

## Data Brief: 2020 Increases in Deaths in BAY AREA

California Department of Public Health - Fusion Center, 09/23/2021

### Summary

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This Data Brief presents an analysis of excess mortality (change in deaths) for BAY AREA in 2020, using California vital statistics death data (death certificates), and includes assessment of differential changes by race/ethnic group, age, and changes in deaths due to conditions other than COVID-19. This Brief is the BAY AREA-specific version of the full State Brief [here](#). This analysis is a follow-up to findings in the 2020 State of Public Health Report, part of the State Health Assessment. Detailed methods and discussion are included in the full Brief, and are not shown here.

- There were 54,059 deaths in BAY AREA in 2020 (corresponding to an age-adjusted all-cause death rate of 541.0 per 100,000 population), compared to 49,169 deaths in 2019 (rate of 503.1). This is a 7.6% change in the death rate in BAY AREA.
- The change in death rate differed by race/ethnicity, as shown in Figures 2, 3a and 3b.
- Changes in deaths from conditions other than COVID-19 were observed, as shown in Table 2 and Figure 4.
- The change in death rate differed by age differentially among race/ethnic groups as shown in Figure 5.

### Findings

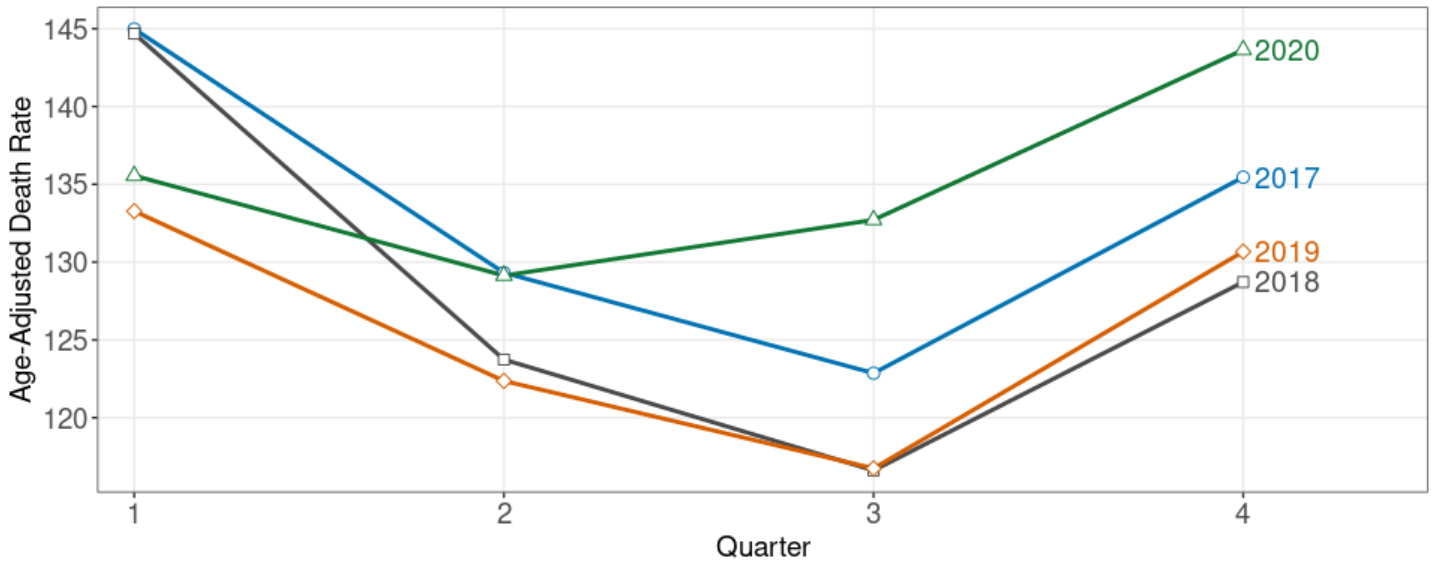
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**Table 1 - Number, Age-Adjusted Rate, and Change in Rate from Prior Year, Deaths from All Causes in BAY AREA, 2017-2020**

Year	Number of Deaths	Age-Adjusted Death Rate	% Increase in Rate from Prior Year
2020	54,059	541.0	7.6%
2019	49,169	503.1	-2.1%
2018	48,848	513.8	-3.5%
2017	49,588	532.6	-

