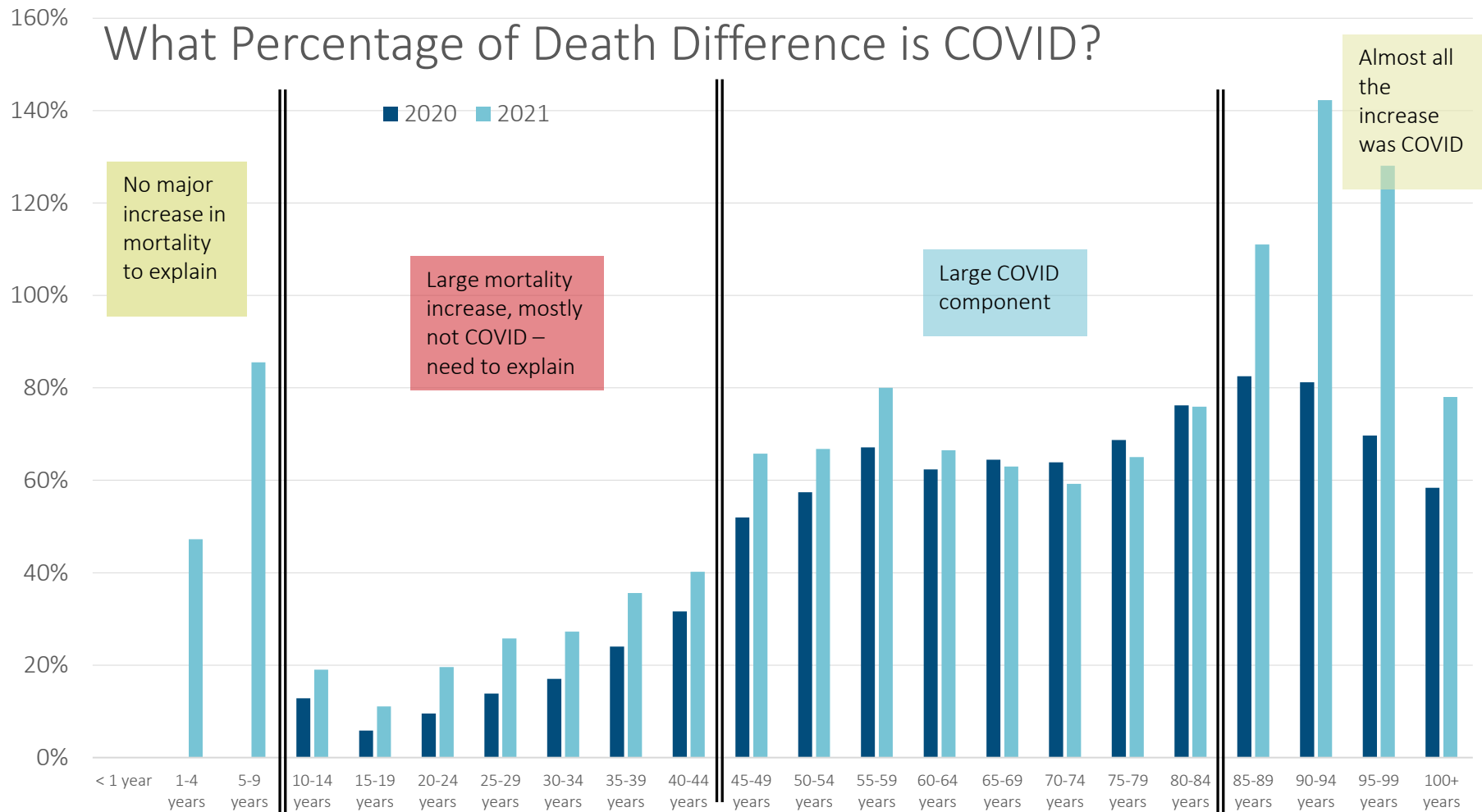
Source: CDC Wonder, data as of 6 May 2022

Difference in Number of Deaths (all-cause) v 2019 U.S. by 5-year Age Groups



Source: CDC Wonder, data as of 6 May 2022

What Percentage of Death Difference is COVID?



No major increase in mortality to explain

Large mortality increase, mostly not COVID – need to explain

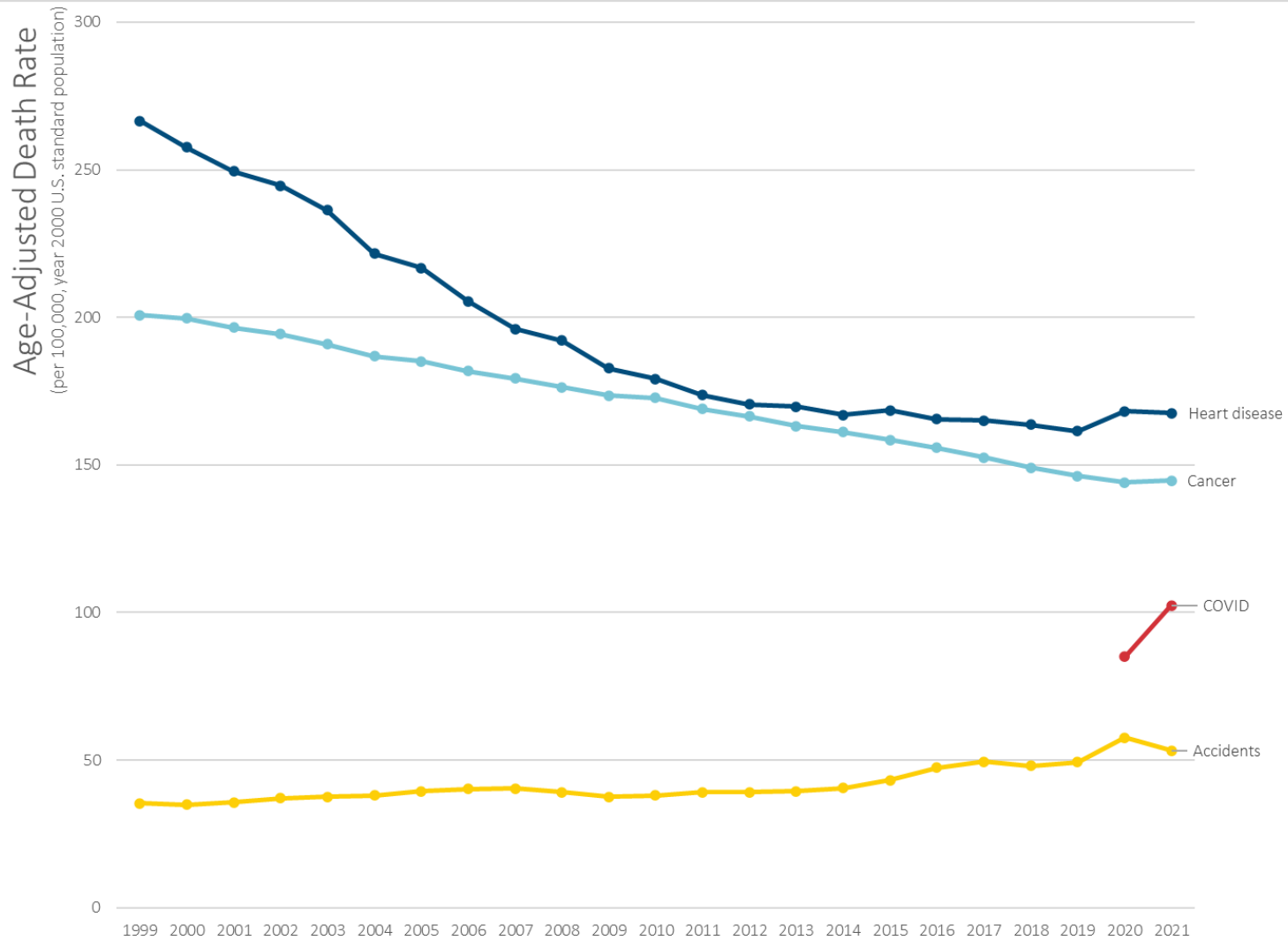
Large COVID component

Almost all the increase was COVID

Source: CDC Wonder, data as of 6 May 2022

Cause of death: non-COVID

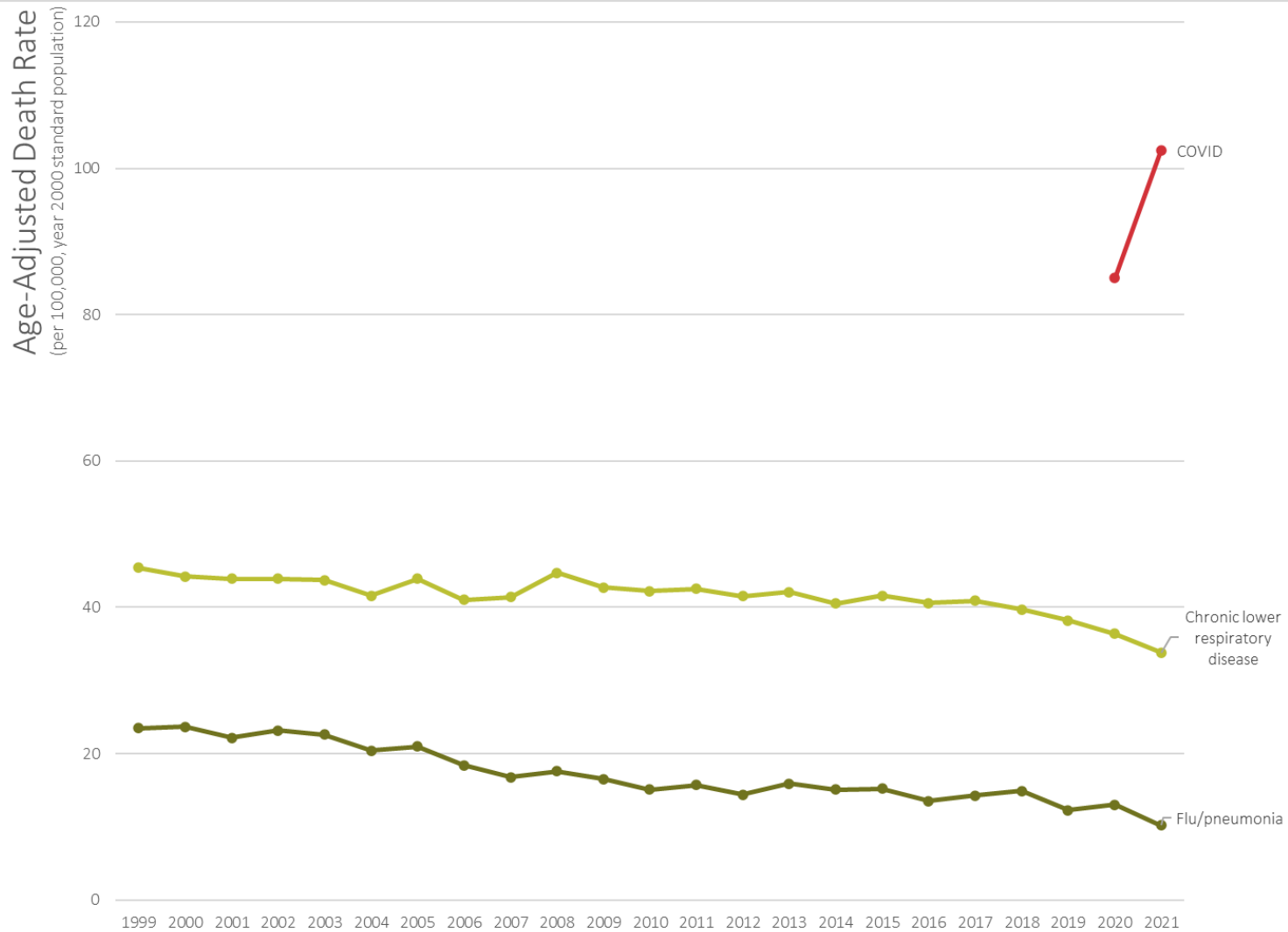




Source: CDC Wonder

2021 data are **PROVISIONAL** as of 7 May 2022

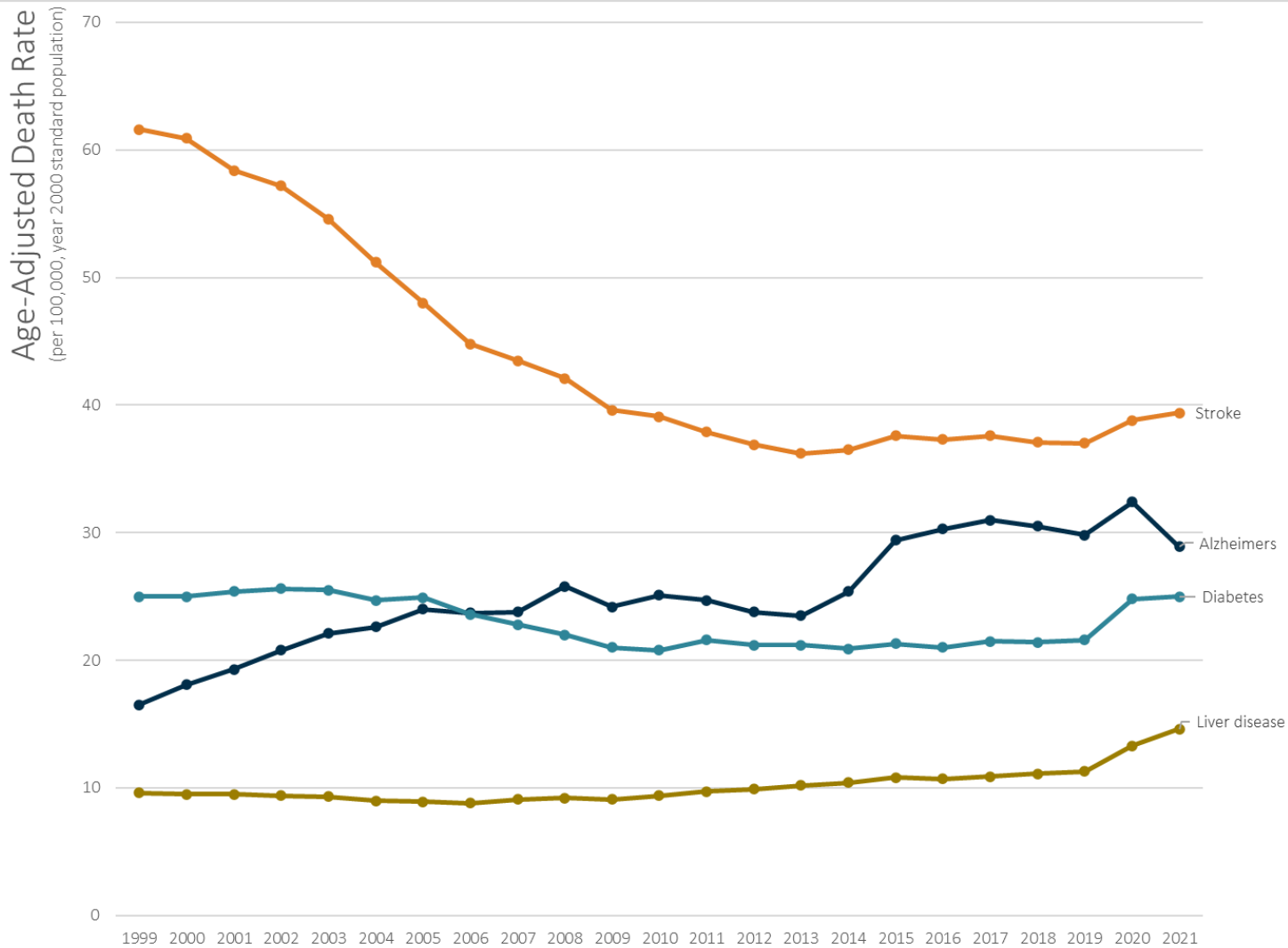
Accidents, Homicide, Suicide are missing 2021 data due to standard 6-month censoring practice