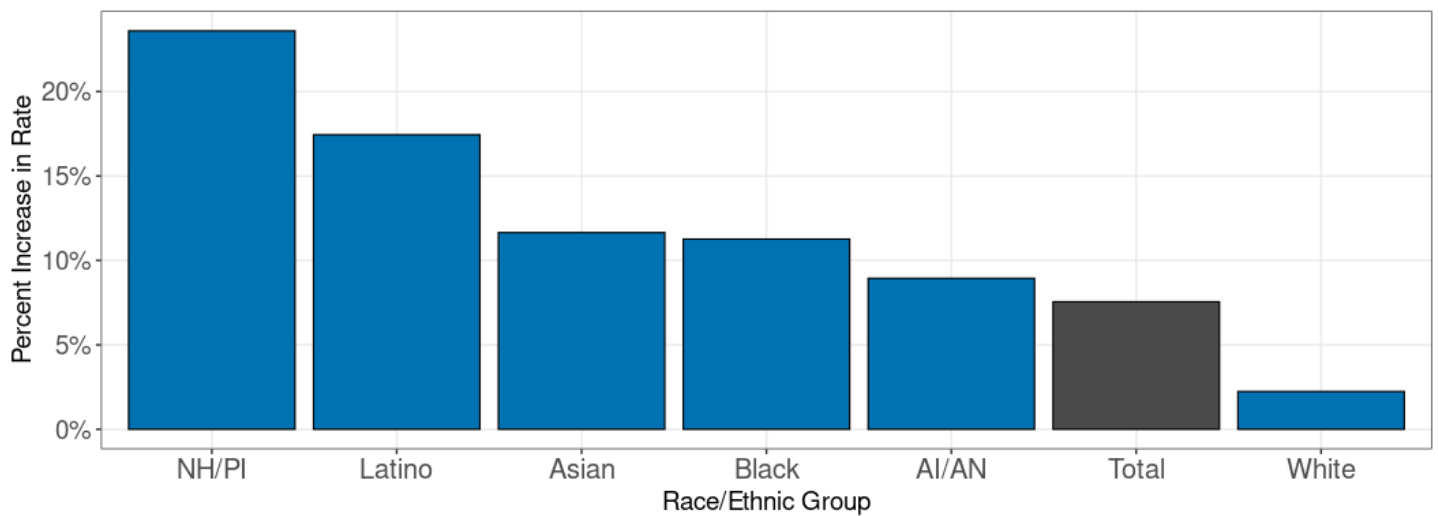
- As the pandemic intensified throughout 2020, the increases in the rates accelerated in most jurisdictions. Comparing the 1st quarter of 2020 to the 1st quarter of 2019, death rates were similar, with a 1.7% change; then, comparing 2nd quarters, there was a 5.5% change; comparing 3rd quarters, a 13.7% change; and when comparing 4th quarters, a 9.9% increase.

**Figure 1 - All-Cause Death Rate by Quarter and Year in BAY AREA, 2017-2020**



## Deaths increased more among some race/ethnicity groups than others

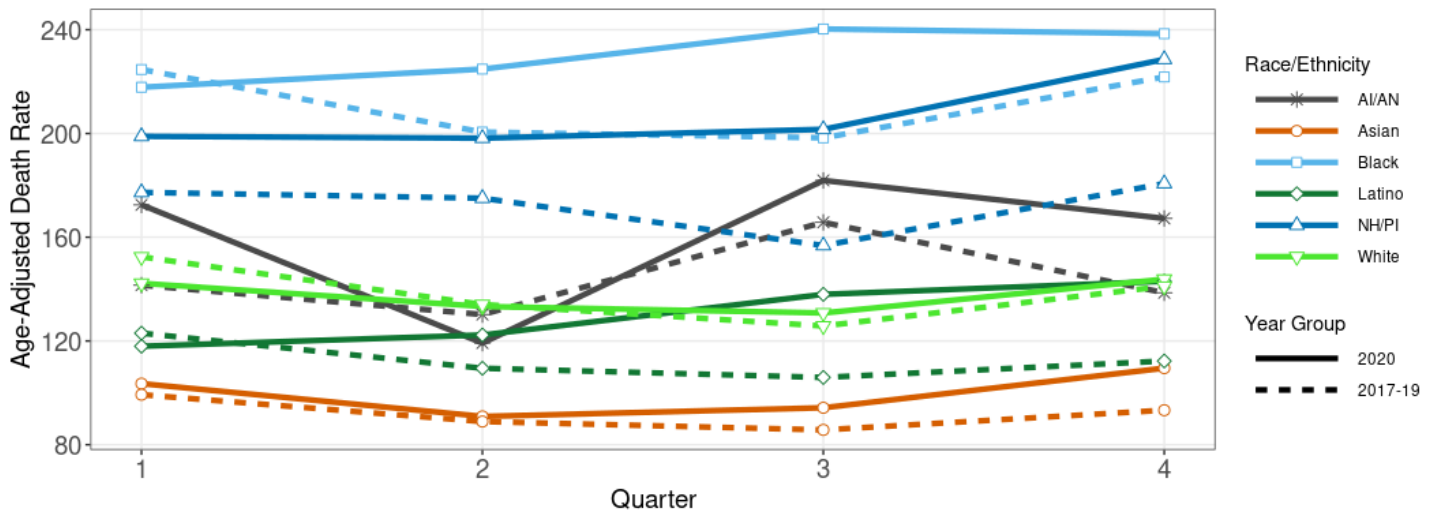
Figure 2 - Percentage Increase in Race-Specific Age-Adjusted Death Rates 2019 to 2020, BAY AREA



\*\* Note: Any race/ethnic group with < 25 deaths in 2020 or with a decrease in the age-adjusted death rate of > 10% is not shown in Figure 2

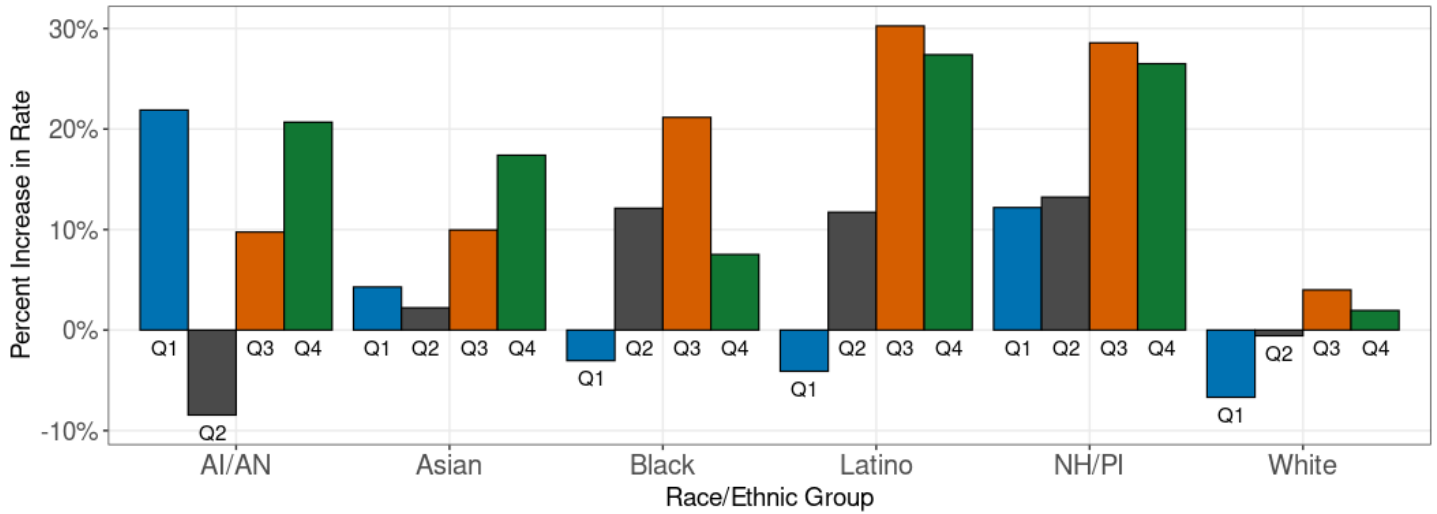
- For the State overall, and for many counties, deaths among most race/ethnic groups were higher in quarters 2, 3, and 4 of 2020 compared to the average rate of the corresponding 2017-2019 quarters.
- These disparities are seen in Figure 3a by observing the increasing gap within any specific race/ethnicity group (dotted line compared to solid line), and by observing the increasingly larger gaps in some groups than others.
- Note: Any race/ethnic group with < 5 deaths in any quarter (or average of 2017-2019 quarters) is not shown in Figure 3a or 3b

**Figure 3a - Trends in All Cause Age-Adjusted Mortality Rate by Race/Ethnicity by Quarter, 2020 and 2017-2019 Average, BAY AREA**



- Figure 3b below shows the same data as in 3a above, with a different perspective. Each bar is the **percent change** in the death rate for each race/ethnicity group comparing quarters of 2017-19 to the corresponding quarters of 2020. The height of the bar reflects the size of the increase, or decrease if the value is less than zero.