Source: CDC Wonder

2021 data are **PROVISIONAL** as of 7 May 2022

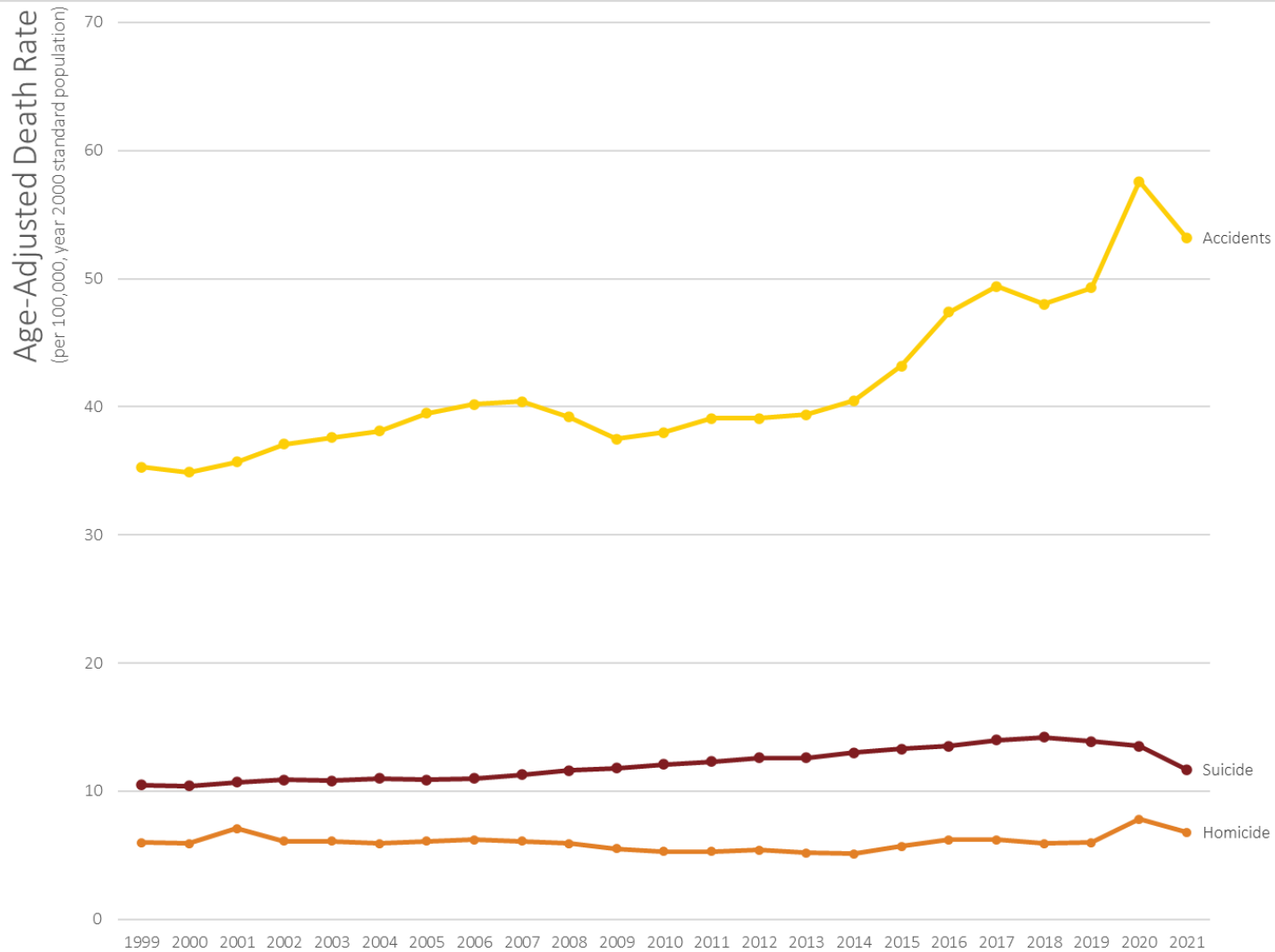
Accidents, Homicide, Suicide are missing November/December 2021 data due to standard 6-month censoring practice



Source: CDC Wonder

2021 data are **PROVISIONAL** as of 7 May 2022

Accidents, Homicide, Suicide are missing November/December 2021 data due to standard 6-month censoring practice



Source: CDC Wonder

2021 data are **PROVISIONAL** as of 7 May 2022

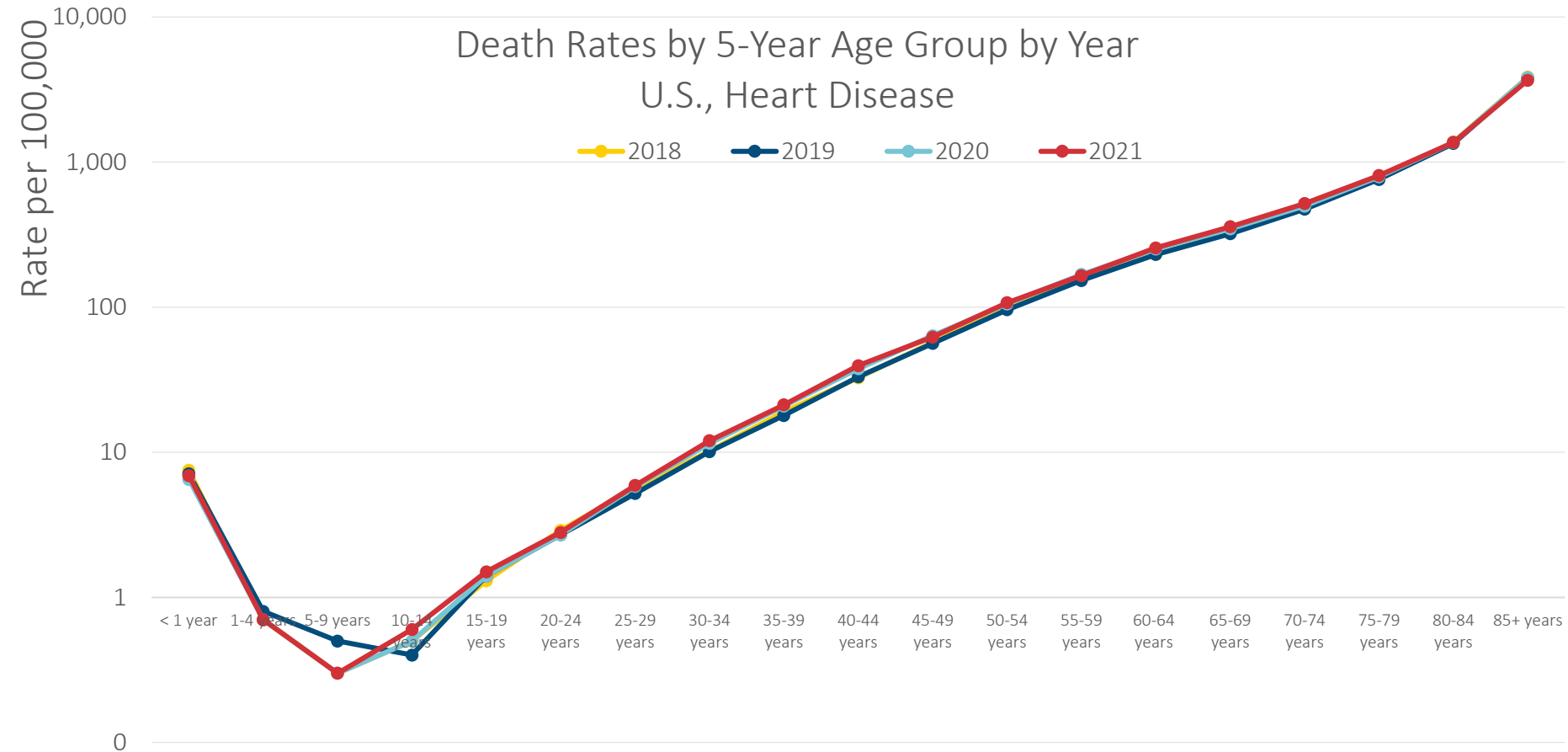
Accidents, Homicide, Suicide are missing November/December 2021 data due to standard 6-month censoring practice

Physiological causes



Death Rates by 5-Year Age Group by Year U.S., Heart Disease

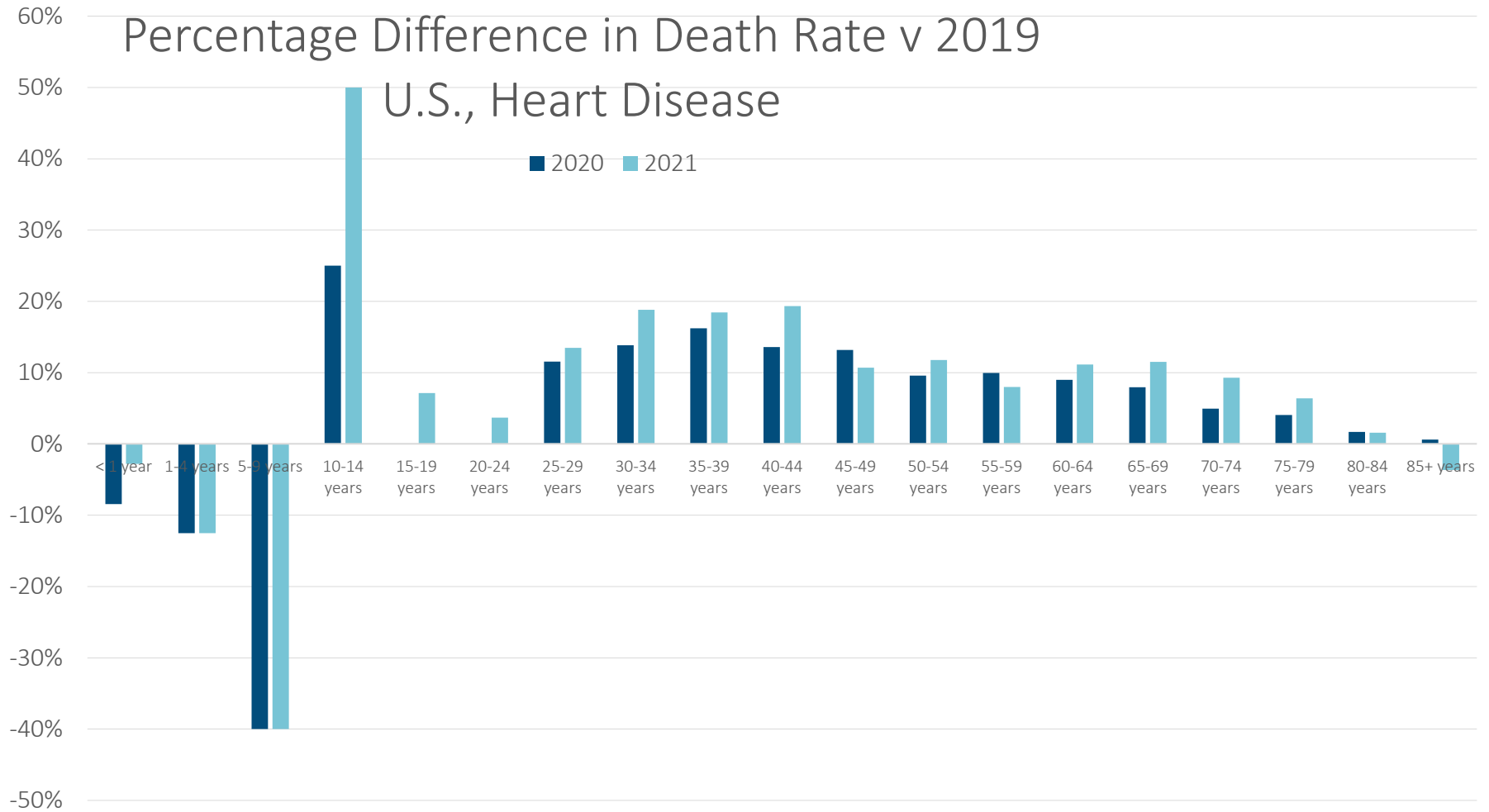
2018 2019 2020 2021



Percentage Difference in Death Rate v 2019

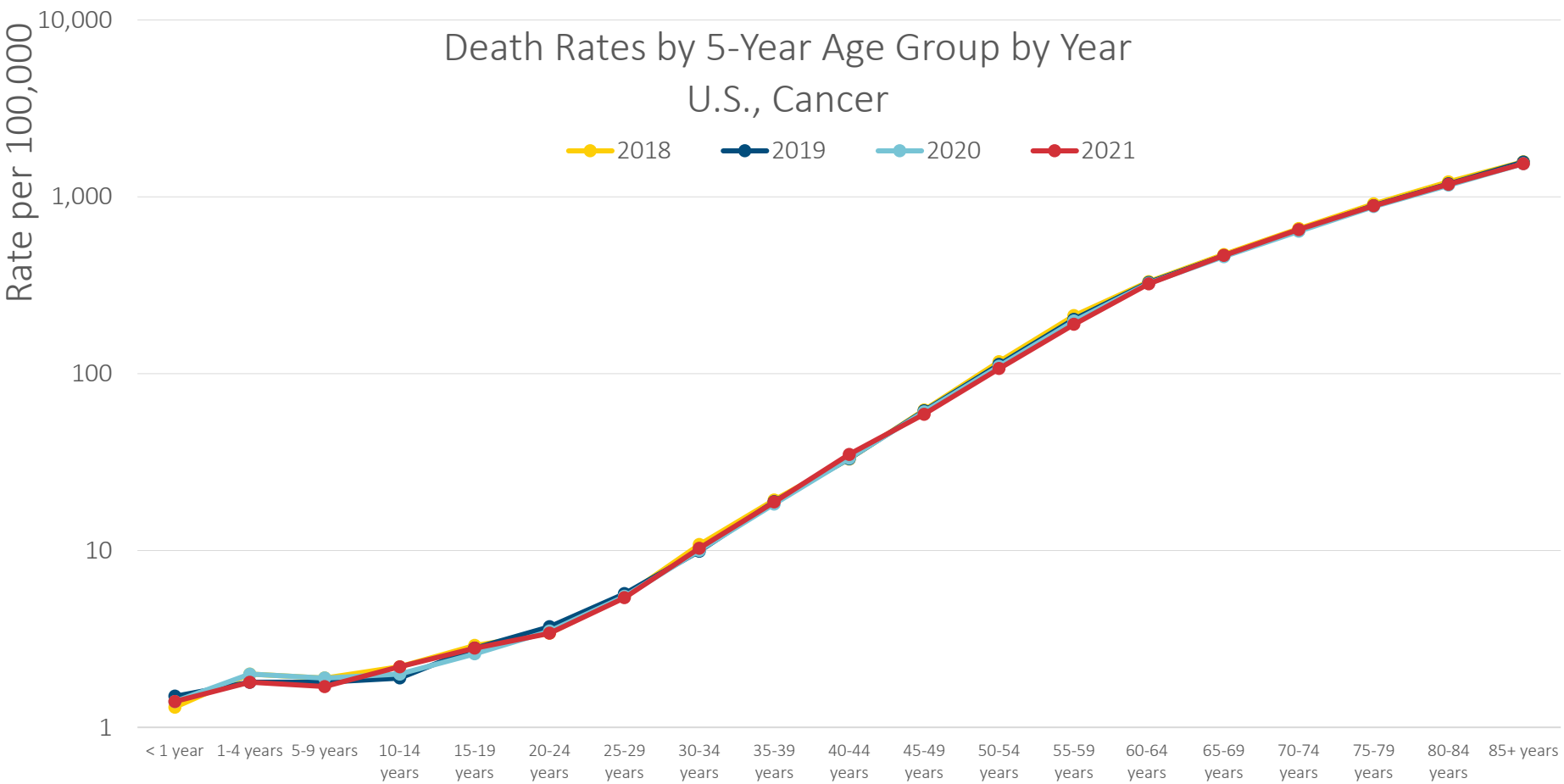
U.S., Heart Disease

■ 2020 ■ 2021



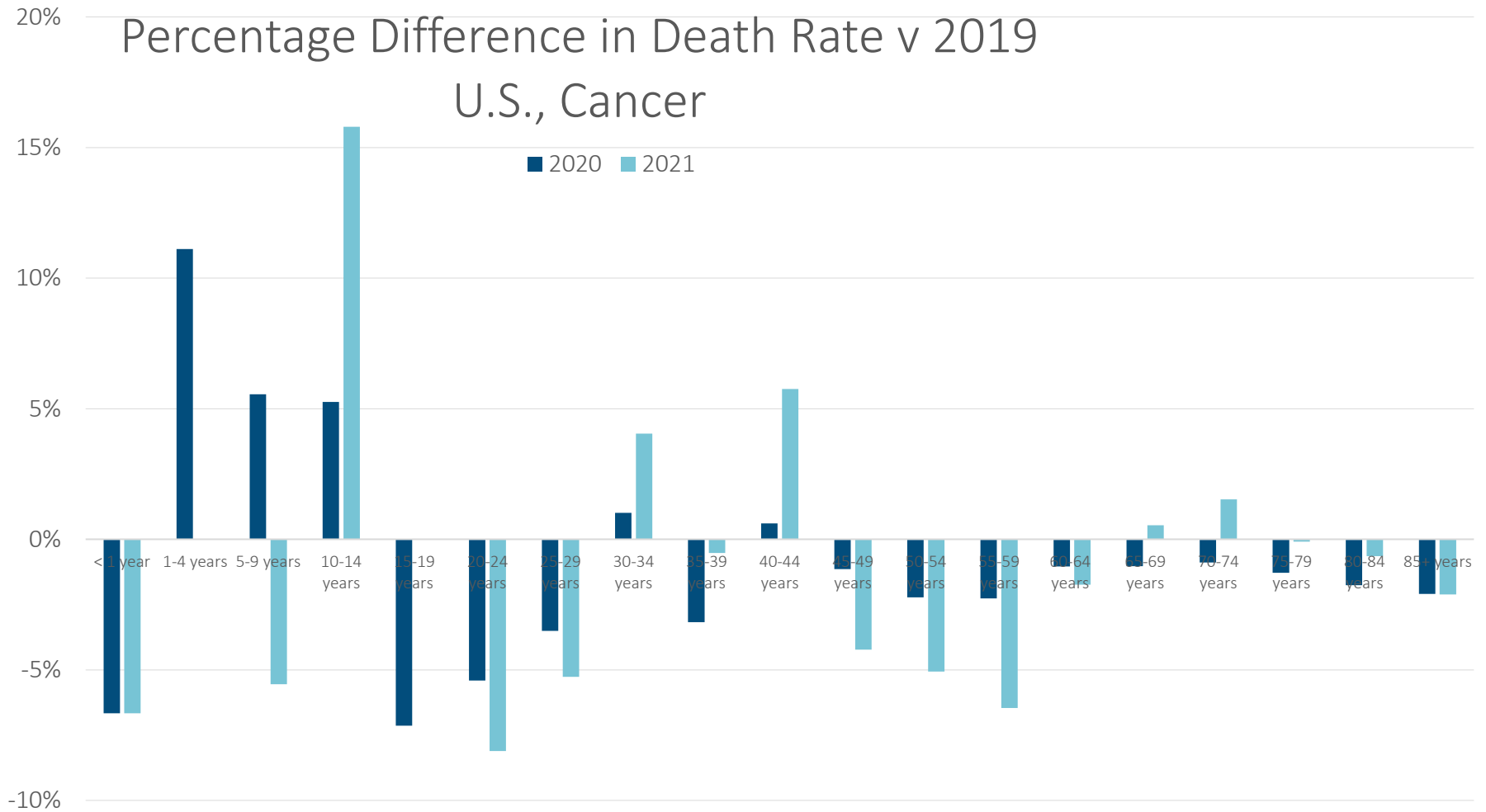
Death Rates by 5-Year Age Group by Year U.S., Cancer

2018 2019 2020 2021



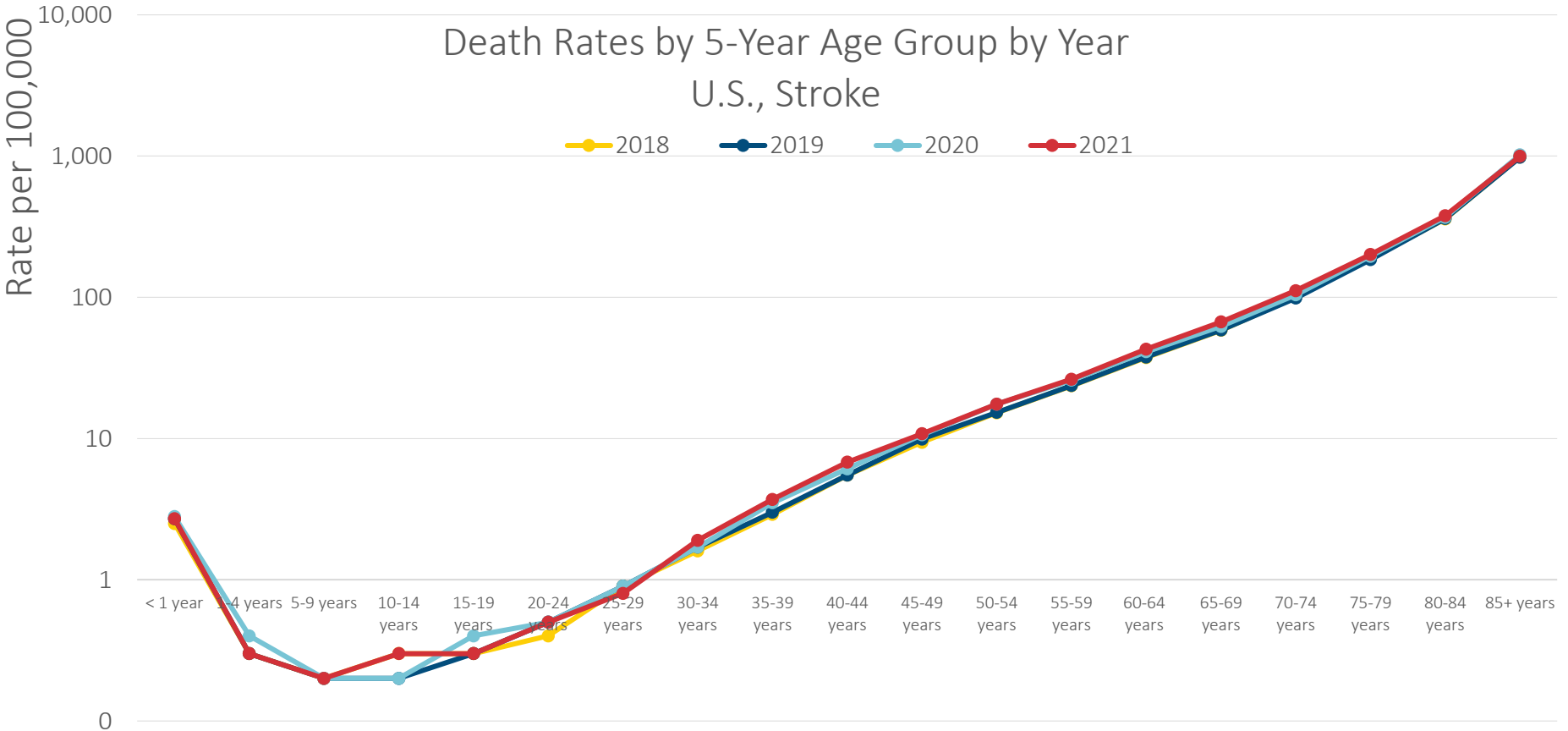
Percentage Difference in Death Rate v 2019