**Figure 3b - Percentage Increase in Age-Adjusted Death Rate by Quarter, 2020 and 2017-2019 Average, by Race/Ethnicity, BAY AREA**



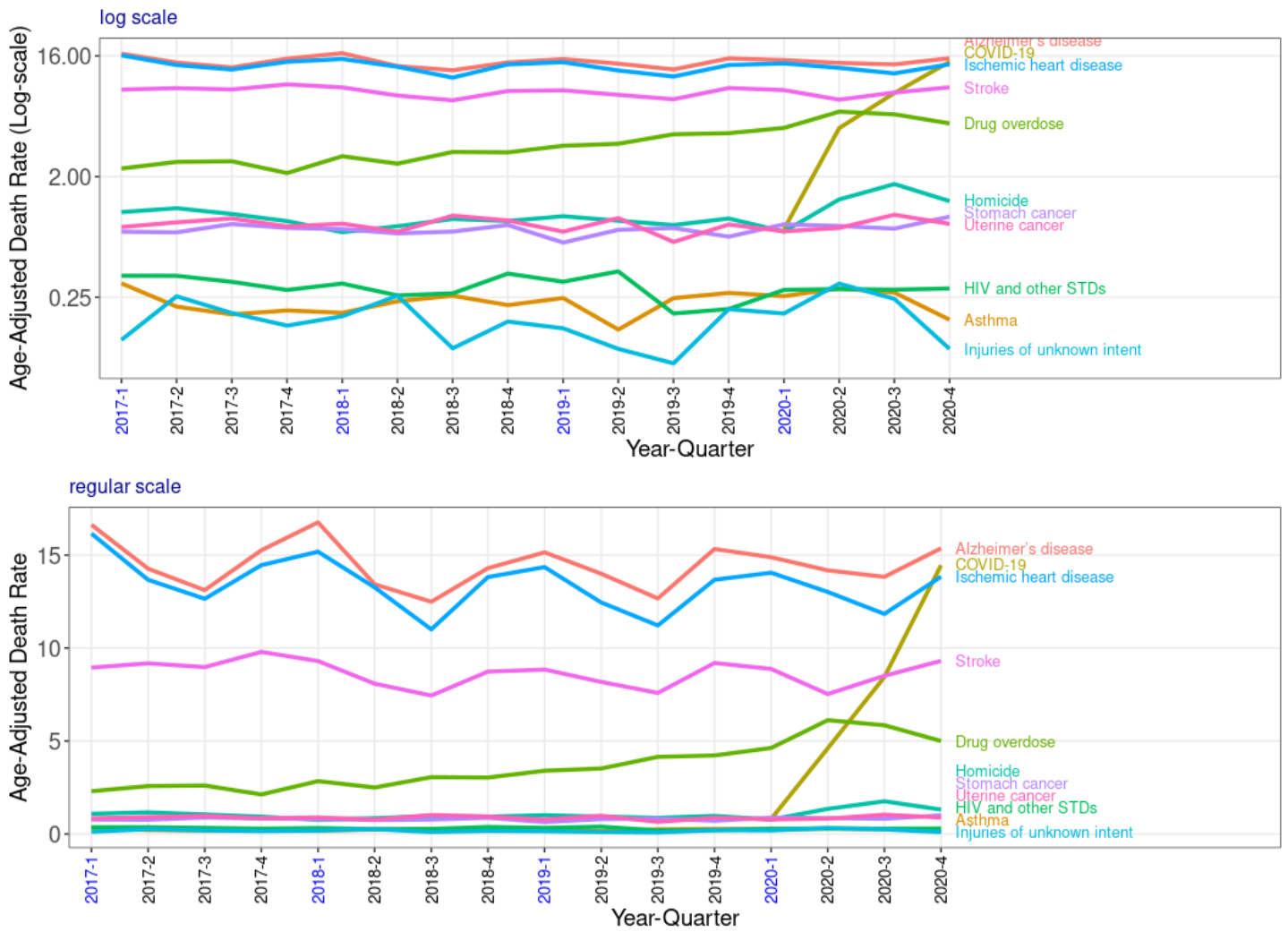
## Causes of death other than COVID-19 also increased