U.S., Cancer



Death Rates by 5-Year Age Group by Year U.S., Stroke

2018 2019 2020 2021

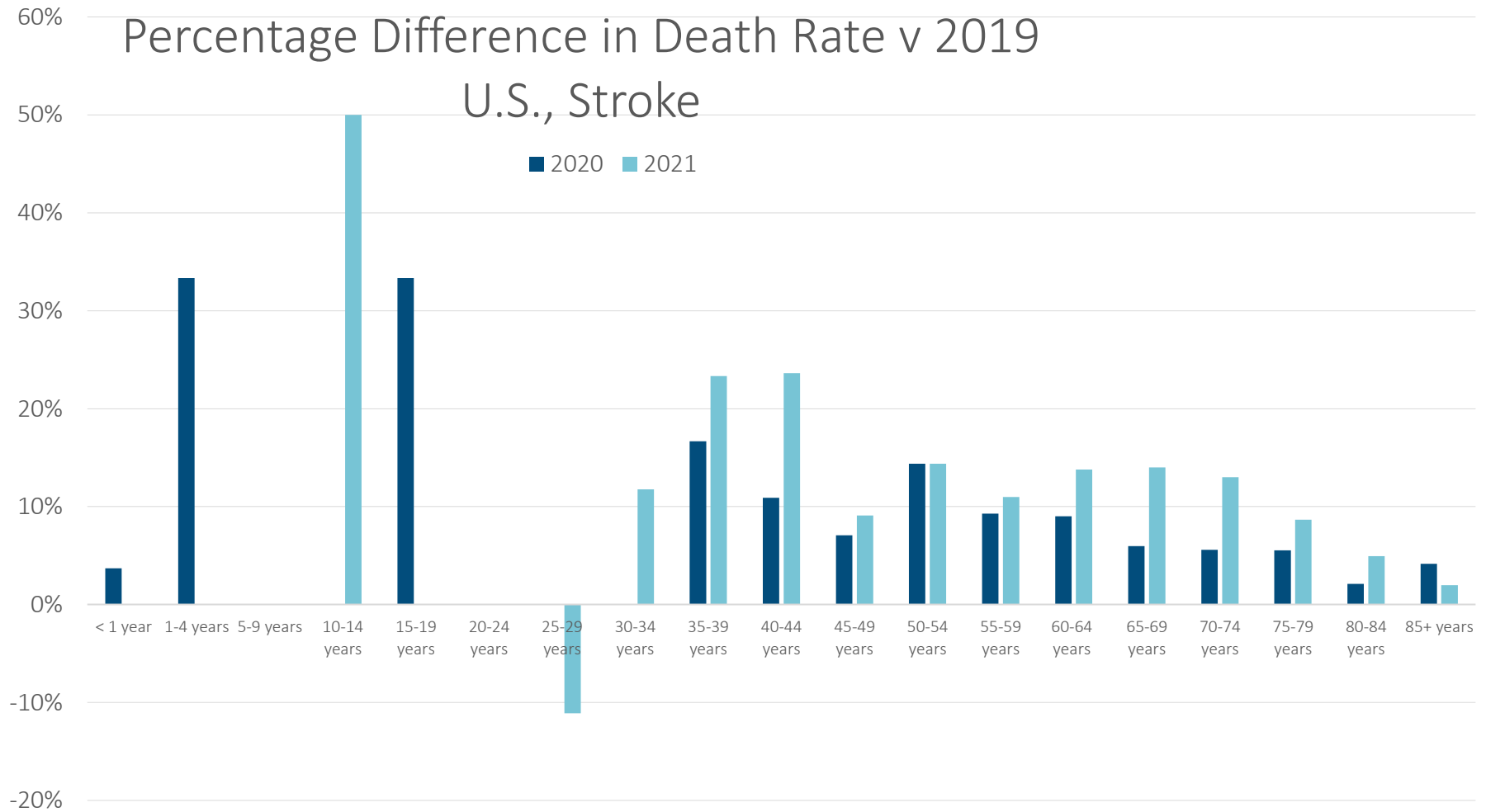


Source: CDC Wonder, data as of 6 May 2022

Percentage Difference in Death Rate v 2019

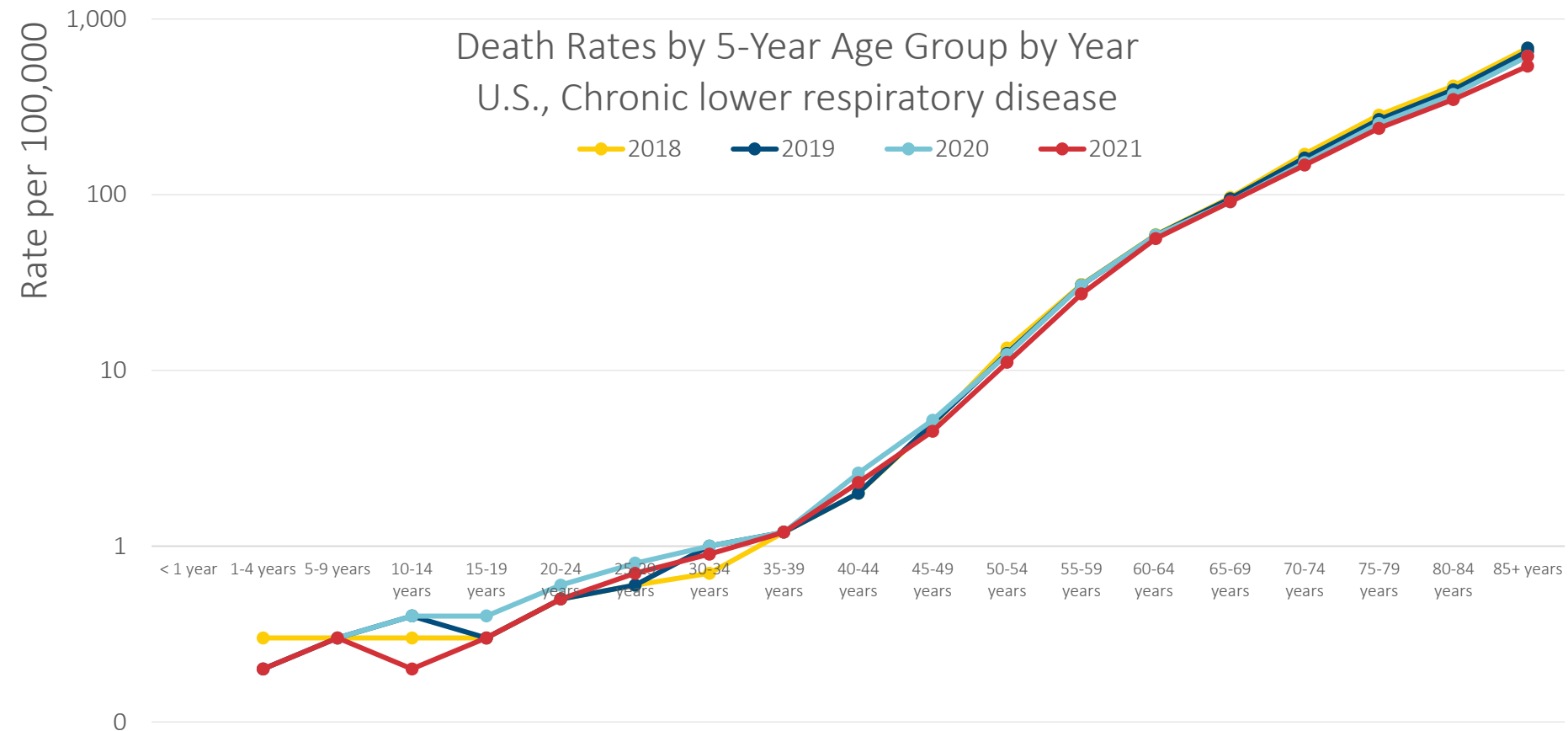
U.S., Stroke

2020 2021

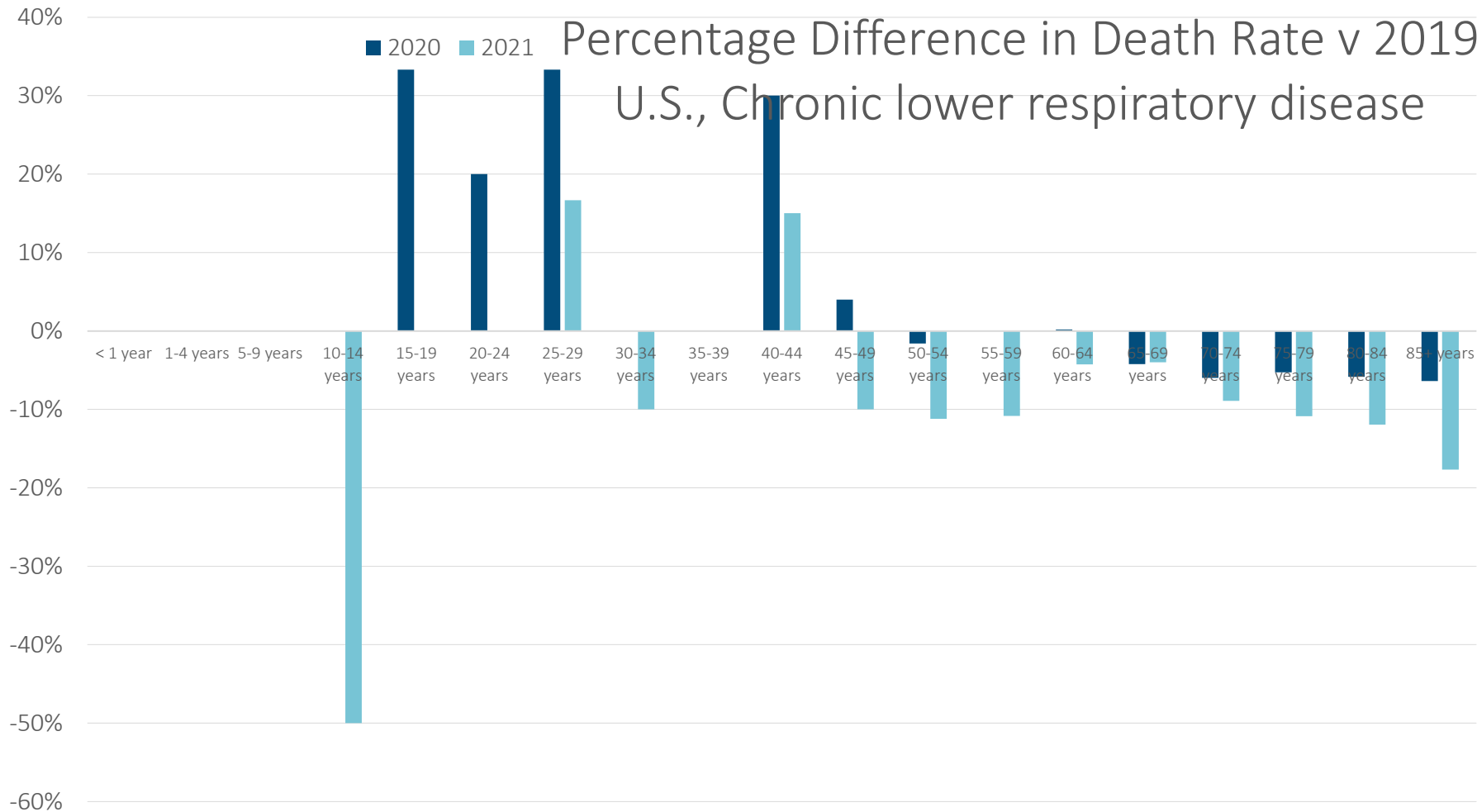


Death Rates by 5-Year Age Group by Year U.S., Chronic lower respiratory disease

2018 2019 2020 2021

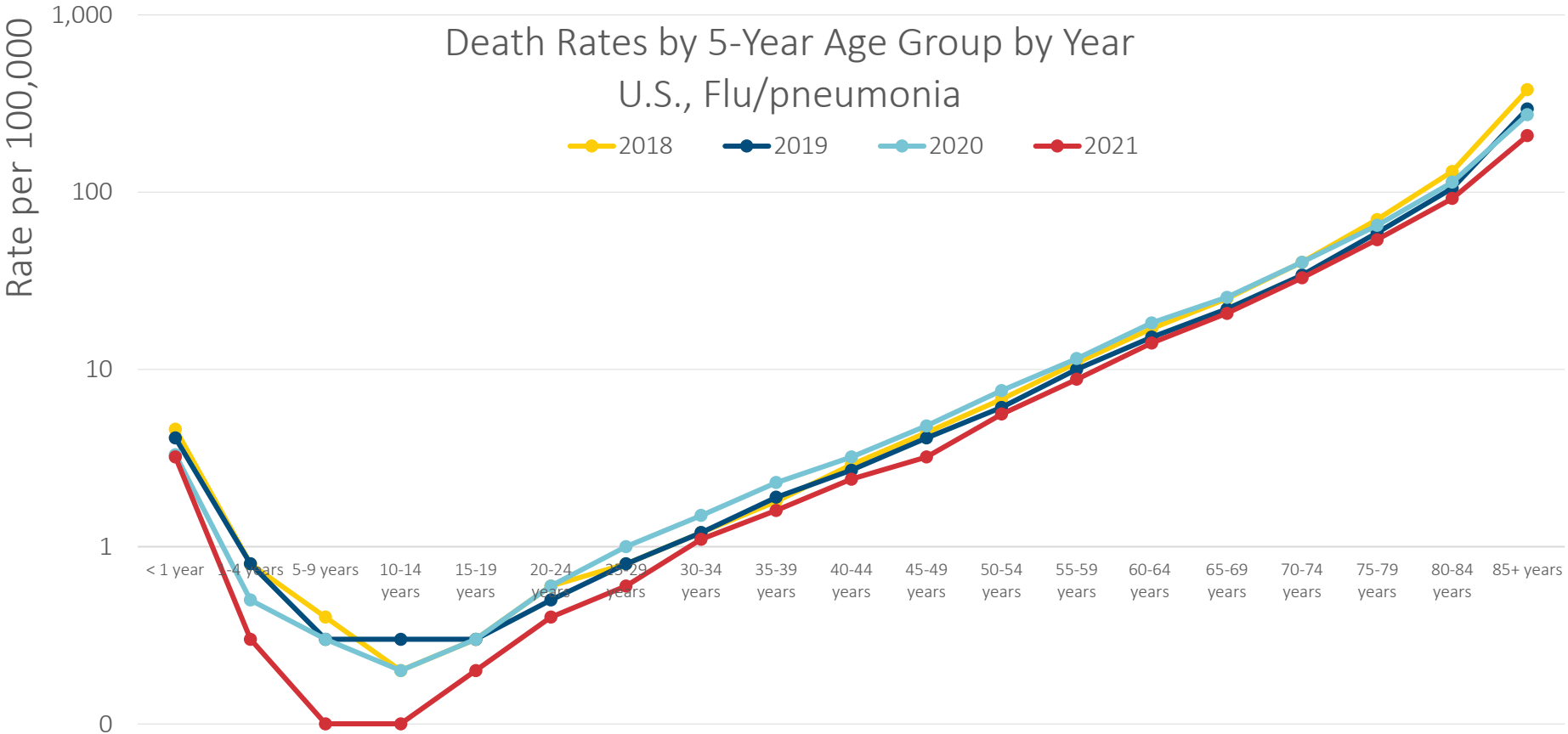


Percentage Difference in Death Rate v 2019 U.S., Chronic lower respiratory disease



Death Rates by 5-Year Age Group by Year U.S., Flu/pneumonia

2018 2019 2020 2021

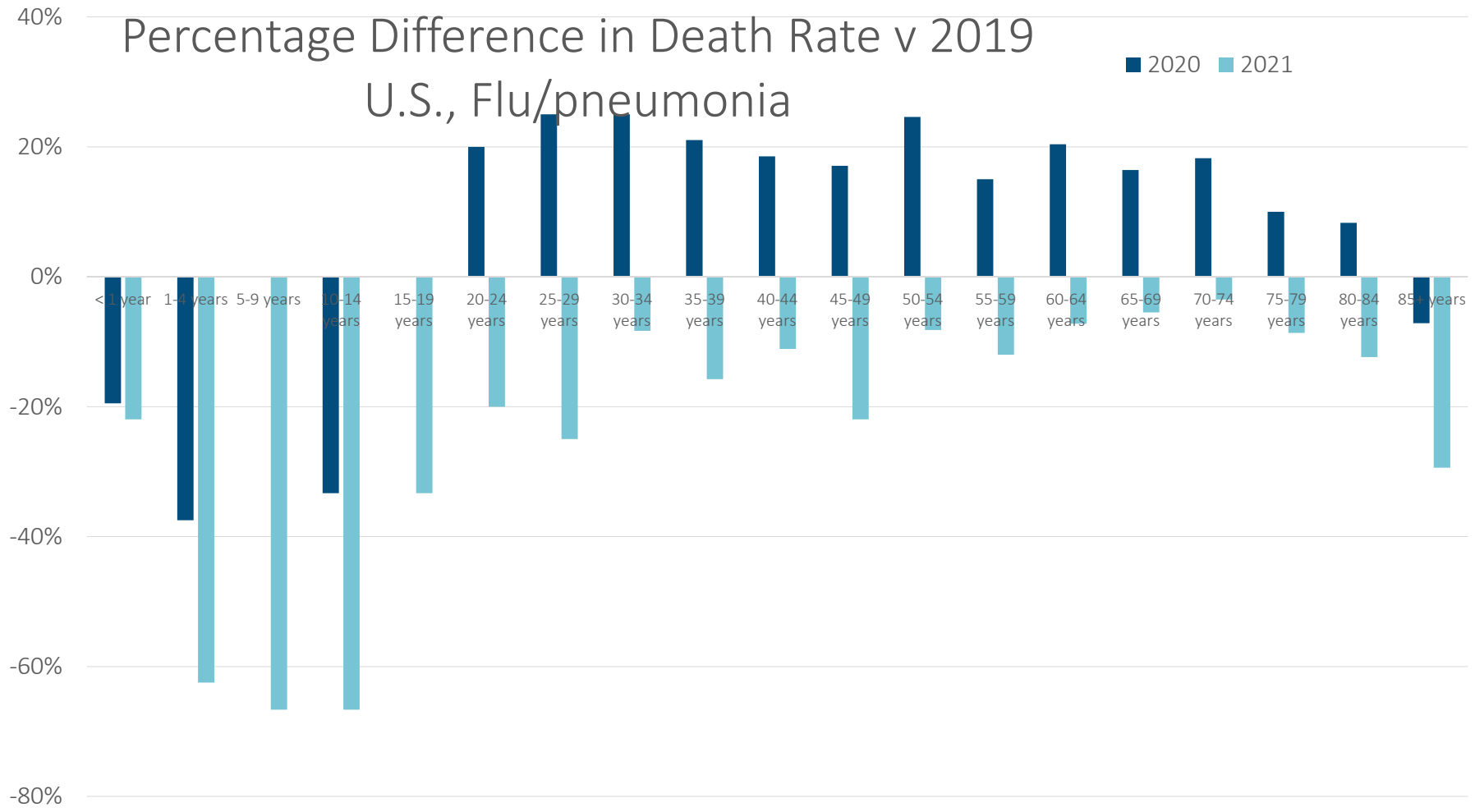


Source: CDC Wonder, data as of 6 May 2022

Percentage Difference in Death Rate v 2019

U.S., Flu/pneumonia

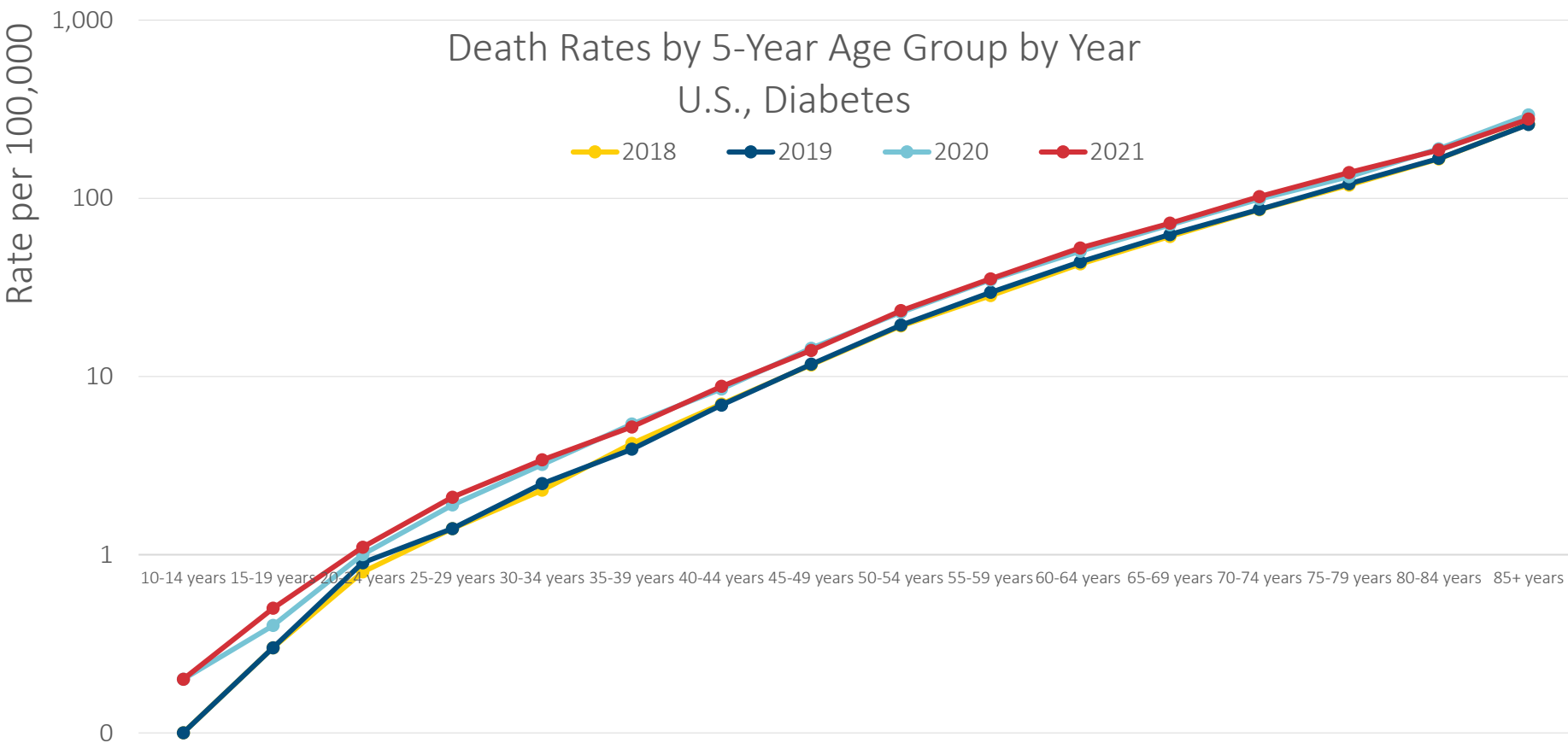
2020 2021



Source: CDC Wonder, data as of 6 May 2022

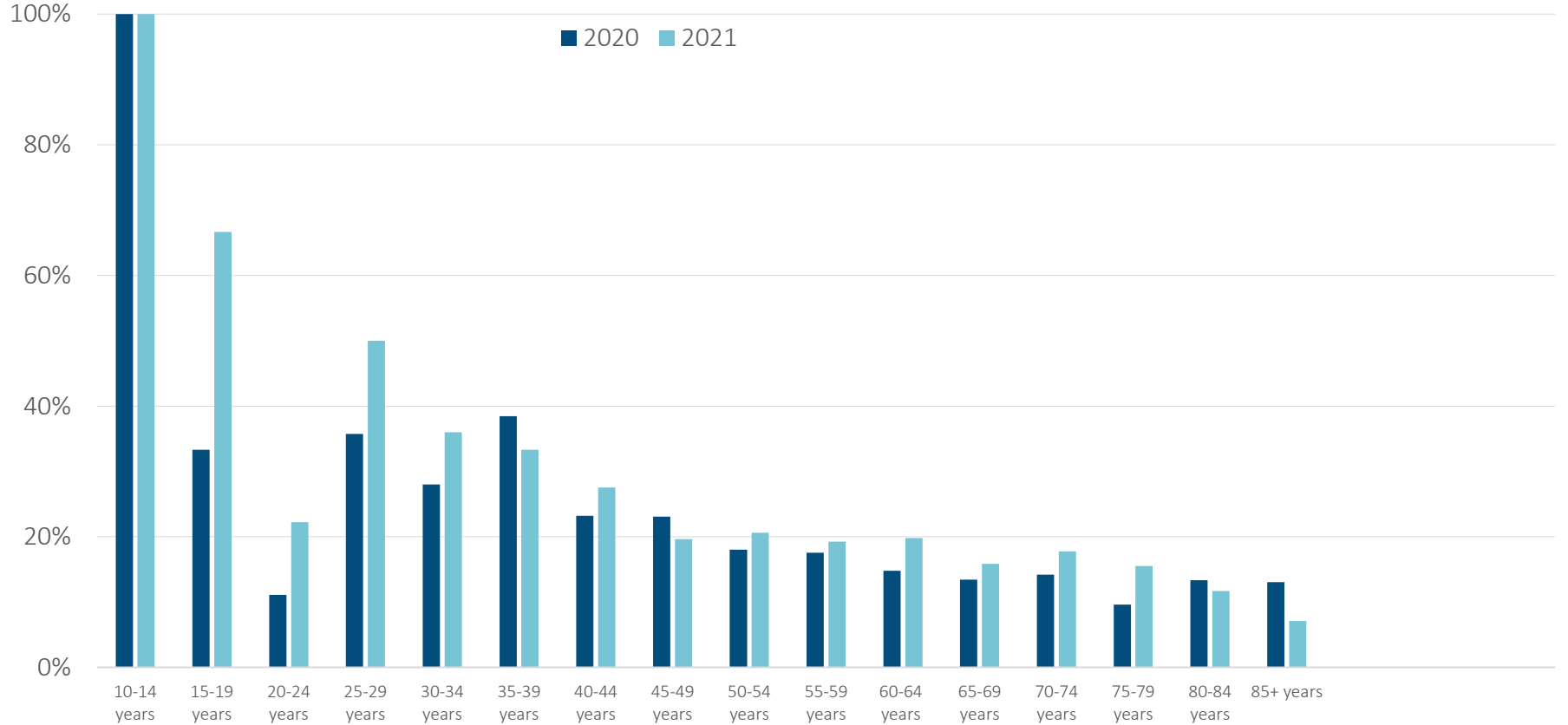
Death Rates by 5-Year Age Group by Year U.S., Diabetes

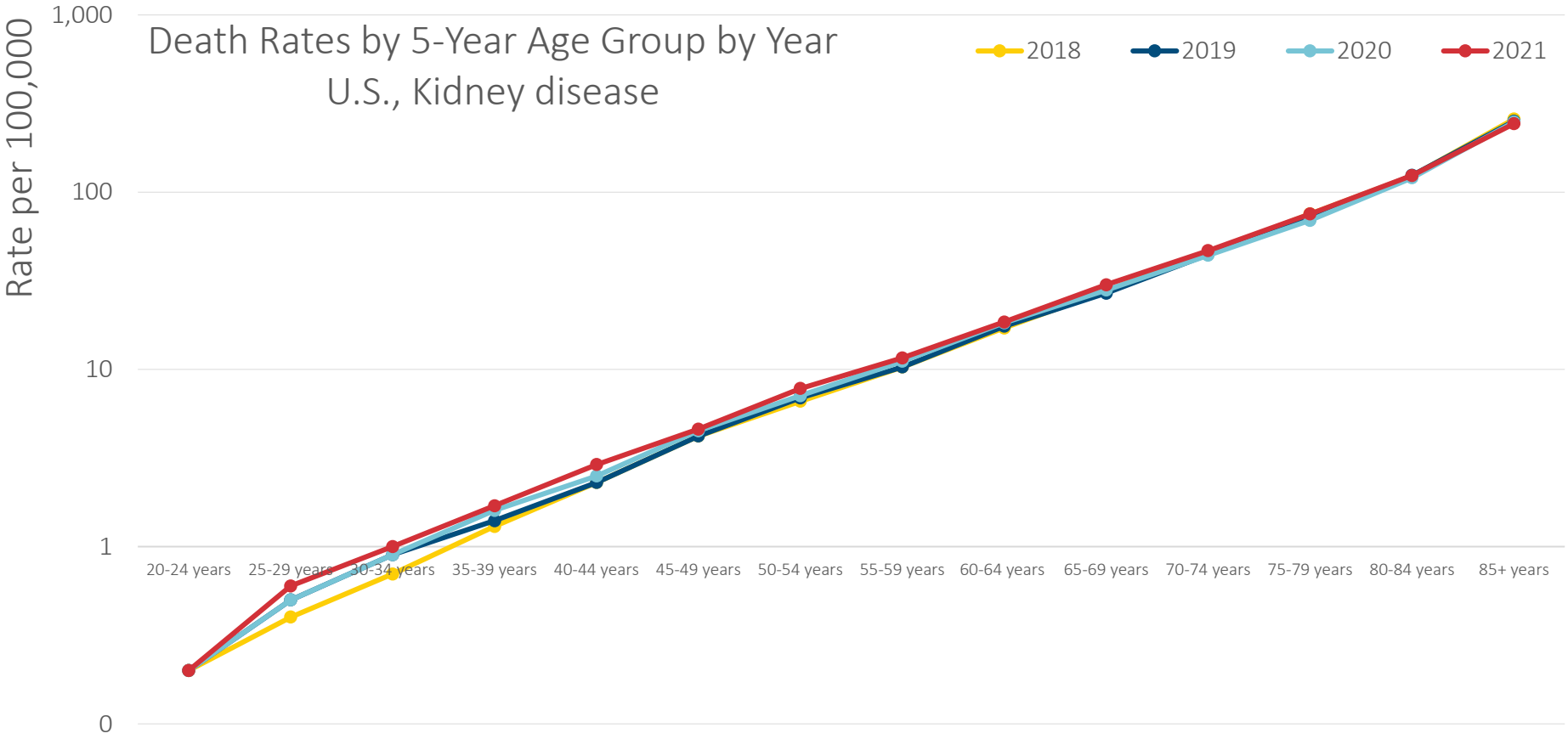
2018 2019 2020 2021



Percentage Difference in Death Rate v 2019

U.S., Diabetes



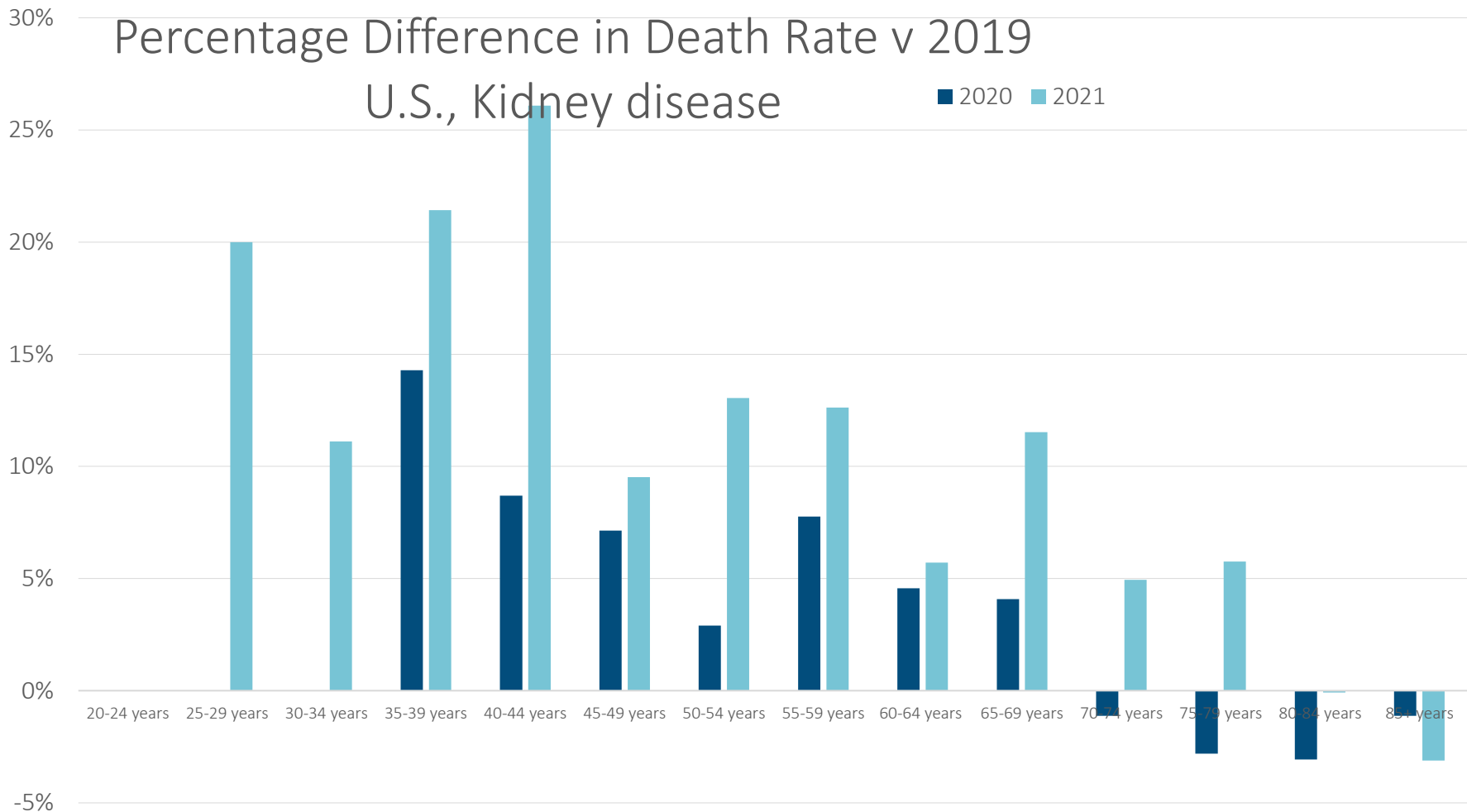


Source: CDC Wonder, data as of 6 May 2022

Percentage Difference in Death Rate v 2019

U.S., Kidney disease

2020 2021

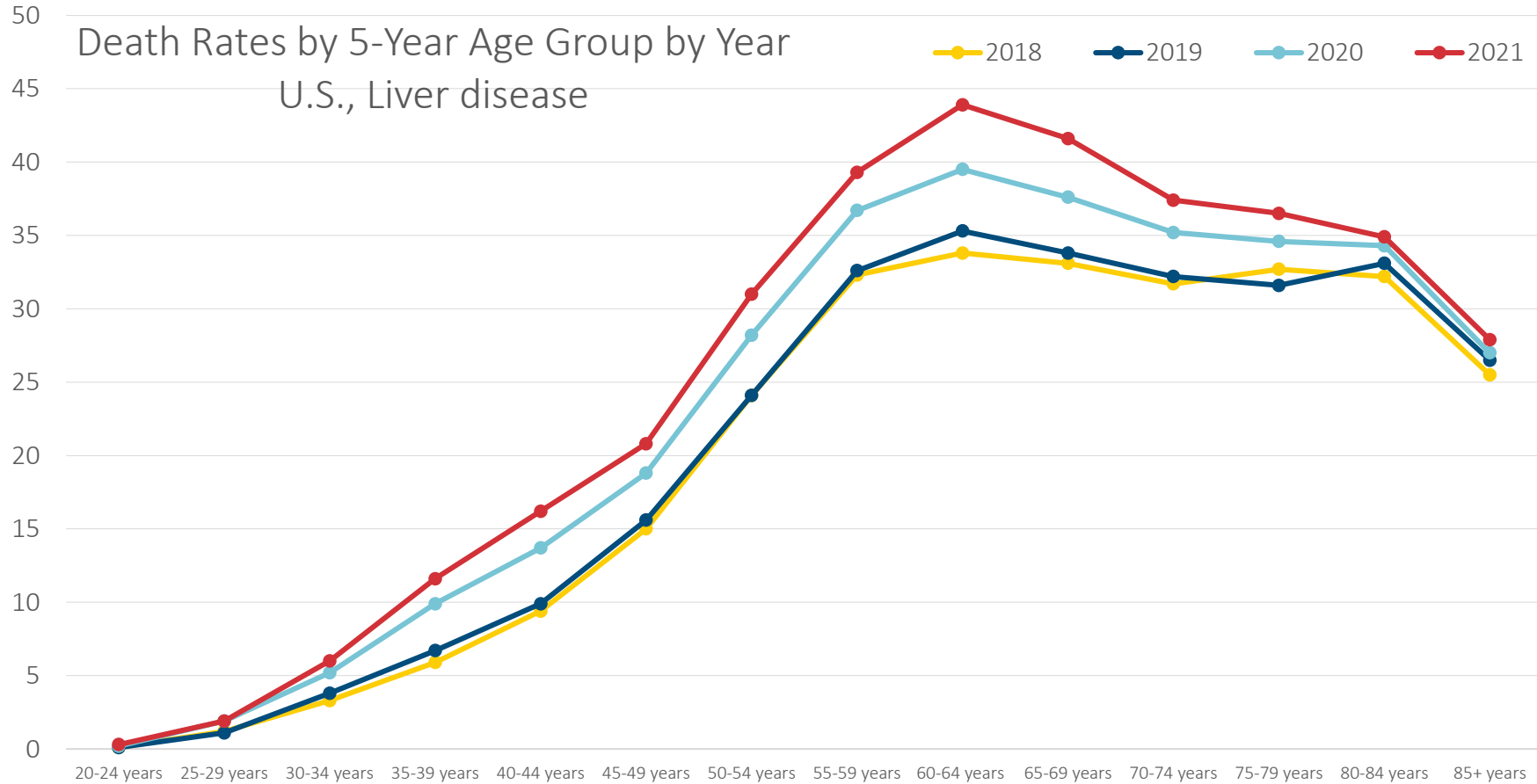


Rate per 100,000

Death Rates by 5-Year Age Group by Year

U.S., Liver disease

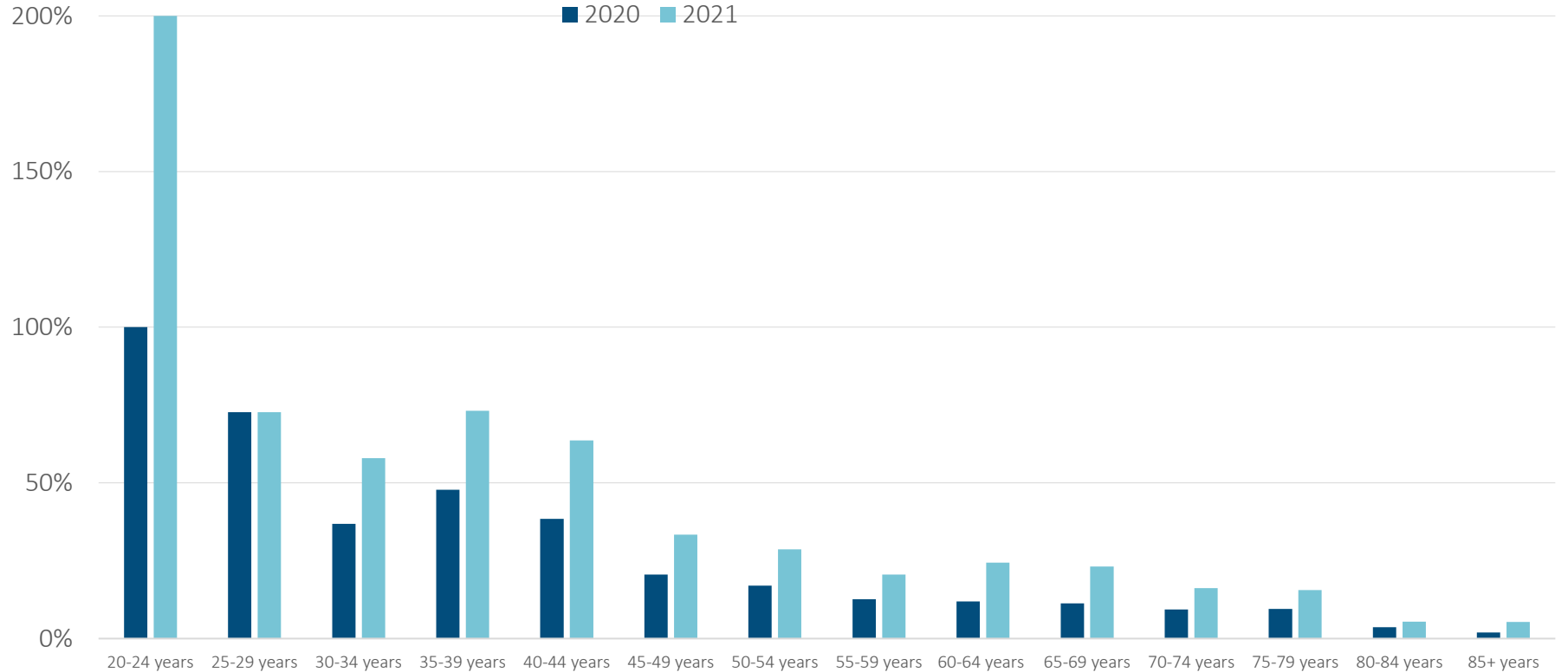
2018 2019 2020 2021



Source: CDC Wonder, data as of 6 May 2022