**Table 2 - 2017 to 2020, Selected Causes of Death, ordered by percent increase 2019 to 2020, BAY AREA**

Cause	N deaths				Age-Adjusted Rate				2019 -> 2020 Increase in N	2019 -> 2020 % Increase in Rate
	2017	2018	2019	2020	2017	2018	2019	2020		
Injuries of unknown intent	57	58	47	72	0.7	0.7	0.5	0.8	25	59.5%
Drug overdose	817	969	1,294	1,786	9.6	11.4	15.2	21.5	492	40.8%
Homicide	323	270	287	384	4.2	3.5	3.8	5.2	97	36.8%
Cirrhosis of the liver	875	904	873	1,029	9.3	9.5	9.0	10.8	156	20.3%
Stomach cancer	307	305	289	349	3.2	3.2	3.0	3.5	60	19.0%
Diabetes mellitus	1,057	971	986	1,173	11.2	10.1	10.0	11.6	187	15.8%
Hypertensive heart disease	2,472	2,400	2,414	2,602	26.0	24.8	24.1	25.2	188	4.5%
Ischemic heart disease	5,388	5,162	5,174	5,411	56.7	53.1	51.5	52.4	237	1.7%
Alzheimer's disease	5,605	5,538	5,731	6,035	59.1	56.8	57.0	57.9	304	1.7%
Lung Cancer	2,242	2,101	2,111	1,981	23.9	21.7	21.1	19.4	-130	-8.3%
Other neurological conditions	1,265	1,359	1,514	1,412	13.9	14.6	15.6	14.2	-102	-9.3%
Other respiratory diseases	1,182	1,146	1,168	1,052	12.7	12.1	11.8	10.3	-116	-13.0%
Neonatal conditions	172	162	142	116	2.7	2.6	2.4	2.0	-26	-15.5%
Leukemia	432	433	478	400	4.8	4.6	4.9	4.0	-78	-18.0%
Tuberculosis	20	23	30	25	0.2	0.2	0.3	0.2	-5	-18.9%
COVID-19				2,864				28.1		--

- Figure 4 below shows 2017-2020 quarterly trends in conditions that had large percentage or large absolute increases from 2019 to 2020.

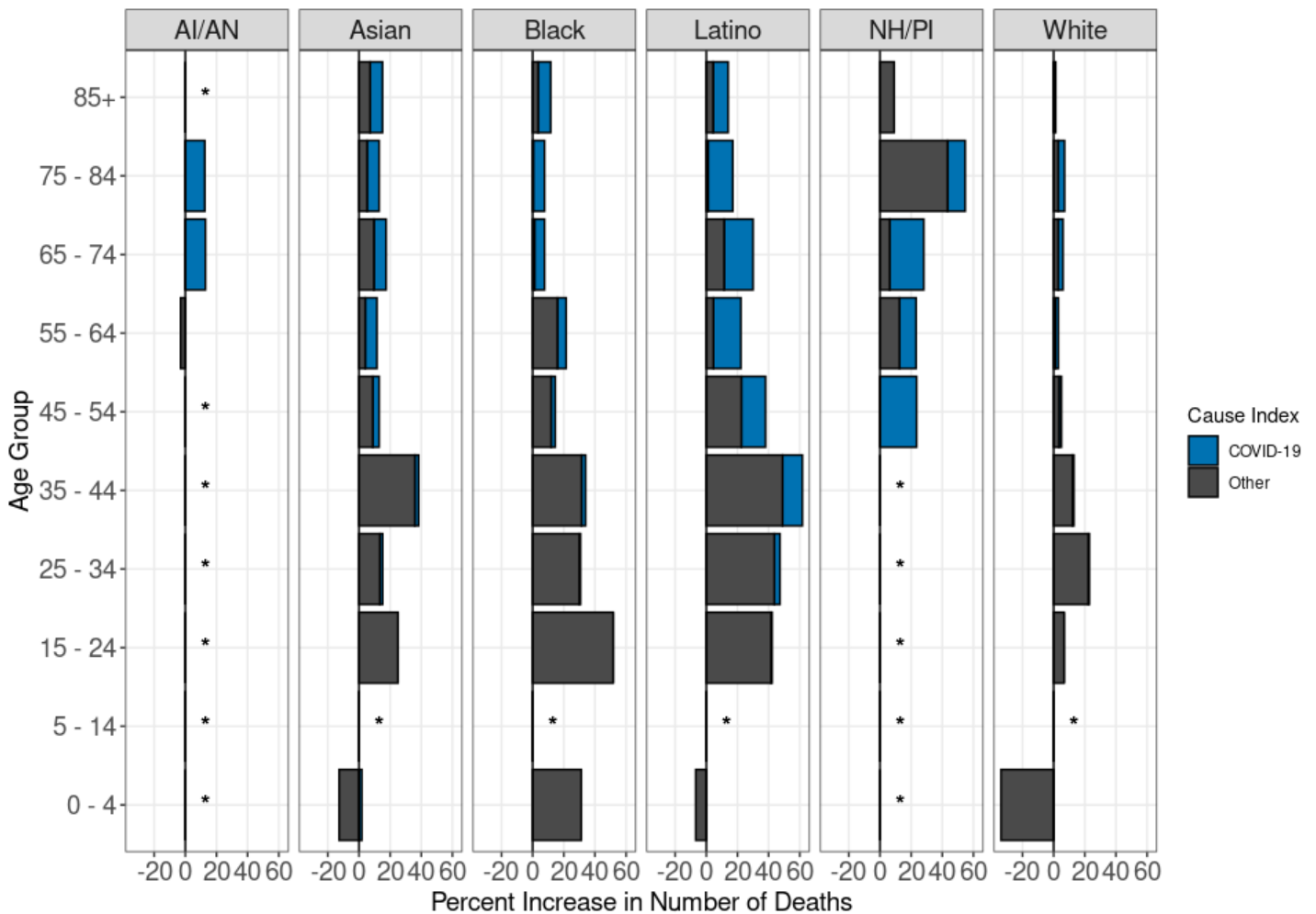
**Figure 4 - Quarterly Trend in Selected Causes of Death 2017-2020, BAY AREA**