Percentage Difference in Death Rate v 2019

U.S., Liver disease



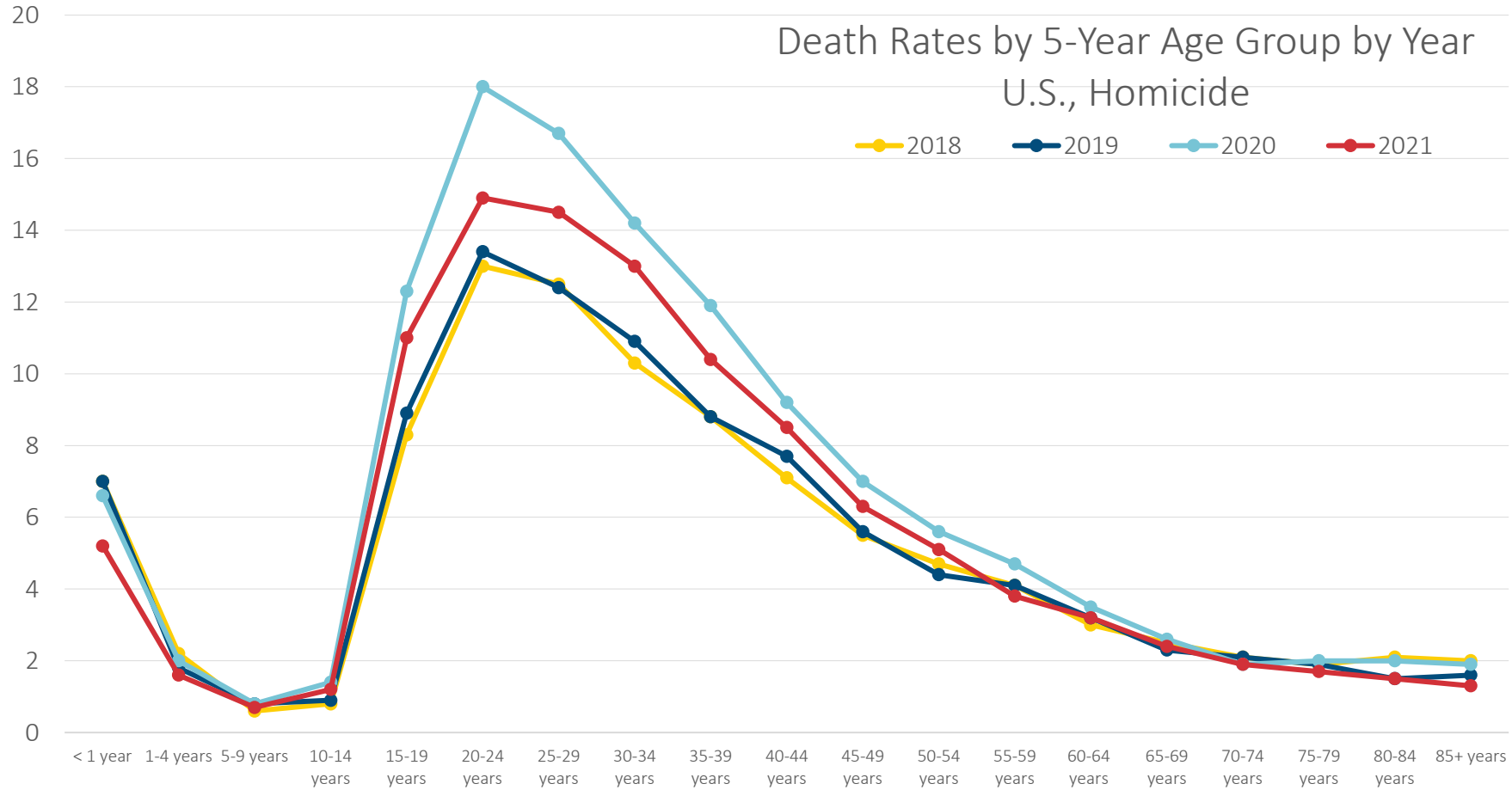
External causes



Rate per 100,000

Death Rates by 5-Year Age Group by Year U.S., Homicide

2018 2019 2020 2021

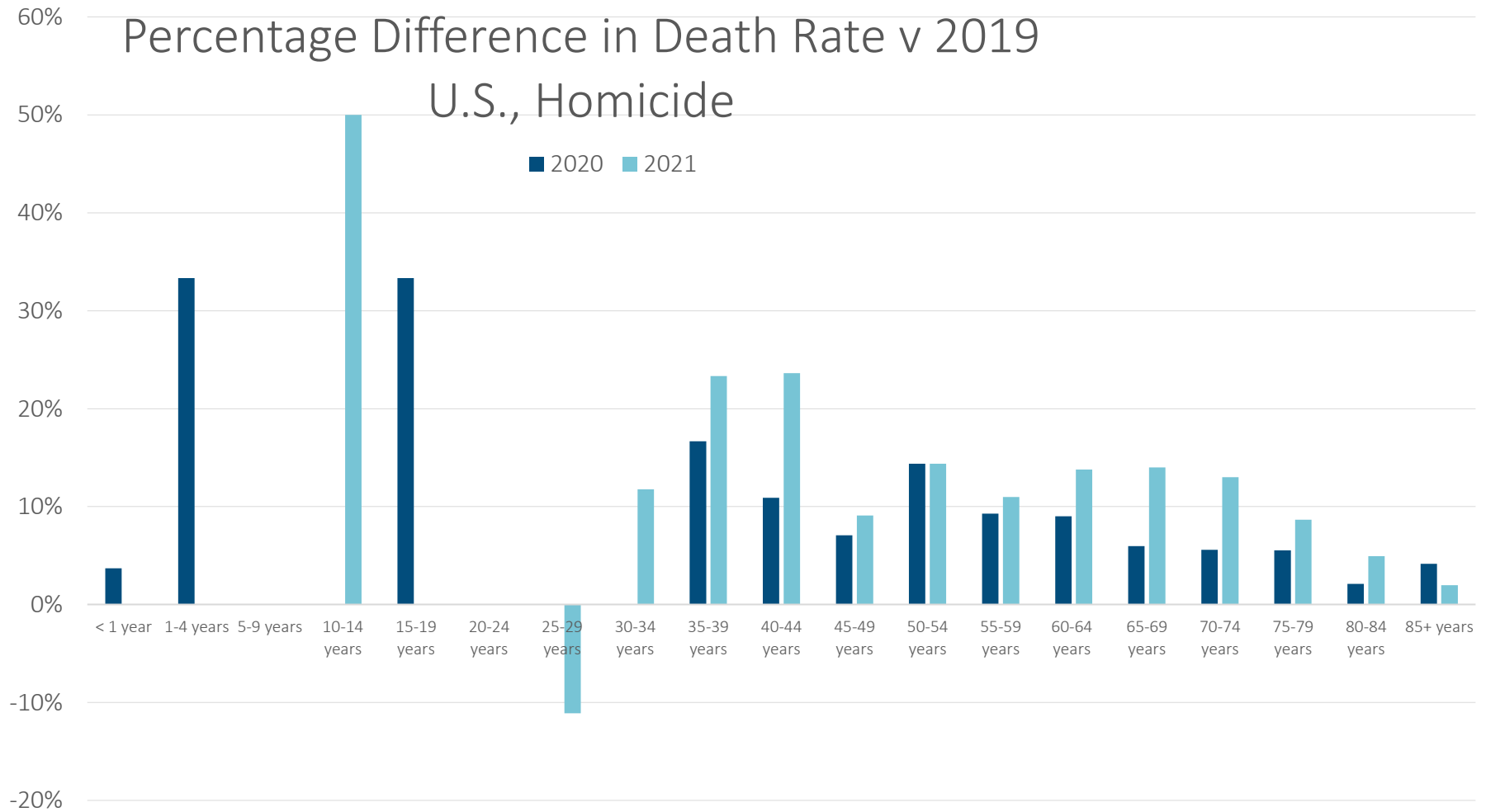


Source: CDC Wonder, data as of 6 May 2022

Percentage Difference in Death Rate v 2019

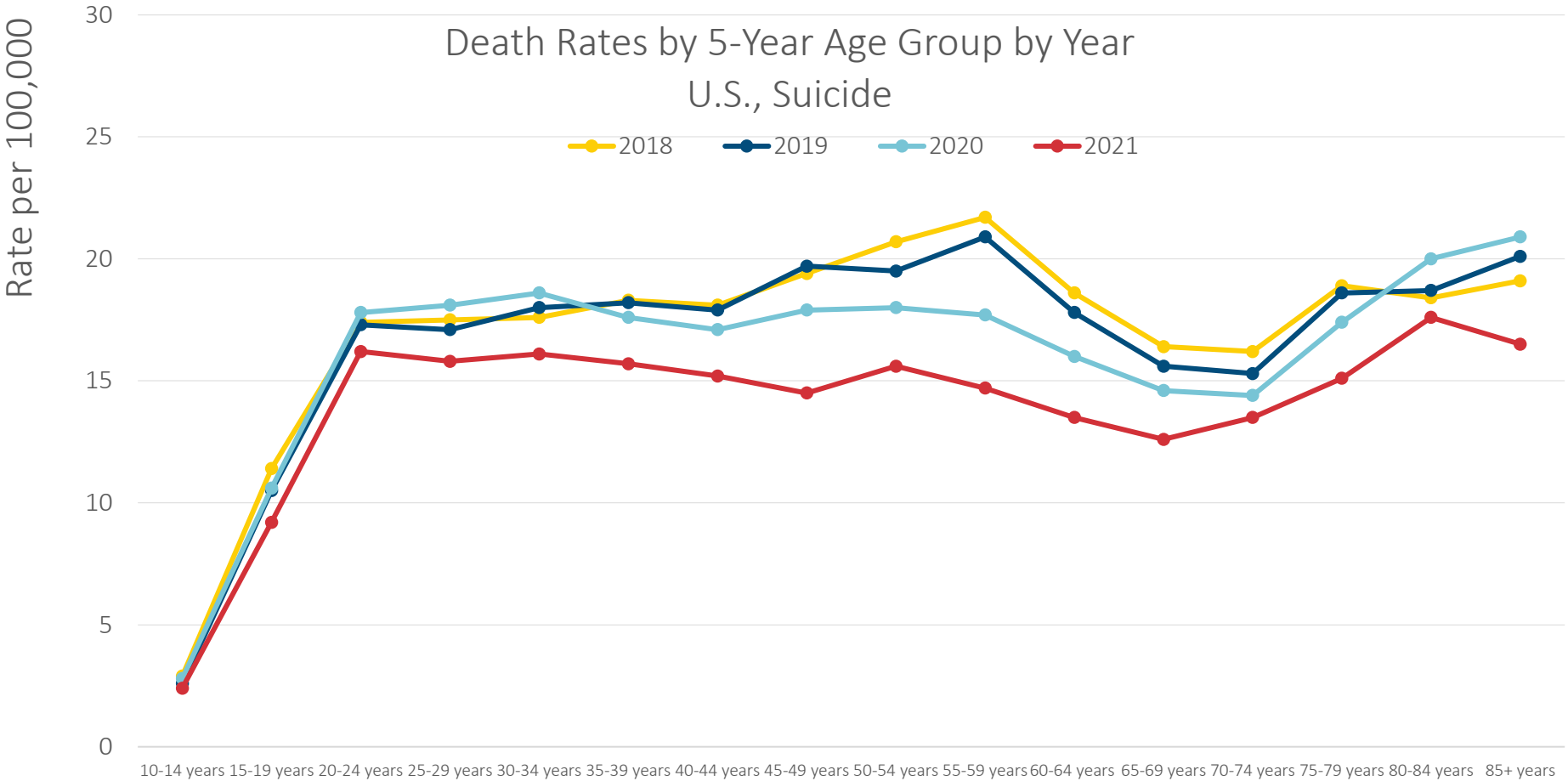
U.S., Homicide

■ 2020 ■ 2021



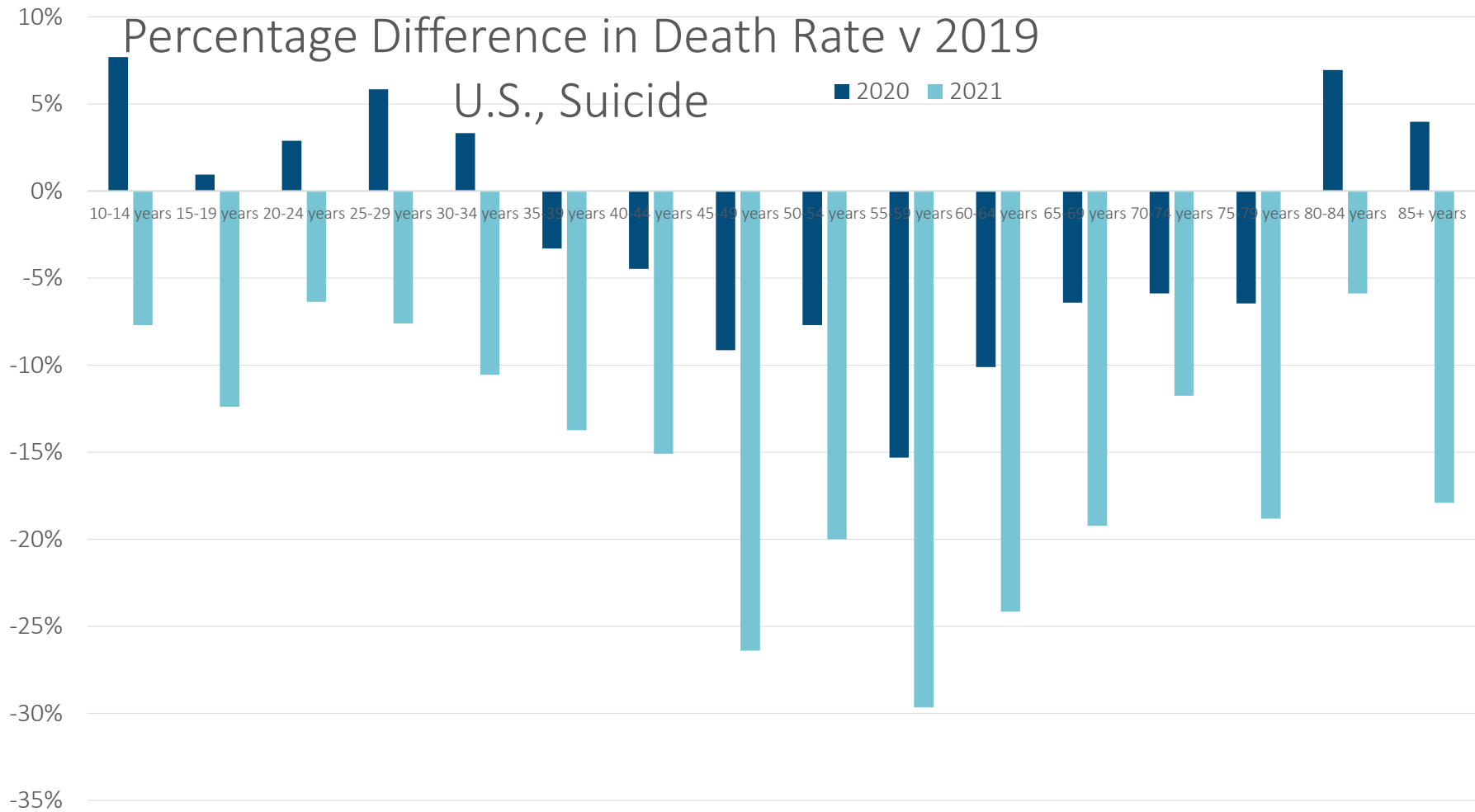
Death Rates by 5-Year Age Group by Year U.S., Suicide