## The amount of increase in deaths, and conditions associated with the increase, differed substantially by age and race/ethnicity

- In general, a large proportion of the increase in deaths among older persons was due to COVID-19 while a large proportion of the increase in deaths among younger persons was due to other conditions.

**Figure 5 - Percent Increase in Number of Deaths 2019 to 2020 by Age Group and Race/Ethnicity and Proportion of Increase due to COVID-19, BAY AREA**



Note: The “cause index” is, rather than a direct proportion, the ratio of the number of COVID-19 deaths in 2020 to the total increase in deaths from 2019 to 2020, and is truncated at 1.0. See the Methods section for details.

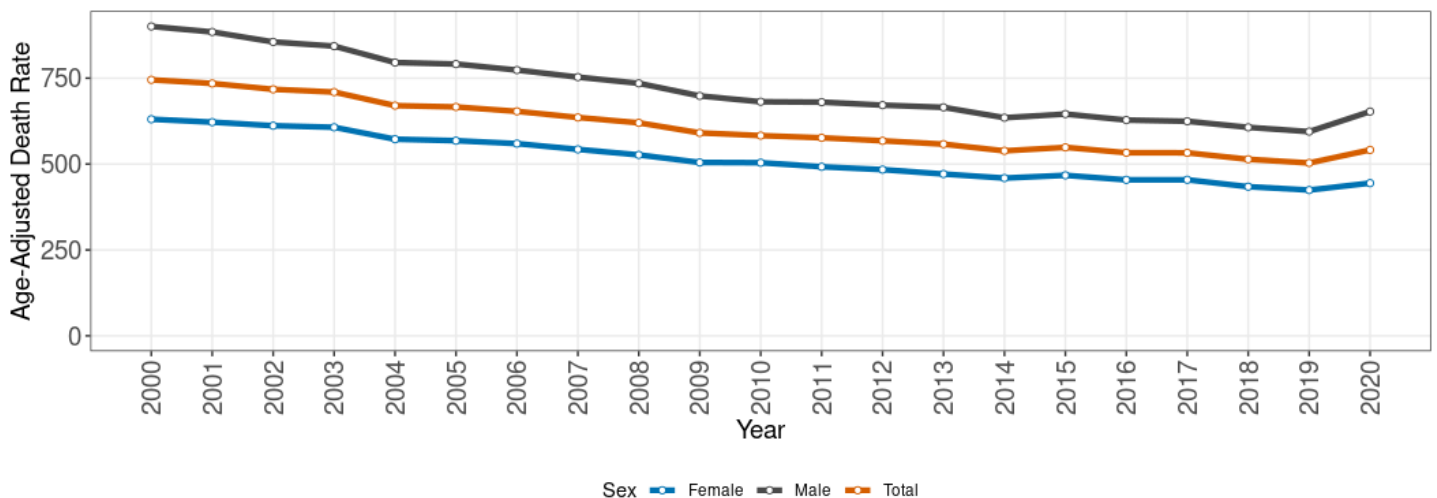
\* 0 deaths or data not shown due to small numbers



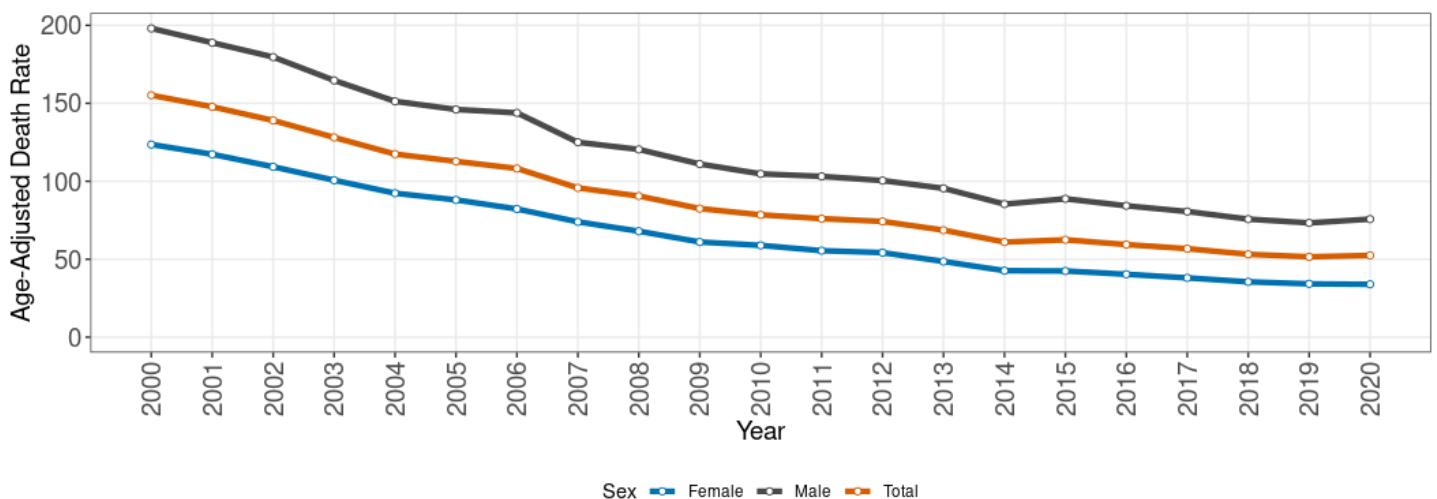
## Supplemental Charts

- For the [Statewide Data Brief](#), a number of additional detailed charts and tables are included in the [Appendix](#). For this BAY AREA Brief these data are not provided. However, all-cause and cause-specific mortality data for BAY AREA, including trends, maps, rankings, and wide range of other data can be found at the [California Community Burden of Disease Engine](#). For reference, long-term BAY AREA trends by sex in all-cause mortality, and trends in several conditions with large observed statewide increases ischemic heart disease, Alzheimer’s disease, drug overdose and homicides are shown below.
- Note: Data are not shown for death rates based on < 11 deaths.