2018 2019 2020 2021



Percentage Difference in Death Rate v 2019

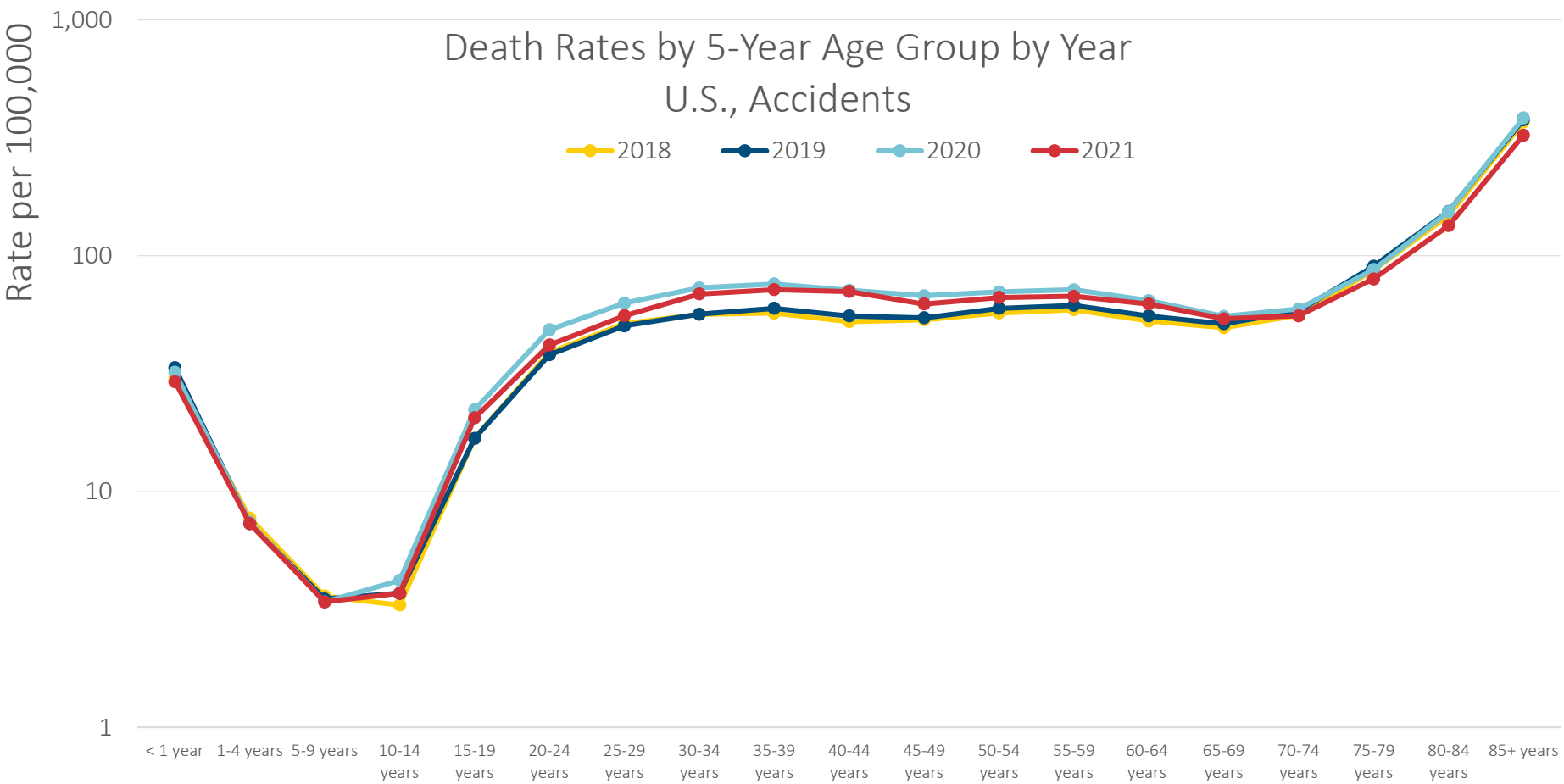
U.S., Suicide



Source: CDC Wonder, data as of 6 May 2022

Death Rates by 5-Year Age Group by Year U.S., Accidents

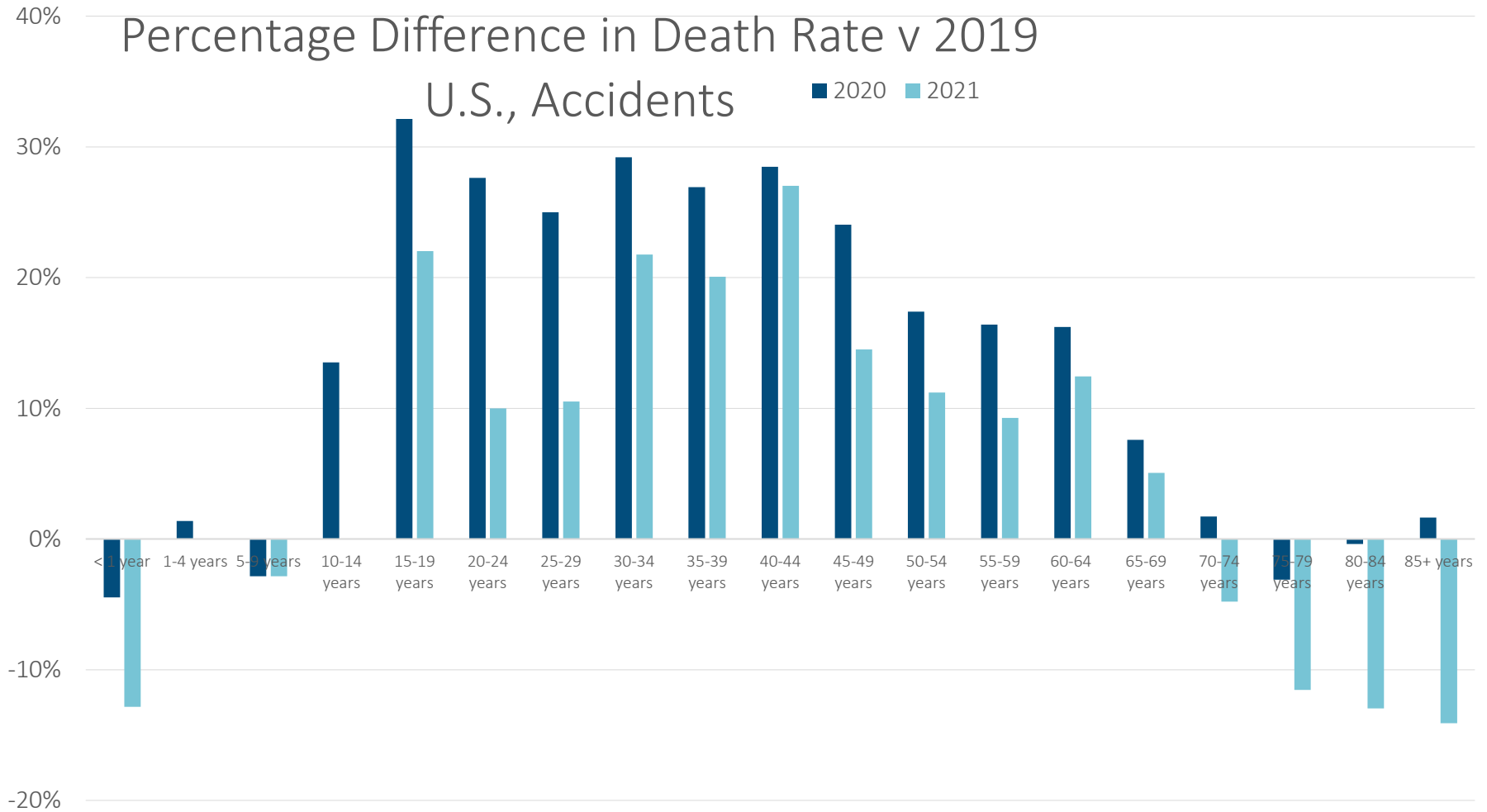
2018 2019 2020 2021



Percentage Difference in Death Rate v 2019

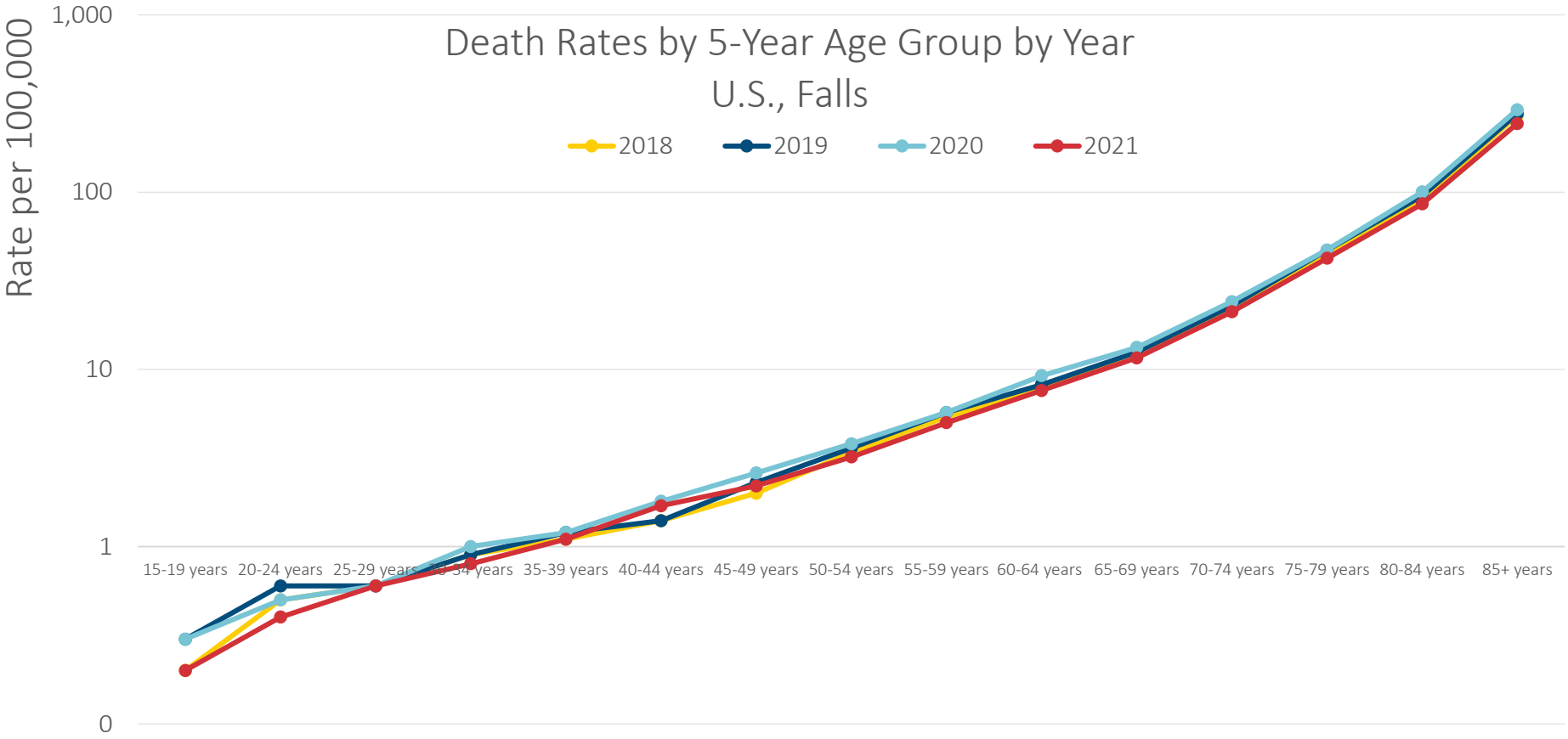
U.S., Accidents

■ 2020 ■ 2021



Death Rates by 5-Year Age Group by Year U.S., Falls

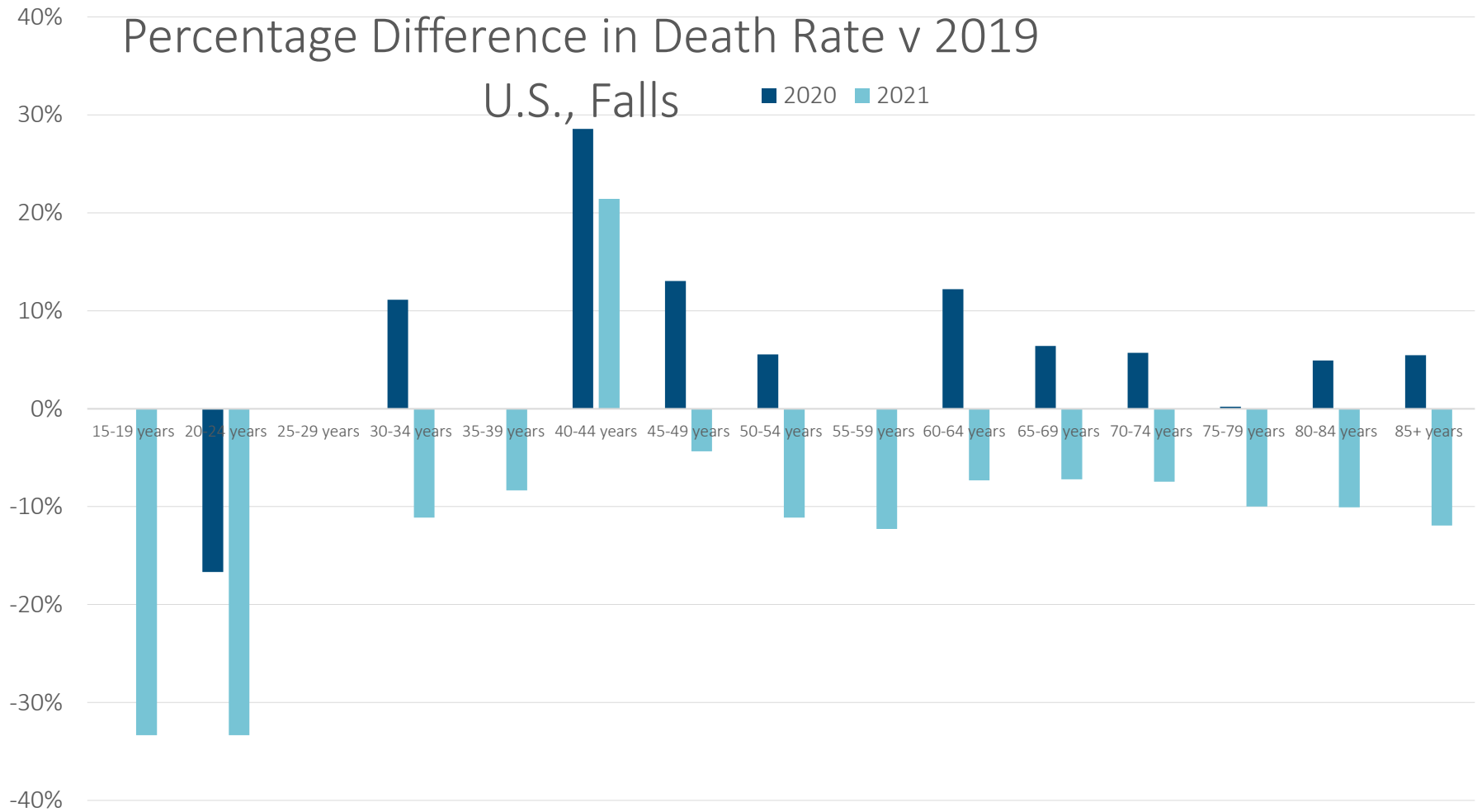
2018 2019 2020 2021



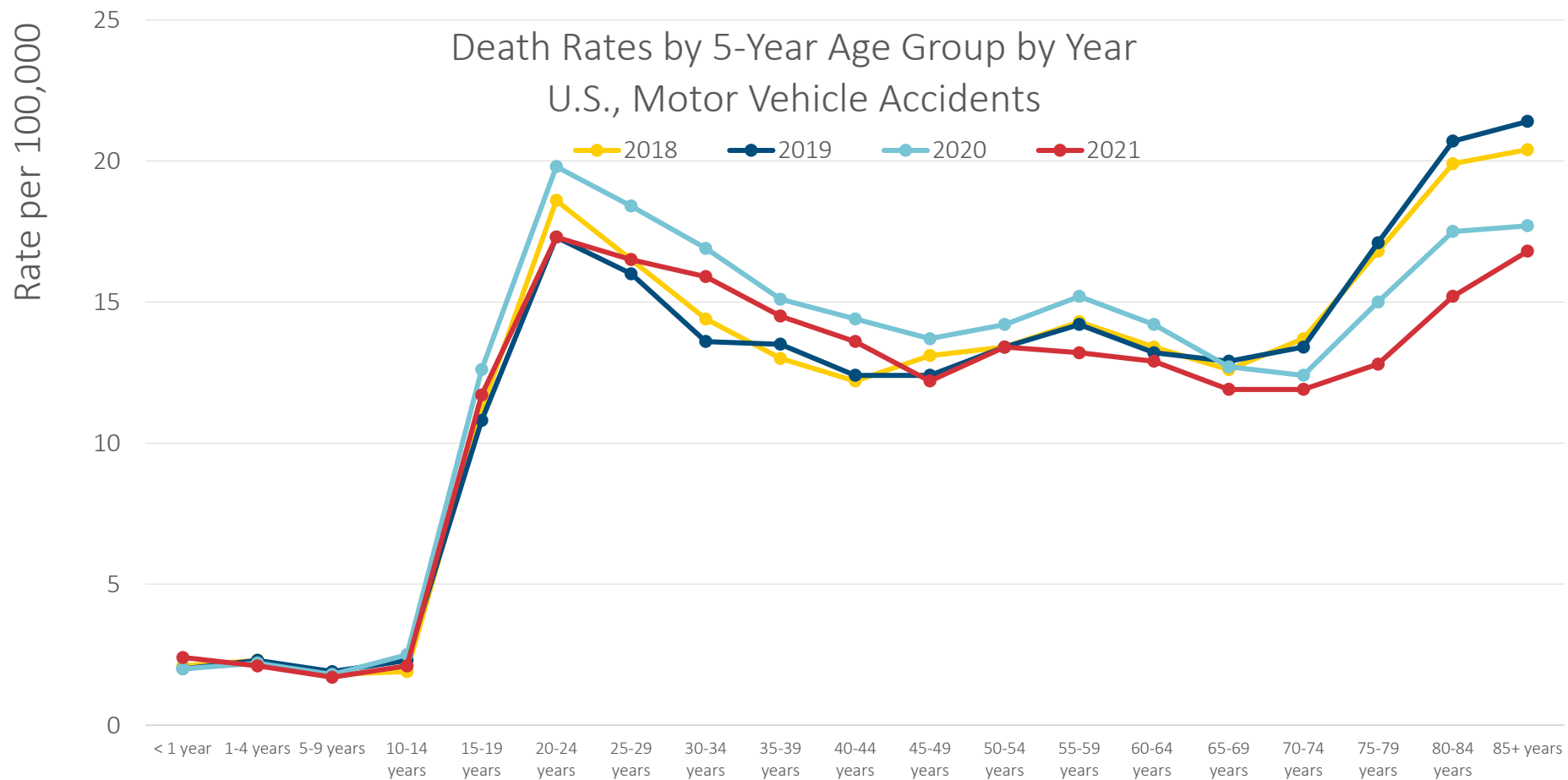
Percentage Difference in Death Rate v 2019

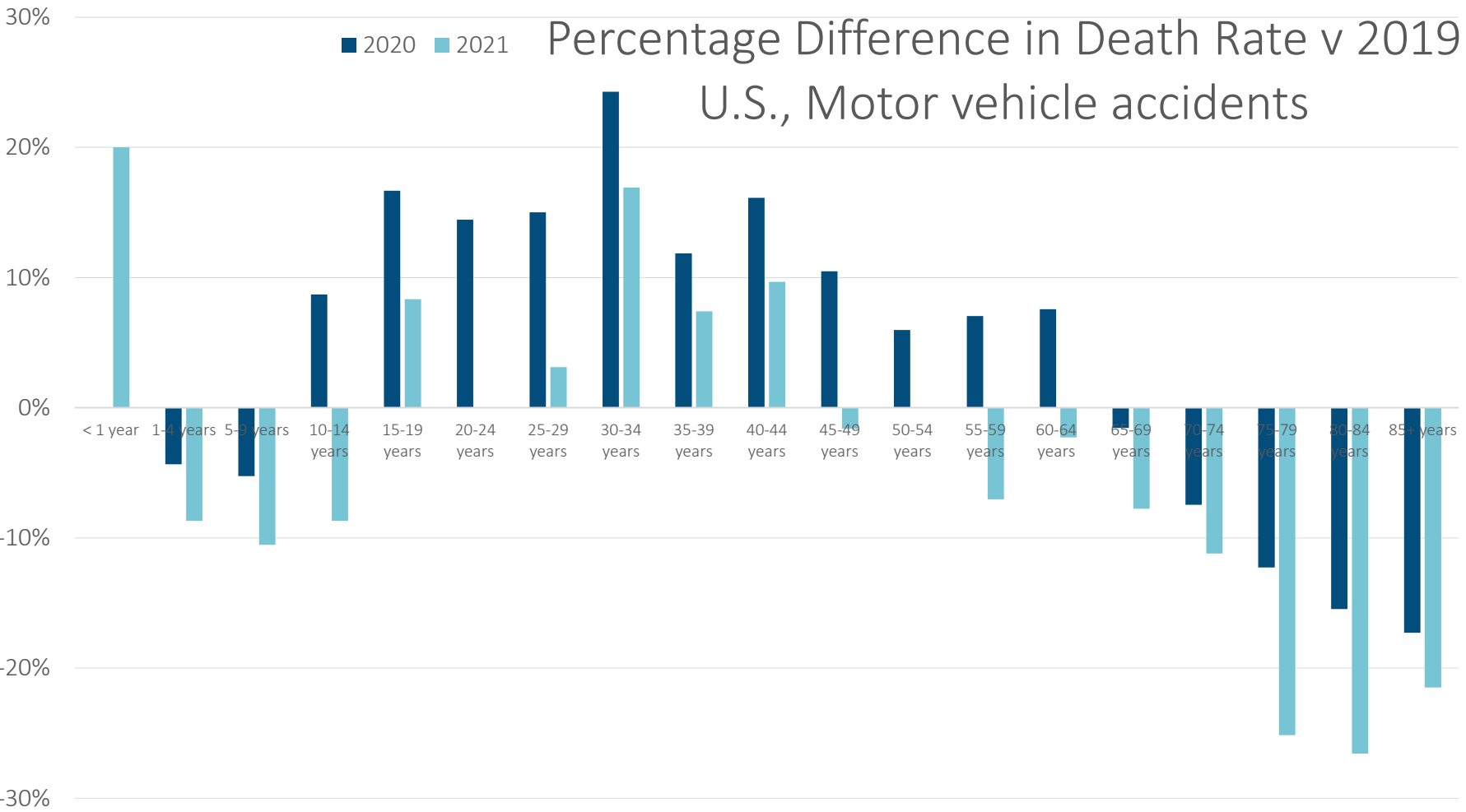
U.S., Falls

2020 2021



Death Rates by 5-Year Age Group by Year U.S., Motor Vehicle Accidents



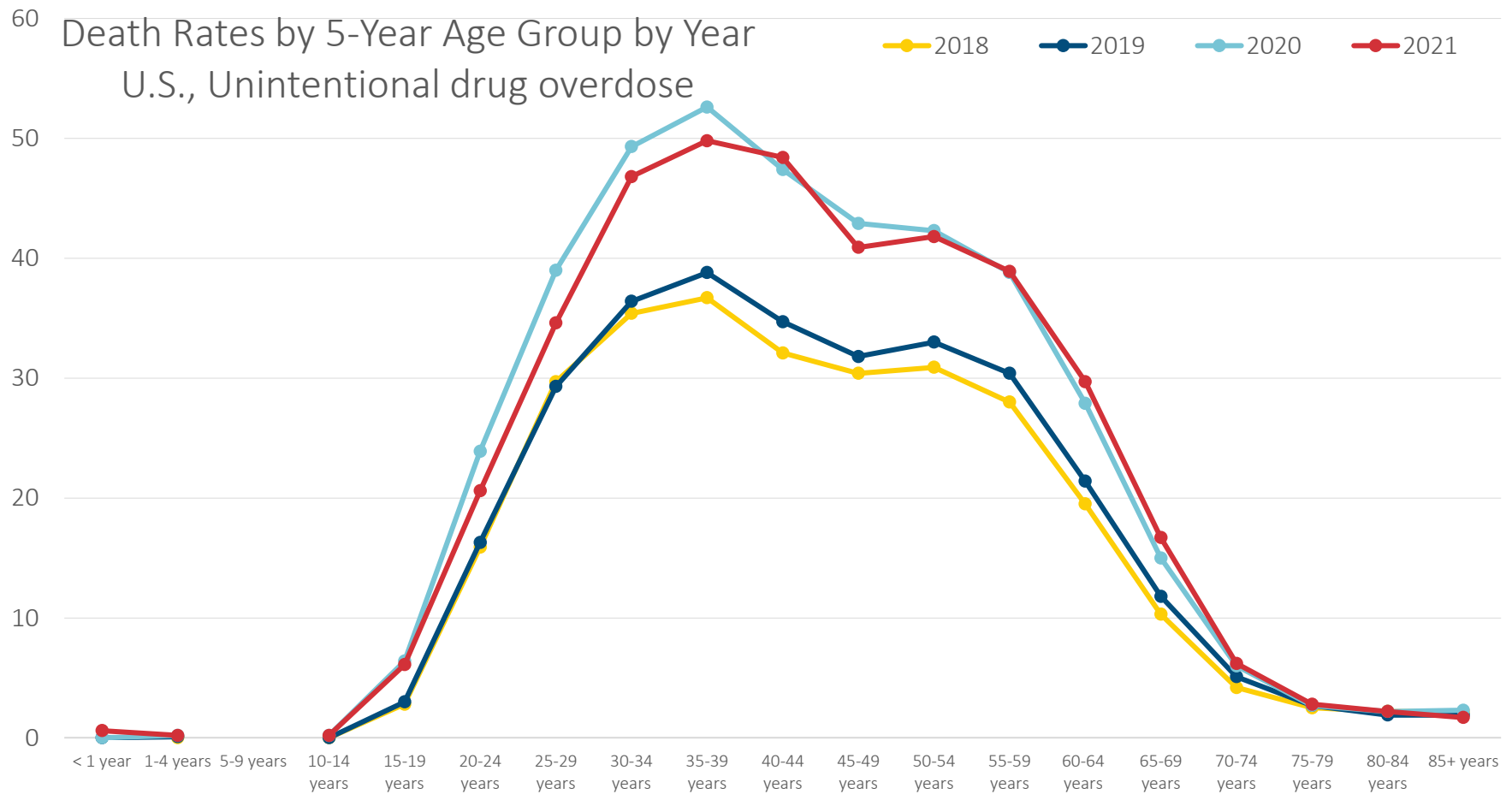


Source: CDC Wonder, data as of 6 May 2022

Rate per 100,000

Death Rates by 5-Year Age Group by Year U.S., Unintentional drug overdose

2018 2019 2020 2021

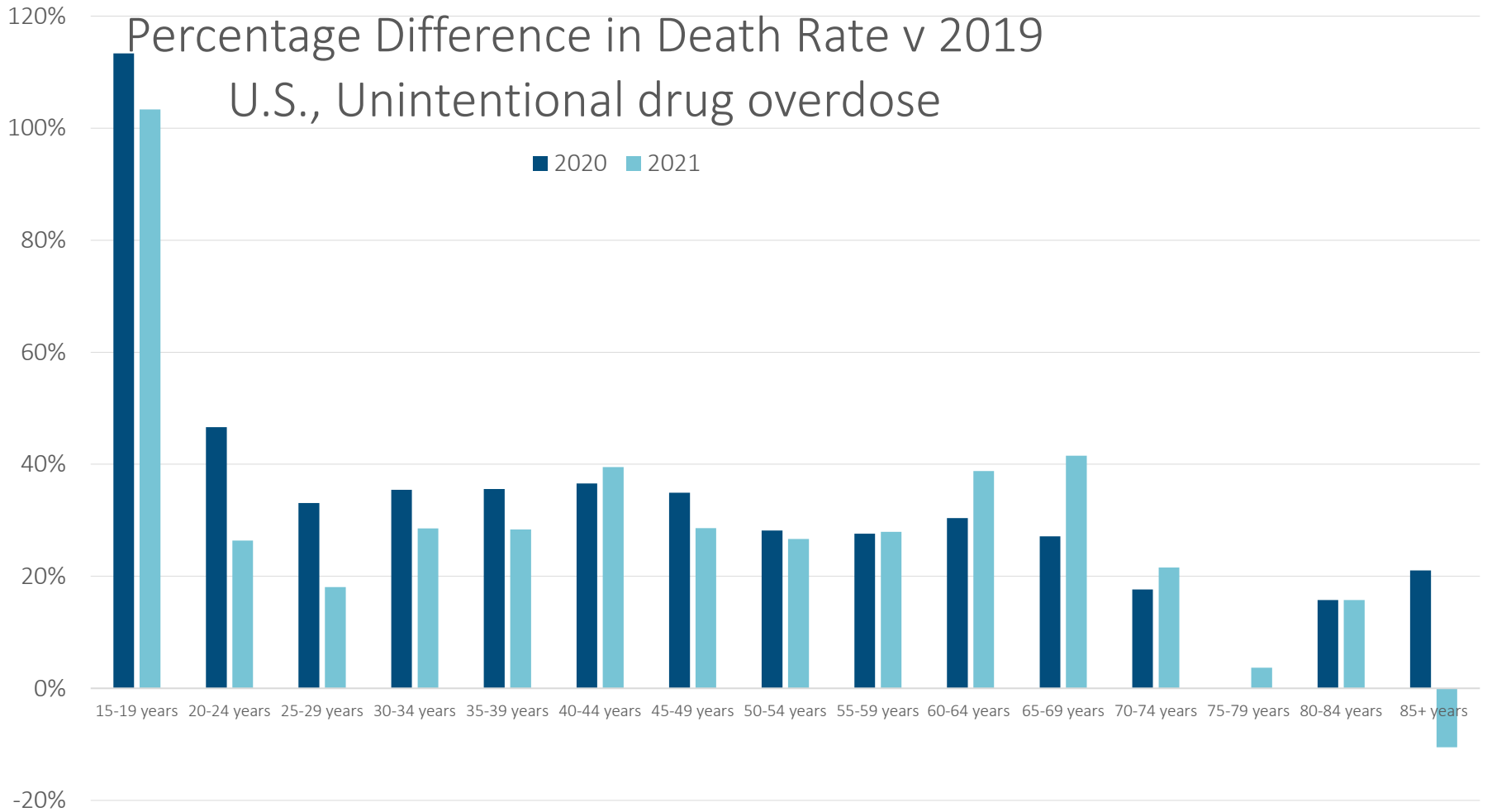


Source: CDC Wonder, data as of 6 May 2022

Percentage Difference in Death Rate v 2019

U.S., Unintentional drug overdose

2020 2021



Links to spreadsheets and data
citation(s)



Completed mortality data

Centers for Disease Control and Prevention, National Center for Health Statistics.

Underlying Cause of Death 1999-2020 on CDC WONDER Online Database, released in 2021. Data are from the Multiple Cause of Death Files, 1999-2020, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.

Accessed at <http://wonder.cdc.gov/ucd-icd10.html> on 29 March 2022 and later dates

Provisional mortality data

Centers for Disease Control and Prevention, National Center for Health Statistics.

National Vital Statistics System, Provisional Mortality on CDC WONDER Online Database. Data are from the final Multiple Cause of Death Files, 2018-2020, and from provisional data for years 2021-2022, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.

Accessed at <http://wonder.cdc.gov/mcd-icd10-provisional.html> on 6 May 2022 and later dates

Deaths occurring through April 16, 2022, reported as of May 1, 2022.

Additional documentation in supporting spreadsheets.

Dropbox link to spreadsheets and slides

Folder link:

<https://www.dropbox.com/sh/394386q974qe7hv/AA DXaLYH5uekikjmpA-Hv8LMa?dl=0>

Can view/download

Mary Pat Campbell links

Substack

<https://marypatcampbell.substack.com/>

Mortality with Meep

<https://marypatcampbell.substack.com/s/mortality-with-meep>

LinkedIn

<https://www.linkedin.com/in/marypatcampbell/>