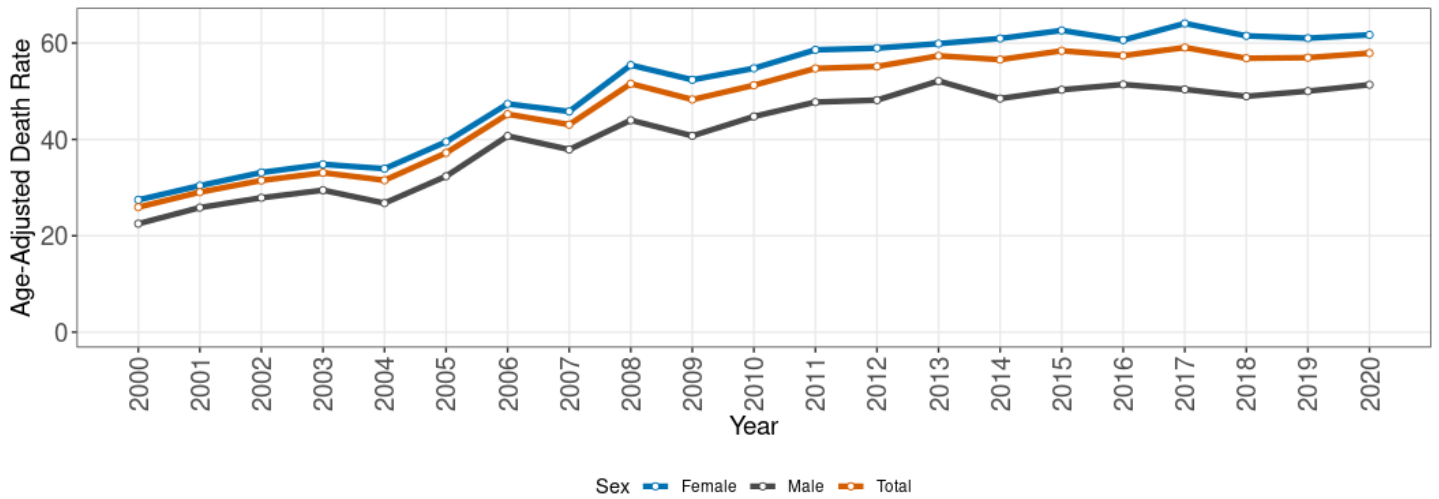
**All-Cause, Age-Adjusted Death Rate Trend by Sex in BAY AREA, 2000-2020**



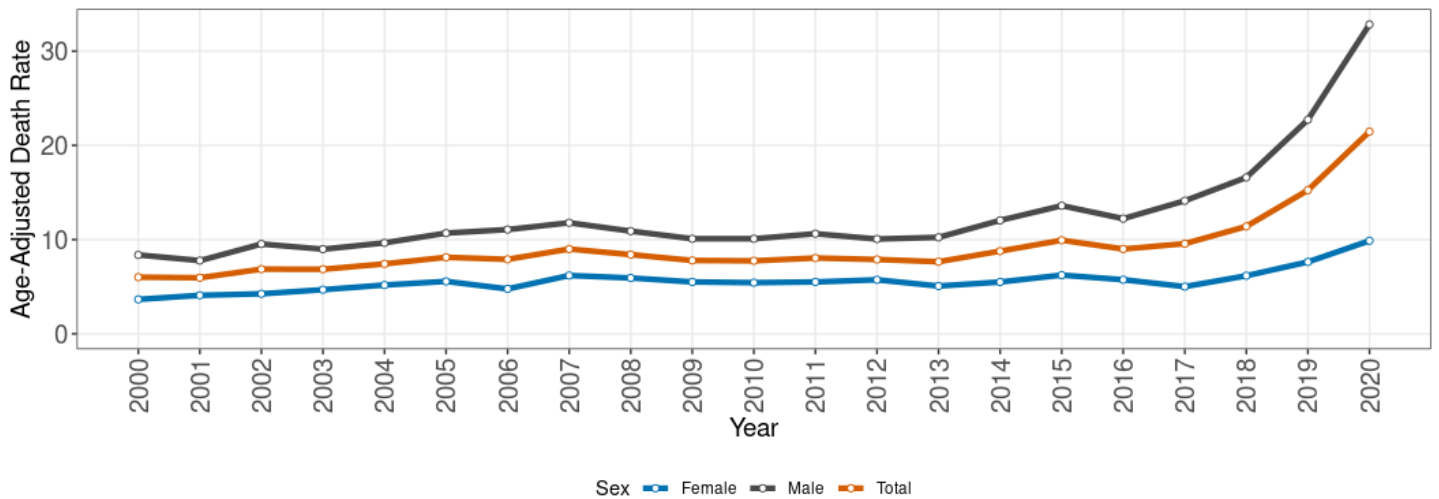
**Ischemic Heart Disease, Age-Adjusted Death Rate Trend by Sex in BAY AREA, 2000-2020**



**Alzheimer's Disease and other dementias, Age-Adjusted Death Rate Trend by Sex in BAY AREA, 2000-2020**



**Drug Overdose, Age-Adjusted Death Rate Trend by Sex in BAY AREA, 2000-2020**



### Homicide, Age-Adjusted Death Rate Trend by Sex in BAY AREA, 2000-2020

